Yahoo Group Archive: TS-520_820_530_830 (2011-01 — 2011-06)

Yahoo Group summary: KENWOOD TS-520_820_530_830

These Yahoo Groups messages were archived in WARC format by ArchiveTeam in 2017. This PDF was generated by Digital Library of Amateur Radio & Communications from the WARC files in 2026.

Date span: 2011-01-01 through 2011-06-30

Source WARC: ts-520_820_530_830.d0kBnMS.warc.gz

Source item: https://archive.org/details/yahoo-groups-2017-04-17T04-04-28Z-8e1d1d

Messages included in this PDF: 3043

Message records with no body available in the source archive: 1

Messages omitted as spam from this PDF: 1

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

29104. Re: [TS-520_820_530_830] Cable for Kenwood VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 00:06:52 UTC
From: n6wk@n6wk.com
Topic: 29100 Message: 29104

I make and sell them.
$25.00 shipped!

73,
Gordon

On 12/31/2010 2:57 PM, ae5uu wrote:
>
> Does anyone have or know where I can purchase an inter-connecting
> cable that connects the Kenwood TS-820 to the Kenwood VFO-820? The
> cable has an Amphenol 9 pin mini-connector on each end. I believe that
> this same cable is used with the Kenwood TS-520.
>
> Thanks,
>
> Russell
>
>

29105. Re: [TS-520_820_530_830] Re: TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 04:05:42 UTC
From: Joseph Stiles
Topic: 29058 Message: 29105

Mike,

I did find TP1...the "1" was partly hidden by a jumper wire...I think J18 ...I do have the X-ray picture(s)...just gotta remember it's reversed. I'll be doing more checking..later...HAPPY NEW YEAR!!! gotta go over to some friends...

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, December 29, 2010 9:33:43 PM
Subject: [TS-520_820_530_830] Re: TS-520 no rcv

Joe and others,

Not being able to see clearly TP1 on the RF Unit is where the service manual's individual PC board "Xray" pictures come into play. The Xray pictures are identical to the actual PC boards and make it easier for you to locate and connect to the correct component or test point.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greeting Group,
>
> Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see TP..but
>the
>
> rest is obscured....but anyway...when I did...the receiver came to life. From
> what I've read..is Q-5..on the RF board the culprit? Also...it seems that the
> freq I obtained from the RIF terminal on the RF board...I think indicates that

> there are other problems....as it indicates...7.55MHz and is not steady...but
> one problem at a time...Ideas??
>
>
> ntx 73's joe wb7uqu
>
>
>
>

>
> _____
> From: wb7uqu <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, December 29, 2010 12:45:37 PM
> Subject: [TS-520_820_530_830] TS-520 no rcv
>
>
> Greetings Group,
>
> Rig:TS-520
> Problem: limited/no rcv
>
> I have the xmit problem fixed(which was not posted..I actually fixed it...by
> reading prior posts...yeah..me!!)...but the following is still a problem:
>
> The rcv seems dead. The AF gain will alter the volume as necessary. I can not
> rcv any signals on any band..with the exception of WWV, which as propagation
> permits..comes in fine.
>
> The "CAL" signal can only be heard...but very weak on 7MHz and 3.5MHz. The
>other
>
> bands the "CAL" signal can not be heard at all.
>
> I have looked at the initial start of a long thread..starting with MSG # 28835.
>
> I would love to diagnose...repair this myself..but my knowledge..skill..and
> equipment are minimal. I have a DVM..with RF detector probe,an RF SIG
>GEN..which
>
> I'm still learning on....and an AF GEN..I'm still learning on..not to
> mention...an O'SCOPE..which..well is gonna take some time...ANY help, is as
> usual, appreciated!
>
> Happy New Year.......73's joe wb7uqu
>
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

29106. Re: [TS-520_820_530_830] Re: TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 04:12:37 UTC
From: n6wk@n6wk.com
Topic: 29058 Message: 29106

Happy new year Walt, Joe, Mike and to All the members of this Group !!

Gordon
N6WK

On 12/31/2010 8:05 PM, Joseph Stiles wrote:
>
> Mike,
>
> I did find TP1...the "1" was partly hidden by a jumper wire...I think J18
> ...I do have the X-ray picture(s)...just gotta remember it's reversed.
> I'll be
> doing more checking..later...HAPPY NEW YEAR!!! gotta go over to some
> friends...
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wed, December 29, 2010 9:33:43 PM
> Subject: [TS-520_820_530_830] Re: TS-520 no rcv
>
> Joe and others,
>
> Not being able to see clearly TP1 on the RF Unit is where the service
> manual's
> individual PC board "Xray" pictures come into play. The Xray pictures are
> identical to the actual PC boards and make it easier for you to locate
> and
> connect to the correct component or test point.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...>
> wrote:
> >
> > Greeting Group,
> >
> > Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see

> TP..but
> >the
> >
> > rest is obscured....but anyway...when I did...the receiver came to
> life. From
> > what I've read..is Q-5..on the RF board the culprit? Also...it seems
> that the
> > freq I obtained from the RIF terminal on the RF board...I think
> indicates that
> >
> > there are other problems....as it indicates...7.55MHz and is not
> steady...but
> > one problem at a time...Ideas??
> >
> >
> > ntx 73's joe wb7uqu
> >
> >
> >
> >
> >
> > _____
> > From: wb7uqu <stilesjoseph@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Wed, December 29, 2010 12:45:37 PM
> > Subject: [TS-520_820_530_830] TS-520 no rcv
> >
> >
> > Greetings Group,
> >
> > Rig:TS-520
> > Problem: limited/no rcv
> >
> > I have the xmit problem fixed(which was not posted..I actually fixed
> it...by
> > reading prior posts...yeah..me!!)...but the following is still a
> problem:
> >
> > The rcv seems dead. The AF gain will alter the volume as necessary.
> I can not
> > rcv any signals on any band..with the exception of WWV, which as
> propagation
> > permits..comes in fine.
> >
> > The "CAL" signal can only be heard...but very weak on 7MHz and
> 3.5MHz. The
> >other
> >
> > bands the "CAL" signal can not be heard at all.

> >
> > I have looked at the initial start of a long thread..starting with
> MSG # 28835.
> >
> > I would love to diagnose...repair this myself..but my
> knowledge..skill..and
> > equipment are minimal. I have a DVM..with RF detector probe,an RF SIG
> >GEN..which
> >
> > I'm still learning on....and an AF GEN..I'm still learning on..not to
> > mention...an O'SCOPE..which..well is gonna take some time...ANY
> help, is as
> > usual, appreciated!
> >
> > Happy New Year.......73's joe wb7uqu
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> [Non-text portions of this message have been removed]
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>

29107. Re: [TS-520_820_530_830] Re: TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 04:34:51 UTC
From: Ruben Echevarria KA2HHB
Topic: 29058 Message: 29107

Happy New Year Gordon !!
And Happy New Year as well to all of the people that are part of this.
Good Health, Wealth & Happiness to all !!!
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, December 31, 2010 11:12 PM
Subject: Re: [TS-520_820_530_830] Re: TS-520 no rcv

>
> Happy new year Walt, Joe, Mike and to All the members of this Group !!
>
> Gordon
> N6WK
>
>
>
> On 12/31/2010 8:05 PM, Joseph Stiles wrote:
>>
>> Mike,
>>
>> I did find TP1...the "1" was partly hidden by a jumper wire...I think J18
>> ...I do have the X-ray picture(s)...just gotta remember it's reversed.
>> I'll be
>> doing more checking..later...HAPPY NEW YEAR!!! gotta go over to some
>> friends...
>>
>> 73's joe wb7uqu
>>
>> _____
>> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
>> To: TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> Sent: Wed, December 29, 2010 9:33:43 PM
>> Subject: [TS-520_820_530_830] Re: TS-520 no rcv
>>
>> Joe and others,
>>
>> Not being able to see clearly TP1 on the RF Unit is where the service
>> manual's

>> individual PC board "Xray" pictures come into play. The Xray pictures are
>> identical to the actual PC boards and make it easier for you to locate
>> and
>> connect to the correct component or test point.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
>> <stilesjoseph@...>
>> wrote:
>> >
>> > Greeting Group,
>> >
>> > Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see
>> TP..but
>> >the
>> >
>> > rest is obscured....but anyway...when I did...the receiver came to
>> life. From
>> > what I've read..is Q-5..on the RF board the culprit? Also...it seems
>> that the
>> > freq I obtained from the RIF terminal on the RF board...I think
>> indicates that
>>
>> > there are other problems....as it indicates...7.55MHz and is not
>> steady...but
>> > one problem at a time...Ideas??
>> >
>> >
>> > ntx 73's joe wb7uqu
>> >
>> >
>> >
>> >
>> >
>> >
>> > _____
>> > From: wb7uqu <stilesjoseph@...>
>> > To: TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> > Sent: Wed, December 29, 2010 12:45:37 PM
>> > Subject: [TS-520_820_530_830] TS-520 no rcv
>> >
>> >
>> > Greetings Group,
>> >
>> > Rig:TS-520
>> > Problem: limited/no rcv

>> >
>> > I have the xmit problem fixed(which was not posted..I actually fixed
>> it...by
>> > reading prior posts...yeah..me!!)...but the following is still a
>> problem:
>> >
>> > The rcv seems dead. The AF gain will alter the volume as necessary.
>> I can not
>> > rcv any signals on any band..with the exception of WWV, which as
>> propagation
>> > permits..comes in fine.
>> >
>> > The "CAL" signal can only be heard...but very weak on 7MHz and
>> 3.5MHz. The
>> >other
>> >
>> > bands the "CAL" signal can not be heard at all.
>> >
>> > I have looked at the initial start of a long thread..starting with
>> MSG # 28835.
>> >
>> > I would love to diagnose...repair this myself..but my
>> knowledge..skill..and
>> > equipment are minimal. I have a DVM..with RF detector probe,an RF SIG
>> >GEN..which
>> >
>> > I'm still learning on....and an AF GEN..I'm still learning on..not to
>> > mention...an O'SCOPE..which..well is gonna take some time...ANY
>> help, is as
>> > usual, appreciated!
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>> > Happy New Year.......73's joe wb7uqu
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> Yahoo! Groups Links
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29108. Re: WANTED... AF board for TS530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 14:09:27 UTC
From: jon_g4fut
Topic: 29081 Message: 29108

Hi Bob,
I've emailed you and agreed the transaction.
Jon
--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@> wrote:
> >
> > X49-1150-00.....
> > Due to failing eyesight, (I'm an OT and these eyes have seen many strange thins so no wonder they are failing LOL)I require a working AF board X49-1150-00 to replace that in my wireless which has stopped working. At any rate the receiver has stopped doing its job, which after 30 years continuous use is to be expected. reason I would like a full board is that the components are too small for me to replace effectively.
> > Happy New Year...
> > Jon G4FUT
> >
> Hi Jon,
> I have a clean functional Audio board (X49-1150-00) for the TS-530S...
> You can get back to me at ..... ke5ftf@...
>
> Thanks,
> Bob Mansker
>

29109. VBT-1 Test Set for Aligning TS-830S VBT Oscillator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 15:04:16 UTC
From: wagstw46
Topic: 29109 Message: 29109

Does anyone know what the VBT-1 test set mentioned on Page 38 of the TS-830S service manual is? It appears to be some type of 2 tone AF generator? I just installed full filter pack in my TS-830S gold and want to align the passband windows. I used the method described under the maintenance section of the Survivors Guide to adjust the VBT oscillator and I think I have it close, but would be nice to have access to factory test equipment or to replicate it to perform this alignment.

Thanks and Happy New Year to all
Terry K9TW

29110. Re: TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 15:05:35 UTC
From: w5rkl
Topic: 29058 Message: 29110

Happy New Year to Gordon, Walt, Joe, and everyone else.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
>
> Happy new year Walt, Joe, Mike and to All the members of this Group !!
>
> Gordon
> N6WK
>
>
>
> On 12/31/2010 8:05 PM, Joseph Stiles wrote:
> >
> > Mike,
> >
> > I did find TP1...the "1" was partly hidden by a jumper wire...I think J18
> > ...I do have the X-ray picture(s)...just gotta remember it's reversed.
> > I'll be
> > doing more checking..later...HAPPY NEW YEAR!!! gotta go over to some
> > friends...
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Wed, December 29, 2010 9:33:43 PM
> > Subject: [TS-520_820_530_830] Re: TS-520 no rcv
> >
> > Joe and others,
> >
> > Not being able to see clearly TP1 on the RF Unit is where the service
> > manual's
> > individual PC board "Xray" pictures come into play. The Xray pictures are
> > identical to the actual PC boards and make it easier for you to locate
> > and
> > connect to the correct component or test point.
> >
> > 73s

> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > <stilesjoseph@>
> > wrote:
> > >
> > > Greeting Group,
> > >
> > > Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see
> > TP..but
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> > life. From
> > > what I've read..is Q-5..on the RF board the culprit? Also...it seems
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> > > freq I obtained from the RIF terminal on the RF board...I think
> > indicates that
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> > > there are other problems....as it indicates...7.55MHz and is not
> > steady...but
> > > one problem at a time...Ideas??
> > >
> > >
> > > ntx 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > _____
> > > From: wb7uqu <stilesjoseph@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Wed, December 29, 2010 12:45:37 PM
> > > Subject: [TS-520_820_530_830] TS-520 no rcv
> > >
> > >
> > > Greetings Group,
> > >
> > > Rig:TS-520
> > > Problem: limited/no rcv
> > >
> > > I have the xmit problem fixed(which was not posted..I actually fixed
> > it...by
> > > reading prior posts...yeah..me!!)...but the following is still a
> > problem:
> > >

> > > The rcv seems dead. The AF gain will alter the volume as necessary.
> > I can not
> > > rcv any signals on any band..with the exception of WWV, which as
> > propagation
> > > permits..comes in fine.
> > >
> > > The "CAL" signal can only be heard...but very weak on 7MHz and
> > 3.5MHz. The
> > >other
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> > > bands the "CAL" signal can not be heard at all.
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> > > I have looked at the initial start of a long thread..starting with
> > MSG # 28835.
> > >
> > > I would love to diagnose...repair this myself..but my
> > knowledge..skill..and
> > > equipment are minimal. I have a DVM..with RF detector probe,an RF SIG
> > >GEN..which
> > >
> > > I'm still learning on....and an AF GEN..I'm still learning on..not to
> > > mention...an O'SCOPE..which..well is gonna take some time...ANY
> > help, is as
> > > usual, appreciated!
> > >
> > > Happy New Year.......73's joe wb7uqu
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> > [Non-text portions of this message have been removed]
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> >
>

29111. Re: VBT-1 Test Set for Aligning TS-830S VBT Oscillator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 15:24:23 UTC
From: w5rkl
Topic: 29109 Message: 29111

Terry,

The signal is RF from an RF signal generator.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> Does anyone know what the VBT-1 test set mentioned on Page 38 of the TS-830S service manual is? It appears to be some type of 2 tone AF generator? I just installed full filter pack in my TS-830S gold and want to align the passband windows. I used the method described under the maintenance section of the Survivors Guide to adjust the VBT oscillator and I think I have it close, but would be nice to have access to factory test equipment or to replicate it to perform this alignment.
>
> Thanks and Happy New Year to all
> Terry K9TW
>

29112. Re: TS-830S Digital Display in TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 12:56:29 UTC
From: Mike
Topic: 29095 Message: 29112

Thanks Joe. Ken even says on his web site that he is backed up. Will do that and put 'parts' in the subject line. Happy new year to all here at the forum. I spent all night last night right before new year on my tower changing things around, got a good view of the pyrotechnics. I climbed down at 15 til midnight and only dropped one wrench and 2 washers.

73
mike

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike kj4pom,
>
> Ken, k4eaa is real busy as far as taking rigs in for repair..he's booked
> through FEB 2011. If you want parts...put "PARTS" in the subject line. I think
> he might run a filter on messages. I do know for a fact, as I have gotten
> numerous little stuff from him that, he will usually contact you within 48 hours
> with an invoice if you order from his web site. Other stuff..not sure...I do
> know also that the XYL helps him out. Have a safe New
> Year.....
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, December 31, 2010 9:56:43 AM
> Subject: [TS-520_820_530_830] Re: TS-830S Digital Display in TS-820
>
>
> Hello Mike,
>
> Unfortunately the 830 digital display will not work in an 820. The digital
> display in the 830 is part of the PLL Unit and not a separate display unit like
> the DG-1 for the 820.
>
> If you have parts you need from Ken, send him an e-mail stating what you need.
> He will answer you.
>
> 73s
> Mike
> W5RKL
>

> --- In TS-520_820_530_830@yahoogroups.com, "kj4pom" <kj4pom@> wrote:
> >
> > Would anyone in the group know if the digital readout assembly for the Kenwood
> >TS-830s would work on the TS-820? I want to put an original in my 820 but do
> >not want to pay too much. Neil at 'Almost all digital electronics' www.aade.com
> >has his line of 'digital frequency displays' that I may end up buying, may be
> >better also. One more question: is Ken Kemski K4EAA, the fella who works on the
> >Kenwood hybrids, very busy? I would like to order some parts from him but he
> >does not always reply to all emails. Probably in such huge demand, his inbox
> >always stays flooded. Thank you and Happy New Year.
> >
> > Mike
> > kj4pom
> >
>
>
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>
>
> [Non-text portions of this message have been removed]
>

29113. Re: [TS-520_820_530_830] Re: TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 17:02:09 UTC
From: W8HW
Topic: 29058 Message: 29113

Hello All... Happy New Year. May you and your family be safe.

73, Bruce, W8HW
http://www.qrz.com/callsign/W8HW
w8hw@...
-- Buy or repair 2-way radios --
Commercial 2-way-Marine-Ham-CB-Broadcast

w8hw@...

----- Original Message -----
From: "Ruben Echevarria KA2HHB" <ka2hhb_2000@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, December 31, 2010 11:34 PM
Subject: Re: [TS-520_820_530_830] Re: TS-520 no rcv

> Happy New Year Gordon !!
> And Happy New Year as well to all of the people that are part of this.
> Good Health, Wealth & Happiness to all !!!
> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308
> EPC#3390
> ----- Original Message -----
> From: <n6wk@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, December 31, 2010 11:12 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-520 no rcv
>
>
>>
>> Happy new year Walt, Joe, Mike and to All the members of this Group !!
>>
>> Gordon
>> N6WK
>>
>>
>>
>> On 12/31/2010 8:05 PM, Joseph Stiles wrote:
>>>
>>> Mike,
>>>
>>> I did find TP1...the "1" was partly hidden by a jumper wire...I think
>>> J18
>>> ...I do have the X-ray picture(s)...just gotta remember it's reversed.

>>> I'll be
>>> doing more checking..later...HAPPY NEW YEAR!!! gotta go over to some
>>> friends...
>>>
>>> 73's joe wb7uqu
>>>
>>> _____
>>> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> Sent: Wed, December 29, 2010 9:33:43 PM
>>> Subject: [TS-520_820_530_830] Re: TS-520 no rcv
>>>
>>> Joe and others,
>>>
>>> Not being able to see clearly TP1 on the RF Unit is where the service
>>> manual's
>>> individual PC board "Xray" pictures come into play. The Xray pictures
>>> are
>>> identical to the actual PC boards and make it easier for you to locate
>>> and
>>> connect to the correct component or test point.
>>>
>>> 73s
>>> Mike
>>> W5RKL
>>>
>>> --- In TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
>>> <stilesjoseph@...>
>>> wrote:
>>> >
>>> > Greeting Group,
>>> >
>>> > Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see
>>> TP..but
>>> >the
>>> >
>>> > rest is obscured....but anyway...when I did...the receiver came to
>>> life. From
>>> > what I've read..is Q-5..on the RF board the culprit? Also...it seems
>>> that the
>>> > freq I obtained from the RIF terminal on the RF board...I think
>>> indicates that
>>>
>>> > there are other problems....as it indicates...7.55MHz and is not
>>> steady...but
>>> > one problem at a time...Ideas??
>>> >
>>> >

>>> > ntx 73's joe wb7uqu
>>> >
>>> >
>>> >
>>> >
>>> >
>>> > _____
>>> > From: wb7uqu <stilesjoseph@...>
>>> > To: TS-520_820_530_830@yahoogroups.com
>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>> > Sent: Wed, December 29, 2010 12:45:37 PM
>>> > Subject: [TS-520_820_530_830] TS-520 no rcv
>>> >
>>> >
>>> > Greetings Group,
>>> >
>>> > Rig:TS-520
>>> > Problem: limited/no rcv
>>> >
>>> > I have the xmit problem fixed(which was not posted..I actually fixed
>>> it...by
>>> > reading prior posts...yeah..me!!)...but the following is still a
>>> problem:
>>> >
>>> > The rcv seems dead. The AF gain will alter the volume as necessary.
>>> I can not
>>> > rcv any signals on any band..with the exception of WWV, which as
>>> propagation
>>> > permits..comes in fine.
>>> >
>>> > The "CAL" signal can only be heard...but very weak on 7MHz and
>>> 3.5MHz. The
>>> >other
>>> >
>>> > bands the "CAL" signal can not be heard at all.
>>> >
>>> > I have looked at the initial start of a long thread..starting with
>>> MSG # 28835.
>>> >
>>> > I would love to diagnose...repair this myself..but my
>>> knowledge..skill..and
>>> > equipment are minimal. I have a DVM..with RF detector probe,an RF SIG
>>> >GEN..which
>>> >
>>> > I'm still learning on....and an AF GEN..I'm still learning on..not to
>>> > mention...an O'SCOPE..which..well is gonna take some time...ANY
>>> help, is as
>>> > usual, appreciated!
>>> >
>>> > Happy New Year.......73's joe wb7uqu

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29114. TS-830S reasonable value

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 16:17:33 UTC
From: Mike Maiorana
Topic: 29114 Message: 29114

Hello all. I'm thinking about selling my TS-830S and was hoping to get some input as to a reasonable asking price. I've owned it since I got my ticket in 1997 but never use it. I want to clear the bench space. I would rate it (as subjective as this is) a 9.5 out of 10. The only imperfections are two very small rub marks on the top cover, and the cover screws have been used many times so they look, well, used. The serial number is 1081xxxx (silver face). It has two InRad 400Hz cw filters installed. I also have the SP-230, again in near-mint condition. Everything works as it should.

I'm looking for an asking price that reflects its value, without trying to gouge.

Thanks in advance for any help or advice.
Mike M. KU4QO

[Non-text portions of this message have been removed]

29115. Re: TS-830S reasonable value

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 20:01:54 UTC
From: jon_g4fut
Topic: 29114 Message: 29115

In the UK they fetch around £300, not much more, some a little less, but thats the average.

--- In TS-520_820_530_830@yahoogroups.com, Mike Maiorana <zfreak@...> wrote:
>
> Hello all. I'm thinking about selling my TS-830S and was hoping to get some
> input as to a reasonable asking price. I've owned it since I got my ticket
> in 1997 but never use it. I want to clear the bench space. I would rate it
> (as subjective as this is) a 9.5 out of 10. The only imperfections are two
> very small rub marks on the top cover, and the cover screws have been used
> many times so they look, well, used. The serial number is 1081xxxx (silver
> face). It has two InRad 400Hz cw filters installed. I also have the SP-230,
> again in near-mint condition. Everything works as it should.
>
> I'm looking for an asking price that reflects its value, without trying to
> gouge.
>
> Thanks in advance for any help or advice.
> Mike M. KU4QO
>
>
> [Non-text portions of this message have been removed]
>

29116. Re: [TS-520_820_530_830] TS-520 no rcv

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 20:38:03 UTC
From: Joseph Stiles
Topic: 29058 Message: 29116

John,

Nope...it's not that..this rig may have some deeper problems...may just put it up for a bit

---
From: John Davidson <k8jd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, December 30, 2010 6:00:46 AM
Subject: Re: [TS-520_820_530_830] TS-520 no rcv

Ant relay RX side contact ?

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, December 29, 2010 5:52:00 PM
Subject: Re: [TS-520_820_530_830] TS-520 no rcv

Greeting Group,

Follow-up, injected 7.1MHz sig what apprears to be TP1..I can see TP..but the rest is obscured....but anyway...when I did...the receiver came to life. From what I've read..is Q-5..on the RF board the culprit? Also...it seems that the freq I obtained from the RIF terminal on the RF board...I think indicates that there are other problems....as it indicates...7.55MHz and is not steady...but one problem at a time...Ideas??

ntx 73's joe wb7uqu

From: wb7uqu <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, December 29, 2010 12:45:37 PM
Subject: [TS-520_820_530_830] TS-520 no rcv

Greetings Group,

Rig:TS-520
Problem: limited/no rcv

I have the xmit problem fixed(which was not posted..I actually fixed it...by reading prior posts...yeah..me!!)...but the following is still a problem:

The rcv seems dead. The AF gain will alter the volume as necessary. I can not rcv any signals on any band..with the exception of WWV, which as propagation permits..comes in fine.

The "CAL" signal can only be heard...but very weak on 7MHz and 3.5MHz. The other

bands the "CAL" signal can not be heard at all.

I have looked at the initial start of a long thread..starting with MSG # 28835. I would love to diagnose...repair this myself..but my knowledge..skill..and equipment are minimal. I have a DVM..with RF detector probe,an RF SIG GEN..which

I'm still learning on....and an AF GEN..I'm still learning on..not to mention...an O'SCOPE..which..well is gonna take some time...ANY help, is as usual, appreciated!

Happy New Year.....73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29117. TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 20:48:38 UTC
From: Joseph Stiles
Topic: 29117 Message: 29117

Greetings and Happy New Year..

I know that I can pick-up the "OSC" frequency on my counter from the "HET" connection on the back of a TS-520S..but the 520 has no such provision. Upon looking at schematic of the 520..it appears to be either the "XL" or the "XO" term on the RF board...I have checked both..depends on the band and which terminal..I can get the correct "OSC COIL" freq reading as stated on the manual...some bands no reading..other bands good reading...I can however.. following the procedure in the "book"... adjust the coils to obtain the proper voltage..this is the same 520 with super weak/no receive..even "cal signal" is weak..or not audible...WWV..depending on time of day is strong....ideas??

73's joe wb7uqu

[Non-text portions of this message have been removed]

29118. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-01 22:51:14 UTC
From: w5rkl
Topic: 29117 Message: 29118

Hi Joe,

Happy New Year.

You are checking the frequency counter to the wrong places on the RF Unit for the HET OSC signal. Connect your frequency counter to "TP3" on the RF Unit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings and Happy New Year..
>
> I know that I can pick-up the "OSC" frequency on my counter from the "HET"
> connection on the back of a TS-520S..but the 520 has no such provision. Upon
> looking at schematic of the 520..it appears to be either the "XL" or the "XO"
> term on the RF board...I have checked both..depends on the band and which
> terminal..I can get the correct "OSC COIL" freq reading as stated on the
> manual...some bands no reading..other bands good reading...I can however..
> following the procedure in the "book"... adjust the coils to obtain the proper
> voltage..this is the same 520 with super weak/no receive..even "cal signal" is
> weak..or not audible...WWV..depending on time of day is strong....ideas??
>
> 73's joe wb7uqu
>
>
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>
> [Non-text portions of this message have been removed]
>

29119. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 00:06:34 UTC
From: Joseph Stiles
Topic: 29117 Message: 29119

Mike,

TNX MIKE... have "OSC" frequencies adjusted to specs...except for 28.0 & 28.5. I understand that the OSC coil for that band affects all three of them The spec says for 28.0MHz it should be 36.895..I get 35.895, for 28.5 I get 36.395...however 29.1 is spot on at 37.995...I picked up a TTY sig on 14.200..confirmed with another radio..changing the band switch had no effect..could still rcv the TTY sig..I am getting really confused...and I did not even drink last night.....

What now?

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 1, 2011 2:51:14 PM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Hi Joe,

Happy New Year.

You are checking the frequency counter to the wrong places on the RF Unit for the HET OSC signal. Connect your frequency counter to "TP3" on the RF Unit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings and Happy New Year..
>
> I know that I can pick-up the "OSC" frequency on my counter from the >"HET"
>
> connection on the back of a TS-520S..but the 520 has no such provision. Upon
> looking at schematic of the 520..it appears to be either the "XL" or the "XO"
> term on the RF board...I have checked both..depends on the band and which
> terminal..I can get the correct "OSC COIL" freq reading as stated on the
> manual...some bands no reading..other bands good reading...I can however..
> following the procedure in the "book"... adjust the coils to obtain the proper

> voltage..this is the same 520 with super weak/no receive..even "cal signal" is

> weak..or not audible...WWV..depending on time of day is strong....ideas??
>
> 73's joe wb7uqu
>
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> [Non-text portions of this message have been removed]
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29120. wrong info

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 00:16:06 UTC
From: Joseph Stiles
Topic: 29120 Message: 29120

That TTY sig I can hear on the 520 WAS NOT heard on the other rig...I do not know what it's hearing...as I can not find that signal

sorry for the wrong info joe wb7uqu

[Non-text portions of this message have been removed]

29121. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 03:25:11 UTC
From: Joseph Stiles
Topic: 29117 Message: 29121

REPOST

Mike & group

Connected to TP3...got all OSC COILS to correct freq. except the 10meter segment. Adjusting according the manual..you use 28.5MHz and the other two..28.0 & 29.1 should fall inline..well..all I could get on the 28.5 adjustment was 36.l394MHZ..should be 1Meg higher and the 28.0 was the same 1Mhz lower..but 29.1Mhz was spot on. The "CAL" sig is still barely audible on 2 bands..non existent on the rest..I could hear a TTY sig the VFO (dial)said was on 14.200Mhz..but turning the band switch to any of the other bands..it still received the TTY sig. I tuned another rig to 14.200..and noTTY there or any other band covered by the 520..when XX.200 indicated. I don't have a clue on this one! Ideas?

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 1, 2011 2:51:14 PM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Hi Joe,

Happy New Year.

You are checking the frequency counter to the wrong places on the RF Unit for the HET OSC signal. Connect your frequency counter to "TP3" on the RF Unit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Greetings and Happy New Year..
>
> I know that I can pick-up the "OSC" frequency on my counter from the
>"HET"
>
> connection on the back of a TS-520S..but the 520 has no such provision. Upon
> looking at schematic of the 520..it appears to be either the "XL" or the "XO"
> term on the RF board...I have checked both..depends on the band and which
> terminal..I can get the correct "OSC COIL" freq reading as stated on the
> manual...some bands no reading..other bands good reading...I can however..

> following the procedure in the "book"... adjust the coils to obtain the proper

> voltage..this is the same 520 with super weak/no receive..even "cal signal" is

> weak..or not audible...WWV..depending on time of day is strong....ideas??
>
> 73's joe wb7uqu
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> [Non-text portions of this message have been removed]
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29122. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 04:00:30 UTC
From: Charlie , W5COV
Topic: 29117 Message: 29122

Has someone removed a crystal and replaced it with a CB crystal ?? Very common on 520's to have been either partially or completely changed over to CB and the freeband or whatever they call it frequencies . Might have a look at the crystal frequencies and list them .

73 ,

Charlie , W5COV

[Non-text portions of this message have been removed]

29123. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 05:15:19 UTC
From: w5rkl
Topic: 29117 Message: 29123

I agree, it appears that 28.5Mhz HET OSC crystal 37.395Mhz has been changed to 36.395Mhz for 11 meter operation.

The HET OSC provides the frequency for the first receiver mixer. Here's how the mixing takes place with the current 36.395Mhz crystal in the first receiver mixer. Understand that the 8Mhz signal, 8.895Mhz and 8.395Mhz is within the frequency range of the first mixer output which is the "RIF" signal fed to the IF Unit. I did the conversion "backwards" so you can see how I came up with the correct frequency for the "RIF" signal frequency. This is the easy way to do it. It allows you to tell at a glance whether the HET OSC crystal is factory or a CB Hacker modification! The VFO output frequency varies from 5.500Mhz (bottom of ALL bands) to 5.000Mhz (top of all bands).

1. 36.395 - 8.895 = 27.500Mhz

In example 1 the VFO is tuned to "zero"

2. 36.395 - 8.395 = 28.000Mhz

In example 2 the VFO is tuned to "500".

Both example shown above is how the incoming signal is mixed with the 36.395Mhz HET OSC crystal with the band switch set to 28.5 for the first conversion RIF signal to be between the "required" 8.895Mhz to 8.395Mhz.

The "second" receive mixing occurs on the IF Unit where the VFO signal is mixed with the 8Mhz signal to produce the 3.395Mhz "IF" signal that is applied to the crystal filter.

Lets say the VFO is tuned to "zero". This results in a VFO output frequency of "5.500Mhz". This also results in an "8.895Mhz" "RIF" signal that is applied to the IF Unit. Therefore, the second receive mixer produces the following:

8.895 - 5.500 = 3.395Mhz

As I said the 520's "IF" frequency of 3.395Mhz is then applied to the crystal filter and processed and fed to the GENERATOR UNIT where it is applied to the balanced detector (ring detector) where the audio is recovered. The audio is then applied to the audio amplifier on the AF Unit then fed to the speaker.

You will have to replace the 28.5Mhz HET OSC crystal with a 37.395Mhz crystal to put 28.5Mhz band switch setting back to its original factory frequency.

You should also check the final amplifier PI Network components and connection to ensure there have not been any modifications made. Any modifications/wiring changes must be removed and the final amplifier PI Network wired back to factory wiring.

I hope I have not confused any of you by the example I provided. It is important to understand how the receive and transmit signals are processed and what specific frequency will be at certain positions along the signal path. This will help you troubleshoot such

problems as this.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> REPOST
>
> Mike & group
>
> Connected to TP3...got all OSC COILS to correct freq. except the 10meter
> segment. Adjusting according the manual..you use 28.5MHz and the other
> two..28.0 & 29.1 should fall inline..well..all I could get on the 28.5
> adjustment was 36.l394MHZ..should be 1Meg higher and the 28.0 was the same 1Mhz
> lower..but 29.1Mhz was spot on. The "CAL" sig is still barely audible on 2
> bands..non existent on the rest..I could hear a TTY sig the VFO (dial)said was
> on 14.200Mhz..but turning the band switch to any of the other bands..it still
> received the TTY sig. I tuned another rig to 14.200..and noTTY there or any
> other band covered by the 520..when XX.200 indicated. I don't have a clue on
> this one! Ideas?
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@...m
> Sent: Sat, January 1, 2011 2:51:14 PM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> Hi Joe,
>
> Happy New Year.
>
> You are checking the frequency counter to the wrong places on the RF Unit for
> the HET OSC signal. Connect your frequency counter to "TP3" on the RF Unit.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Greetings and Happy New Year..
> >
> > I know that I can pick-up the "OSC" frequency on my counter from the

> >"HET"
> >
> > connection on the back of a TS-520S..but the 520 has no such provision. Upon
> > looking at schematic of the 520..it appears to be either the "XL" or the "XO"
> > term on the RF board...I have checked both..depends on the band and which
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> > manual...some bands no reading..other bands good reading...I can however..
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> > voltage..this is the same 520 with super weak/no receive..even "cal signal" is
>
> > weak..or not audible...WWV..depending on time of day is strong....ideas??
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> > 73's joe wb7uqu
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29124. Happy New Year everyone

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 05:22:59 UTC
From: Gray Zhu
Topic: 29124 Message: 29124

Dear friends:
Happy New Year everyone!
Sincere thanks to the help you gave me!
GD DX!!!

VY 73!
BH4RCI,Grayzhu

[Non-text portions of this message have been removed]

29125. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 06:08:30 UTC
From: Joseph Stiles
Topic: 29117 Message: 29125

Mike & Charlie,

I never gave that a thought...but guess what? You're right....sure enough two XTAL's X5 & X6 on the OSC board have been changed. I should have been tipped off by the sloppy resolder job on the grounding foil/plate/screws...not to mention the "silver xtal cans" vs the grey plastic coated ones...at least one of the "new" cans has "KENWOOD" printed on it....I do have some of the proper XTALS on a junk 520 I can use for repair...then I'll check the final cage area...then go back to the receive problem...this is getting deep...but a VERY good learning lesson! TNX!!

73's joe wb7uqu

From: "Charlie , W5COV" <cvest@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 1, 2011 8:00:30 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Has someone removed a crystal and replaced it with a CB crystal ?? Very common on 520's to have been either partially or completely changed over to CB and the freeband or whatever they call it frequencies . Might have a look at the crystal frequencies and list them .

73 ,

Charlie , W5COV

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[Non-text portions of this message have been removed]

29126. Happy New Year To All

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 07:00:15 UTC
From: alancgut
Topic: 29126 Message: 29126

Hello,
To all have a happy and prosperous new year. I have really had a lot of fun troubleshooting and working on the "new" TS-830S here and have a lot of help from this group -- especially Mike W5RKL -- what a fine example of selfless contribution to the amateur community. 73 to all. WB2FZC, Alan

29127. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 15:09:08 UTC
From: w5rkl
Topic: 29117 Message: 29127

Morning Joe,

The individual band ANT COIL Unit coils are wired in "series". Adjusting of each coil is performed in a specific order.

Since we now know that the 520 has been modified for 11 meter operation, the ANT COIL Unit alignment is more than likely "out of alignment" which can easily affect receive. We also do not know what other changes/modifications have been done. Therefore a thorough visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit boards should be done using the 520 service manual's RF UNIT schematic as your guide.

You said the soldering of the board was poor. I recommend checking the solder connections to be sure they are done properly. A fault ground due to poor soldering can affect how the coils in the ANT, MIXER, and DRIVER are working. A poor solder connection may show a good "DC" indication but will fail or present a high resistance to RF.

In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a specific order as outlined on page 40 of the 520 service manual. Therefore, once you replace the 10 meter HET OSC CB crystals with the correct HET OSC crystals, I recommend you perform an alignment starting on page 39 of the 520 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & Charlie,
>
> I never gave that a thought...but guess what? You're right....sure enough
> two XTAL's X5 & X6 on the OSC board have been changed. I should have been
> tipped off by the sloppy resolder job on the grounding foil/plate/screws...not
> to mention the "silver xtal cans" vs the grey plastic coated ones...at least one
> of the "new" cans has "KENWOOD" printed on it....I do have some of the proper
> XTALS on a junk 520 I can use for repair...then I'll check the final cage
> area...then go back to the receive problem...this is getting deep...but a VERY
> good learning lesson! TNX!!
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "Charlie , W5COV" <cvest@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Sat, January 1, 2011 8:00:30 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> Has someone removed a crystal and replaced it with a CB crystal ?? Very common
> on 520's to have been either partially or completely changed over to CB and the
> freeband or whatever they call it frequencies . Might have a look at the crystal
> frequencies and list them .
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> 73 ,
>
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>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29128. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 18:54:32 UTC
From: Leslie Smith
Topic: 29117 Message: 29128

Morning Joe/Mike,
I have been following the case with interest. I note your comments (Joe) that the soldering has been poorly done and (2) Mike that the front end may be out of alignment.

I ask: Was the set known to be working in the citizens band? I offer the possibility that an unknown person began to modify your set for CB operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain ability - and the poor solder joints observed may indicate that was lacking.

Good success & 73s

Les
ex VK2BCU

----- Original Message -----
From: "w5rkl"
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
Date: Sun, 02 Jan 2011 15:09:08 -0000

Morning Joe,

The individual band ANT COIL Unit coils are wired in "series". Adjusting of each coil is performed in a specific order.

Since we now know that the 520 has been modified for 11 meter operation, the ANT COIL Unit alignment is more than likely "out of alignment" which can easily affect receive. We also do not know what other changes/modifications have been done. Therefore a thorough visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit boards should be done using the 520 service manual's RF UNIT schematic as your guide.

You said the soldering of the board was poor. I recommend checking the solder connections to be sure they are done properly. A fault ground due to poor soldering can affect how the coils in the ANT, MIXER, and DRIVER are working. A poor solder connection may show a good "DC" indication but will fail or present a high resistance to RF.

In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a specific order as outlined on page 40 of the 520 service manual. Therefore, once you replace the 10 meter HET OSC CB crystals with the correct HET OSC crystals, I recommend you perform an alignment starting on page 39 of the 520 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles
<stilesjoseph@...> wrote:
>
> Mike & Charlie,
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> I never gave that a thought...but guess what? You're right....sure
enough
> two XTAL's X5 & X6 on the OSC board have been changed. I should
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> To: TS-520_820_530_830@yahoogroups.com
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> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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Download Opera 9 at http://www.opera.com

[Non-text portions of this message have been removed]

29129. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 19:04:02 UTC
From: Joseph Stiles
Topic: 29117 Message: 29129

Mike...good morning to you too.....

I did some wire tracing already...and there are some things that are rewired..the signal wires to/from the XVERTER in and out jacks..for starters..but one at a time....I wish that I could to a FULL alignment..but 1. Don't have all the needed equipment and, 2. Do not have the SKILL level..yet...but getting there. My local club may be a good place...just have to rejoin...kinda got of of the "CLUB THING" many years ago...too young I guess...but NOW...since I'm older and wiser.....boy this is a bad way to start of the New Year...lying like that.....older yes...wiser....?????

as always..TNX 73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 2, 2011 7:09:08 AM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Morning Joe,

The individual band ANT COIL Unit coils are wired in "series". Adjusting of each coil is performed in a specific order.

Since we now know that the 520 has been modified for 11 meter operation, the ANT COIL Unit alignment is more than likely "out of alignment" which can easily affect receive. We also do not know what other changes/modifications have been done. Therefore a thorough visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit boards should be done using the 520 service manual's RF UNIT schematic as your guide.

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W5RKL

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29130. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 19:21:28 UTC
From: Joseph Stiles
Topic: 29117 Message: 29130

Les,

The resoldering job...I should say was not...say cold solder...just a bit more glob-like and bright..versus the more professional "factory look" which also has dulled with time. Also, I could hear signals...but could not cross reference them with another receiver..the 520 seemed to be "stuck" on/around the 11meter band...as changing the band switch had no effect. I do have to commend...to a point..the person who took this rig partly apart..as you might know...its a real pain to get those boards out...and get back together...but I guess I'll deal with one at a time...who know...a miracle MAY occur..

73's mate joe wb7uqu

From: Leslie Smith <vk2bcu@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 2, 2011 10:54:32 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Morning Joe/Mike,
I have been following the case with interest. I note your comments (Joe) that the soldering has been poorly done and (2) Mike that the front end may be out of alignment.

I ask: Was the set known to be working in the citizens band? I offer the possibility that an unknown person began to modify your set for CB operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain ability - and the poor solder joints observed may indicate that was lacking.

Good success & 73s

Les
ex VK2BCU

----- Original Message -----
From: "w5rkl"
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
Date: Sun, 02 Jan 2011 15:09:08 -0000

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73s
Mike
W5RKL

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> Sent: Sat, January 1, 2011 8:00:30 PM
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29131. Re: TS-830S reasonable value

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 19:34:45 UTC
From: rkersey tds.net
Topic: 29114 Message: 29131

Hi Mike,

I would check the various classified and auction sites and see what they are asking/getting. On ebay, if you are registered, you can check "completed items" in the left menu and get a summary of completed auctions for your items and also a summary of those offered for sale which were not sold (did not reach reserve bid). In addition to ebay I would check qth.com and qrz.com. There may be others of which I am ignorant.

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29132. Re: [TS-520_820_530_830] Re: VBT-1 Test Set for Aligning TS-830S VBT Oscillator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 21:17:42 UTC
From: Terry Wagoner
Topic: 29109 Message: 29132

Mike--I think you are right as they are putting input from this VBT-1 set into IF jack on back of rig. If it was audio they would be going into the mike connector on the front. The waveform they show looks like 2 tone test. I see that Elecraft has a 2-tone generator kit that I might consider building. Richard Measures method described in the Survivors Guide uses the 25 khz calibrator and I think I got it pretty close doing it his way. Only thing that now seems a little off is the IF shift. It is not equal in both directions of the pot. I am looking at the effects of the VBT pot and the IF shift pot on the passband using a audio spectrum analyzer software I downloaded called Spectogram. You take audio from headphone jack thru a homebrew padder and connect to your laptop thru the sound card line input. Kind of fun to see this. Thanks for responding. I suspect not too many hams purchased the VBT-1 test set or if it was even available for sale from Kenwood? Thanks Mike for responding. Terry K9TW

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 1, 2011 10:24:23 AM
Subject: [TS-520_820_530_830] Re: VBT-1 Test Set for Aligning TS-830S VBT Oscillator

Terry,

The signal is RF from an RF signal generator.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> Does anyone know what the VBT-1 test set mentioned on Page 38 of the TS-830S
>service manual is? It appears to be some type of 2 tone AF generator? I just
>installed full filter pack in my TS-830S gold and want to align the passband
>windows. I used the method described under the maintenance section of the
>Survivors Guide to adjust the VBT oscillator and I think I have it close, but
>would be nice to have access to factory test equipment or to replicate it to
>perform this alignment.
>
> Thanks and Happy New Year to all
> Terry K9TW
>

[Non-text portions of this message have been removed]

29133. Re: TS-830S reasonable value

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 21:44:28 UTC
From: Ger
Topic: 29114 Message: 29133

Mike,

The 830S including the Inrad CW filters and in collectors item condition should go between 450 - 500 USS. The SP-230 in perfect condition around 100 - 125 USS. When you search all the second hands sites like ebay, qrz.com etc. you will see these prices.

Good luck with the sell. 73's Ger PE1CZG

--- In TS-520_820_530_830@yahoogroups.com, Mike Maiorana <zfreak@...> wrote:
>
> Hello all. I'm thinking about selling my TS-830S and was hoping to get some
> input as to a reasonable asking price. I've owned it since I got my ticket
> in 1997 but never use it. I want to clear the bench space. I would rate it
> (as subjective as this is) a 9.5 out of 10. The only imperfections are two
> very small rub marks on the top cover, and the cover screws have been used
> many times so they look, well, used. The serial number is 1081xxxx (silver
> face). It has two InRad 400Hz cw filters installed. I also have the SP-230,
> again in near-mint condition. Everything works as it should.
>
> I'm looking for an asking price that reflects its value, without trying to
> gouge.
>
> Thanks in advance for any help or advice.
> Mike M. KU4QO
>
>
> [Non-text portions of this message have been removed]
>

29134. Re: VBT-1 Test Set for Aligning TS-830S VBT Oscillator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 21:50:01 UTC
From: w5rkl
Topic: 29109 Message: 29134

Any signal injected to or taken from the IF Unit as described in the service manual VBT adjustment is "RF" not "AF".

The only "AF" signal(s) in the IF Unit are the result of "audio recovery" by the "balanced detector" on the IF Unit. The "recovered audio" signal is then fed "from" the IF Unit "to" the AF Unit to be applied to the audio amplifier and heard in the speaker.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
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> IF jack on back of rig. If it was audio they would be going into the mike
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 1, 2011 10:24:23 AM
> Subject: [TS-520_820_530_830] Re: VBT-1 Test Set for Aligning TS-830S VBT
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29135. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 21:46:16 UTC
From: w5rkl
Topic: 29117 Message: 29135

You said changing the VFO and band switch does not affect the "ghost" or "phantom" signal. If I am wrong then please correct me.

This could be caused by improperly adjusted series and parallel "traps" (L11/C51 and L5/C34). L3 on the ANT COIL UNIT is another trap that if improperly adjusted could lead to improper operation. If removing the antenna causes the "ghost" or "phantom" signals to disappear then the signals are coming into the 520 from the antenna. That's why I said to perform a thorough alignment after you are sure any wiring changes and mods have been removed and the 520 is back to it's factory state.

While it's possible a previous owner, a CB hacker, or a CB hacker "wanna-be" tried to modify the 520 and didn't finish, it is obvious there were other wiring changes that have been done. This is why I said to do a thorough visual inspection of the 520 using the 520 schematic as a guide. You have no idea what has been done to this 520 by a previous owner or CB hacker. These types of problems unfortunately take a lot of time to do. One needs to think "outside the box" when troubleshooting these types of problems. As I say quite often, don't assume anything, verify it to be sure.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> Les,
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> From: Leslie Smith <vk2bcu@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, January 2, 2011 10:54:32 AM

> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> Date: Sun, 02 Jan 2011 15:09:08 -0000
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, January 1, 2011 8:00:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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29136. Re: Mundane question about panel bulbs

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-02 23:35:42 UTC
From: Rob
Topic: 28998 Message: 29136

HNY 2011!
I still cannot get the lumens or candlepower on the panel bulb with a 12v bulb! I see video on YouTube with a TS820s, and the VFO lamp bulb is very bright! Mine is a sort of dim version of same...the smeter is b right and cheery.

Guess the grain of rice bulbs from the STates will be needed.

thanks in advance for tips...
73
Rob. XE1GXG

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Rob,
>
> If the bulb was replaced sometime in the past, the previous owner may
> have used a higher voltage bulb. These are common in the model train (16v -
> sometimes 24v) hobby and are the right size, just not the right voltage. Which
> will help the bulb last a REAL long time...just poor light output (foot candles
> or lumens) For an example of how many small "grain of rice, or grain of wheat"
> bulbs that are out there.."GOOGLE" it sometime. I found the best source and the
> cheapest (really) is Ken Kemski..k4eaa.com, or your local hobby shop...just
> insist on the correct voltage...after all...the originals are still functioning
> in many rigs..even after about 30 years.
>
> Happy Holidays 73's joe wb7uqu
>
>
>
>
> _____
> From: Rob <barnardbaca@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, December 25, 2010 12:24:22 PM
> Subject: [TS-520_820_530_830] Re: Mundane question about panel bulbs
>
>
> Hi Mike: Merry Christmas! I mentioned the fact that the unit is an 820, not an
> 820s; I realise they are the same same for the DG readout. Well the VFO panel
> bulb is set in its mount quite snugly! It is wired up to voltage source
> properly, too. Maybe not an appropriate bulb?
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > No, your dial lamp problem is not normal. It appears the dial lamp behind the
> >front panel and in front of the VFO has come loose from its mount.

> >
> > The model number, 820 or 820S has nothing to do with this problem. The dial
> >lamps are the same in the 820 as they are in the 820S.
> >
> > Set the 820 on the bench with the front panel facing you.
> >
> > Remove the top cover, being careful not to break in the internal speaker
> cable.
> >
> > Set the top cover off to the right side with the speaker cable still connected.
> >The right side doesn't "stretch" the speaker cable. Make sure the top cover is
> >not touching the RF Unit PC board and DRIVE variable capacitors.
> >
> > Power up the 820 and look behind the front panel, between the VFO and the front
> >panel, and you should see the dial lamp lit. More than lightly it is has come
> >loose from it's mount.
> >
> > You can fix the problem by removing the VFO or by removing the VFO tuning knob,
> >bearing, VFO fact plate, and dials.
> >
> >
> > The 820's service manual has the removal procedures. You can download the 820
> >service manual on Gordon's website
> >
> > www.n6wk.com/kenwood/
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Rob" <barnardbaca@> wrote:
> > >
> > > My TS820's S-meter and VFO dial lamps work fine; they are replacement
> >lamplets I put in some time ago, procured from local electronic part shops here
> >in Guadalajara. BUT...
> > >
> > > The S-meter is bright and highly readable. The lamp that sits behind the VFO
> >dial really doesn't do much to highlight the face of dial. Must use a table lamp
> >to front-light the radio. This is NOT the TS-820S BTW.
> > >
> > > Is this normal? I notice when dial is spun to around 350-400kcs (any band of
> >course) more light "passes" through.
> > >
> > > --Merry Christmas/Holidays to all
> > >

> > > XE1GXG
> > >
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29137. TS-830S Parts needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 02:19:34 UTC
From: n6wk_skcc3
Topic: 29137 Message: 29137

I am in need of a PLL board and a Counter board for a TS-830S.
I also need the AF control Knob.

Please email me off list if you can help.

Thanks,
Gordon
N6WK

29138. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 03:14:44 UTC
From: Joseph Stiles
Topic: 29117 Message: 29138

Les,

I do not remember if it was known to work on the CB band or not It's been stuck back in the closet...and a couple of week ago..it's....hey..what's this box? I am progressing on the diagnosis/repair thanks to Mike, w5rkl and, others.....I will continue to post updates...and as usual ask a bunch of questions....

73's joe wb7uqu

From: Leslie Smith <vk2bcu@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 2, 2011 10:54:32 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Morning Joe/Mike,
I have been following the case with interest. I note your comments (Joe) that the soldering has been poorly done and (2) Mike that the front end may be out of alignment.

I ask: Was the set known to be working in the citizens band? I offer the possibility that an unknown person began to modify your set for CB operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain ability - and the poor solder joints observed may indicate that was lacking.

Good success & 73s

Les
ex VK2BCU

----- Original Message -----
From: "w5rkl"
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
Date: Sun, 02 Jan 2011 15:09:08 -0000

Morning Joe,

The individual band ANT COIL Unit coils are wired in "series". Adjusting of each coil is performed in a specific order.

Since we now know that the 520 has been modified for 11 meter operation, the ANT COIL Unit alignment is more than likely "out of alignment" which can easily affect receive. We also do not know what other changes/modifications have been done. Therefore a thorough visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit

boards should be done using the 520 service manual's RF UNIT schematic as your guide.

You said the soldering of the board was poor. I recommend checking the solder connections to be sure they are done properly. A fault ground due to poor soldering can affect how the coils in the ANT, MIXER, and DRIVER are working. A poor solder connection may show a good "DC" indication but will fail or present a high resistance to RF.

In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a specific order as outlined on page 40 of the 520 service manual. Therefore, once you replace the 10 meter HET OSC CB crystals with the correct HET OSC crystals, I recommend you perform an alignment starting on page 39 of the 520 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & Charlie,
>
> I never gave that a thought...but guess what? You're right....sure enough
> two XTAL's X5 & X6 on the OSC board have been changed. I should have been
> tipped off by the sloppy resolder job on the grounding foil/plate/screws...not
> to mention the "silver xtal cans" vs the grey plastic coated ones...at least one
> of the "new" cans has "KENWOOD" printed on it....I do have some of the proper
> XTALS on a junk 520 I can use for repair...then I'll check the final cage
> area...then go back to the receive problem...this is getting deep...but a VERY
> good learning lesson! TNX!!
>
> 73's joe wb7uqu
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>
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> _____
> From: "Charlie , W5COV" <cvest@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 1, 2011 8:00:30 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

>
>
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Very common
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29139. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 13:01:20 UTC
From: ki4ax
Topic: 29117 Message: 29139

JOe,

I have been following along with the problems and post with your TS-520. I really don't have anything to add or suggest but did notice something in your posts that I am curious about; not sure it has any bearing on your situation or not. A few post back you mentioned that there were two crystals that appeared to have been changed....X5 & X6 on the OSC board. I have a TS-520 that was modified for 11m and as far as I know there was only (1) crystal that was changed. Perhaps some of the other guys in the group might know more about the modification, but why (2) crystals? Is changing (2) required for the modification or did something go bad and get changed? Perhaps verification of the freq. of the 2nd crystal is inorder? Also, as I think you already know, inorder to change the crystal they would have had to disassembled the coil pack. It appears that the disassembly/ reassembly process is very tidious. I would verify that the coil pack has been reassembled propery. I would bet that even the length and position of the spacers would affect the operation of the OSC and coils. Just some thoughts on your situation.

Dan KI4AX

TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & Charlie,
>
> I never gave that a thought...but guess what? You're right....sure enough
> two XTAL's X5 & X6 on the OSC board have been changed. I should have been
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> Sent: Sat, January 1, 2011 8:00:30 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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29140. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 15:37:16 UTC
From: w5rkl
Topic: 29117 Message: 29140

Joe, Les, and others,

The original CB band starts at 26.965 for channel "1" and ends at 27.405 for channel "40". You can see the individual change frequencies at the following website.

http://www.firestik.com/Tech_Docs/CBFREQ.htm

You will notice that each channel has a 10Khz space between each channel but not all channels have the same 10Khz spacing, some are spaced "15Khz" apart such as between channels 3 and 4, channels 11 and 12, and so on.

Ham gear, such as the TS-520, that has been modified to operate on 11 meters typically changes the 28.0 and 28.5 band switch HET OSC crystals. This provides the CB operator a range of frequencies from 27.0Mhz to 28.0Mhz, a 1Mhz range of frequencies! When modified, the TS-520 VFO is NOT channalized but rather "variable between any frequency from 27.0Mhz to 28.0Mhz is available to the operator!

I won't repeat what I said in an earlier response, how the mixing process occurs and how each mixer's output produces the desired signal at certain points along the signal path and how the HET OSC crystal affects both transmit and receive mising.

When the modifications are performed, the appropriate HET OSC coil and DRIVER coils must be readjusted. This will affect the 520's 10 meter receive and transmit when the CB Hacker crystals are replaced with the original ham band 10 meter HET OSC crystals! The CBer, in most cases, not all, is not interested in the other bands. He/she is only interested in talking to his buddies on 27Mhz to 28Mhz.

It's not a simple matter of only replacing the HET OSC crystals then starting transmitting on 10 meters again! I have said a number of times that a thorough inspection, after replacing the CB HET OSC crystals with the proper ham band crystals, should be done. I say this because you do NOT know what has been done to the 520 other than changing the HET OSC crystals! You also do not know the skill of the person doing the modification either! Most CB mods to the 520 only adjust the HET OSC Coil and driver coils for the bands they modified. When that happens it upsets the entire receiver and driver Coil Pack which affects ALL bands! This is why I say an alignment should be done, to ensure the 520 is operating at peak performance after installing the original HET OSC crystals! As I always say, never assume anything, always check and make adjustment as needed to be sure!

73s
Mike
W5RKL

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> I do not remember if it was known to work on the CB band or not It's been

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> From: Leslie Smith <vk2bcu@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, January 2, 2011 10:54:32 AM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> Morning Joe/Mike,
> I have been following the case with interest. I note your comments (Joe)
> that the soldering has been poorly done and (2) Mike that the front end
> may be out of alignment.
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> I ask: Was the set known to be working in the citizens band? I offer
> the possibility that an unknown person began to modify your set for CB
> operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain
> ability - and the poor solder joints observed may indicate that was
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>
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> ex VK2BCU
>
> ----- Original Message -----
> From: "w5rkl"
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> Date: Sun, 02 Jan 2011 15:09:08 -0000
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>
>
> Morning Joe,
>
> The individual band ANT COIL Unit coils are wired in "series".
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> operation, the ANT COIL Unit alignment is more than likely "out of
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> visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
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> schematic as your guide.
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> You said the soldering of the board was poor. I recommend checking
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> > Sent: Sat, January 1, 2011 8:00:30 PM
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29141. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 21:42:33 UTC
From: Joseph Stiles
Topic: 29117 Message: 29141

Mike & group,

Well..here's the news..replaced the "hack" xtals with the proper ones...thank GOD I had an un-rap/rap tool. Put it back together...and...prayed..hit the power switch...and power...but no audio...I can however I can turn on the JJY/WWV switch and rcv WWV ...adjusting the AF gain here works fine....just nothing...when JJY/WWV switch not on.. DEAD.I think for now..I'll put it up...and take a breather.. I can not detect any overt changes except for what was stated in prior messages. This is currently beyond my skill/equipment level...so unless someone out there...has any ideas..it's going back to the closet for awhile.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 7:37:16 AM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

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> >
> > Has someone removed a crystal and replaced it with a CB crystal ??
> Very common
> > on 520's to have been either partially or completely changed over
> to CB and the
> > freeband or whatever they call it frequencies . Might have a look
> at the crystal
> > frequencies and list them .
> >
> > 73 ,
> >
> > Charlie , W5COV
> >
> > [Non-text portions of this message have been removed]
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> --
> ____
> Surf the Web in a faster, safer and easier way:
> Download Opera 9 at http://www.opera.com
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29142. TS_530 VFO DRIFT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 22:22:17 UTC
From: kd5utc
Topic: 29142 Message: 29142

i have to keep radio on to stop the vfo from drifting what does it take o stop the drift on it.

KD5UTC Thank You

29143. RE: [TS-520_820_530_830] TS_530 VFO DRIFT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 23:29:07 UTC
From: Greg Anders
Topic: 29142 Message: 29143

There are several tricks to reduce drift, however in the 530 and 830 the VFO main capacitor was a problem itself. Somewhere in the production run between the 820S and the newever 530/830 Kenwood changed vendors. The earlier 820 radios had a capacitor with phenolic spacers between the rotor/stator plates. They went to a different capacitor with "plastic". The plastic reacts differently with temperature. So, someone here on the list may have some good hints, however I found only one solution in the three 830s I owned at various times over the past 20 years. A "huff-n-puff" VFO stabilizer kit. Google it and you can learn all about them and find folks still selling the kits.

Just my $.02,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of kd5utc
Sent: Monday, January 03, 2011 2:22 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS_530 VFO DRIFT

i have to keep radio on to stop the vfo from drifting what does it take o stop the drift on it.

KD5UTC Thank You

[Non-text portions of this message have been removed]

29144. Re: [TS-520_820_530_830] TS_530 VFO DRIFT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-03 23:32:07 UTC
From: n6wk@n6wk.com
Topic: 29142 Message: 29144

I would start by loosening and re-tightening all the screws that hold
the boards down.
Next I would make sure the 9 volt and the 3.6 volt circuits are adjusted
right on the money on the AVR board. (the screws on the AVR board are
very important to be tight)
Loose grounds (screws) on the boards are the biggest cause of drifting
from what I have found.

73,
Gordon

On 1/3/2011 2:22 PM, kd5utc wrote:
>
> i have to keep radio on to stop the vfo from drifting what does it
> take o stop the drift on it.
>
> KD5UTC Thank You
>
>

29145. RE: [TS-520_820_530_830] TS_530 VFO DRIFT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 00:40:20 UTC
From: Jan
Topic: 29142 Message: 29145

Try this guy for VFO stabilizer kit. He used to have them

http://www.hanssummers.com/

73

Jan - LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Greg Anders
Sent: Tuesday, January 04, 2011 12:29 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] TS_530 VFO DRIFT

There are several tricks to reduce drift, however in the 530 and 830 the VFO main capacitor was a problem itself. Somewhere in the production run between the 820S and the newever 530/830 Kenwood changed vendors. The earlier 820 radios had a capacitor with phenolic spacers between the rotor/stator plates. They went to a different capacitor with "plastic".
The plastic reacts differently with temperature. So, someone here on the list may have some good hints, however I found only one solution in the three 830s I owned at various times over the past 20 years. A "huff-n-puff" VFO stabilizer kit. Google it and you can learn all about them and find folks still selling the kits.

Just my $.02,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of kd5utc
Sent: Monday, January 03, 2011 2:22 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] TS_530 VFO DRIFT

i have to keep radio on to stop the vfo from drifting what does it take o stop the drift on it.

KD5UTC Thank You

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[Non-text portions of this message have been removed]

29146. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 00:50:04 UTC
From: Joseph Stiles
Topic: 29117 Message: 29146

Dan,

X5 & X6 on the OSC board were both changed during the "MOD." I removed the board...that was fun..and the "cans" had their freqs imprinted on the outside...both were 1MHz lower that what schematic indicated they should be. All other xtals are as stated in the schematic. I am not as yet very good at diagnosis/troubleshooting/repair...somethings.. for now.. are beyond my skill/equipment level. There is some other stuff going on...but, I think for now..it's going to go back in the closet..maybe when I take it out...it will cooperate! hi hi

73's joe wb7uqu

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 5:01:20 AM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

JOe,

I have been following along with the problems and post with your TS-520. I really don't have anything to add or suggest but did notice something in your posts that I am curious about; not sure it has any bearing on your situation or not. A few post back you mentioned that there were two crystals that appeared to have been changed....X5 & X6 on the OSC board. I have a TS-520 that was modified for 11m and as far as I know there was only (1) crystal that was changed. Perhaps some of the other guys in the group might know more about the modification, but why (2) crystals? Is changing (2) required for the modification or did something go bad and get changed? Perhaps verification of the freq. of the 2nd crystal is inorder? Also, as I think you already know, inorder to change the crystal they would have had to disassembled the coil pack. It appears that the disassembly/ reassembly process is very tidious. I would verify that the coil pack has been reassembled propery. I would bet that even the length and position of the spacers would affect the operation of the OSC and coils. Just some thoughts on your situation.

Dan KI4AX

TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & Charlie,
>
> I never gave that a thought...but guess what? You're right....sure enough

> two XTAL's X5 & X6 on the OSC board have been changed. I should have been
> tipped off by the sloppy resolder job on the grounding foil/plate/screws...not

> to mention the "silver xtal cans" vs the grey plastic coated ones...at least
>one
>
> of the "new" cans has "KENWOOD" printed on it....I do have some of the proper
> XTALS on a junk 520 I can use for repair...then I'll check the final cage
> area...then go back to the receive problem...this is getting deep...but a VERY

> good learning lesson! TNX!!
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "Charlie , W5COV" <cvest@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 1, 2011 8:00:30 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> Has someone removed a crystal and replaced it with a CB crystal ?? Very common

> on 520's to have been either partially or completely changed over to CB and the
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> freeband or whatever they call it frequencies . Might have a look at the
>crystal
>
> frequencies and list them .
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> 73 ,
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> Charlie , W5COV
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29147. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 01:03:00 UTC
From: n6wk@n6wk.com
Topic: 29117 Message: 29147

Joe,
It sounds like Q5 on the RF board is bad since WWV goes through Q9,
but BEWARE, I have had a 520 thru here that was backwards from the
Schematic. Q5 was for WWV and Q9 was for normal operation.
You need to check them both. I'll bet one is Bad causing your no
reception other then WWV

73,
Gordon
N6WK

On 1/3/2011 1:42 PM, Joseph Stiles wrote:
>
> Mike & group,
>
> Well..here's the news..replaced the "hack" xtals with the proper
> ones...thank
> GOD I had an un-rap/rap tool. Put it back together...and...prayed..hit
> the power
> switch...and power...but no audio...I can however I can turn on the
> JJY/WWV
> switch and rcv WWV ...adjusting the AF gain here works fine....just
> nothing...when JJY/WWV switch not on.. DEAD.I think for now..I'll put it
> up...and take a breather.. I can not detect any overt changes except
> for what
> was stated in prior messages. This is currently beyond my skill/equipment
> level...so unless someone out there...has any ideas..it's going back
> to the
> closet for awhile.
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, January 3, 2011 7:37:16 AM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
> Joe, Les, and others,
>
> The original CB band starts at 26.965 for channel "1" and ends at
> 27.405 for
> channel "40". You can see the individual change frequencies at the
> following

> website.
>
> http://www.firestik.com/Tech_Docs/CBFREQ.htm
>
> You will notice that each channel has a 10Khz space between each
> channel but not
> all channels have the same 10Khz spacing, some are spaced "15Khz"
> apart such as
> between channels 3 and 4, channels 11 and 12, and so on.
>
> Ham gear, such as the TS-520, that has been modified to operate on 11
> meters
> typically changes the 28.0 and 28.5 band switch HET OSC crystals. This
> provides
> the CB operator a range of frequencies from 27.0Mhz to 28.0Mhz, a 1Mhz
> range of
> frequencies! When modified, the TS-520 VFO is NOT channalized but rather
> "variable between any frequency from 27.0Mhz to 28.0Mhz is available
> to the
> operator!
>
> I won't repeat what I said in an earlier response, how the mixing
> process occurs
> and how each mixer's output produces the desired signal at certain
> points along
> the signal path and how the HET OSC crystal affects both transmit and
> receive
> mising.
>
> When the modifications are performed, the appropriate HET OSC coil and
> DRIVER
> coils must be readjusted. This will affect the 520's 10 meter receive and
> transmit when the CB Hacker crystals are replaced with the original
> ham band 10
> meter HET OSC crystals! The CBer, in most cases, not all, is not
> interested in
> the other bands. He/she is only interested in talking to his buddies
> on 27Mhz to
> 28Mhz.
>
> It's not a simple matter of only replacing the HET OSC crystals then
> starting
> transmitting on 10 meters again! I have said a number of times that a
> thorough
> inspection, after replacing the CB HET OSC crystals with the proper
> ham band
> crystals, should be done. I say this because you do NOT know what has
> been done
> to the 520 other than changing the HET OSC crystals! You also do not
> know the

> skill of the person doing the modification either! Most CB mods to the
> 520 only
> adjust the HET OSC Coil and driver coils for the bands they modified.
> When that
> happens it upsets the entire receiver and driver Coil Pack which
> affects ALL
> bands! This is why I say an alignment should be done, to ensure the
> 520 is
> operating at peak performance after installing the original HET OSC
> crystals! As
> I always say, never assume anything, always check and make adjustment
> as needed
> to be sure!
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...>
> wrote:
> >
> > Les,
> >
> > I do not remember if it was known to work on the CB band or not It's
> been
> > stuck back in the closet...and a couple of week
> ago..it's....hey..what's this
> > box? I am progressing on the diagnosis/repair thanks to Mike, w5rkl
> and,
> > others.....I will continue to post updates...and as usual ask a
> bunch of
> > questions....
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> > _____
> > From: Leslie Smith <vk2bcu@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sun, January 2, 2011 10:54:32 AM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
> >
> > Morning Joe/Mike,
> > I have been following the case with interest. I note your comments (Joe)

> > that the soldering has been poorly done and (2) Mike that the front end
> > may be out of alignment.
> >
> > I ask: Was the set known to be working in the citizens band? I offer
> > the possibility that an unknown person began to modify your set for CB
> > operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain
> > ability - and the poor solder joints observed may indicate that was
> > lacking.
> >
> > Good success & 73s
> >
> > Les
> > ex VK2BCU
> >
> > ----- Original Message -----
> > From: "w5rkl"
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > Date: Sun, 02 Jan 2011 15:09:08 -0000
> >
> >
> >
> > Morning Joe,
> >
> > The individual band ANT COIL Unit coils are wired in "series".
> > Adjusting of each coil is performed in a specific order.
> >
> > Since we now know that the 520 has been modified for 11 meter
> > operation, the ANT COIL Unit alignment is more than likely "out of
> > alignment" which can easily affect receive. We also do not know what
> > other changes/modifications have been done. Therefore a thorough
> > visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
> > boards should be done using the 520 service manual's RF UNIT
> > schematic as your guide.
> >
> > You said the soldering of the board was poor. I recommend checking
> > the solder connections to be sure they are done properly. A fault
> > ground due to poor soldering can affect how the coils in the ANT,
> > MIXER, and DRIVER are working. A poor solder connection may show a
> > good "DC" indication but will fail or present a high resistance to
> > RF.
> >
> > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > specific order as outlined on page 40 of the 520 service manual.
> > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > correct HET OSC crystals, I recommend you perform an alignment
> > starting on page 39 of the 520 service manual.
> >
> > 73s

> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > <stilesjoseph@> wrote:
> > >
> > > Mike & Charlie,
> > >
> > > I never gave that a thought...but guess what? You're right....sure
> > enough
> > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > have been
> > > tipped off by the sloppy resolder job on the grounding
> > foil/plate/screws...not
> > > to mention the "silver xtal cans" vs the grey plastic coated
> > ones...at least one
> > > of the "new" cans has "KENWOOD" printed on it....I do have some of
> > the proper
> > > XTALS on a junk 520 I can use for repair...then I'll check the
> > final cage
> > > area...then go back to the receive problem...this is getting
> > deep...but a VERY
> > > good learning lesson! TNX!!
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > > _____
> > > From: "Charlie , W5COV" <cvest@>
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
> > >
> > > Has someone removed a crystal and replaced it with a CB crystal ??
> > Very common
> > > on 520's to have been either partially or completely changed over
> > to CB and the
> > > freeband or whatever they call it frequencies . Might have a look
> > at the crystal
> > > frequencies and list them .
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> > > 73 ,
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> > > Charlie , W5COV
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> > > [Non-text portions of this message have been removed]
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29148. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 01:15:45 UTC
From: james27613
Topic: 29117 Message: 29148

Hi Joe,

Good luck with getting your 520 back in the bands.

Please be sure to document your work, even a few
photos uploaded to the Photo section of the group
can help others with similar repairs.

Note that there was a Kenwood documented modification
to the transverter connection per the TV-502 manual pg 9
section 3.6 HF/VHF changover.

73 james ke4drn

29149. Re: TS-830S Parts needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 03:16:48 UTC
From: Bob
Topic: 29137 Message: 29149

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> I am in need of a PLL board and a Counter board for a TS-830S.
> I also need the AF control Knob.
>
> Please email me off list if you can help.
>
> Thanks,
> Gordon
> N6WK
>

Hi Gordon,
I have what you need...
Send me an email...
ke5ftf"at"mail.com
Bob Mansker
Littleton, CO

29150. New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 02:28:08 UTC
From: jacob
Topic: 29150 Message: 29150

Hi OM/YL's;

I'm happy to join the group after just getting a TS-820. I'm a 2 year ham veteran (HI HI). The rig looks good, cost $150, and worked FB to my surprise - since when I bought her the digital display was dead and little info was known about the rig in general. Well, I got it home and even the digital dial worked (though I have to clean it as sometimes it flakes out and dies) and I made many QSO's on 40,20,15, and 10m cw and some on SSB where I got great audio reports. She sounds so good and has great ears! I finally know what that means!

Then, this morning my heart sank as the FB CW sigs started chirping like a sick little chick! This is intermittent - mostly the rig sounds good, but off and on chirps.

The chirp seems to happen:

1. irrespective of the rig being warm or just turned on after a long or short rest
2. on all the bands CW and also when I check SSB (it is wavering too)
3. I tried flipping all switches at random and nothing helps
4. I noticed that "tuning around" seemed to correlate with it getting better, but can't be sure (could be coincidence e.g. post hoc ergo propter hoc)
5. but, 4 above made me start to play with the main tuning dial and I noticed the sigs waver a bit when I touch the dial or push in on the center of it toward the rig.

I know this is a sketchy outline and that chirp might well be a tough nut to crack, but any ideas?

I am a real neophyte on radios (built a couple of kits) so I might be sending it off, but if it is something like a VFO cleaning and lube maybe I could try it out.....

VRY 73, DE Jacob K4JQV

and thanks!

29151. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 01:41:35 UTC
From: ki4ax
Topic: 29117 Message: 29151

Joe,

After installing the new crystals did you try tuning as Mike had suggested?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Dan,
>
> X5 & X6 on the OSC board were both changed during the "MOD." I removed the
> board...that was fun..and the "cans" had their freqs imprinted on the
> outside...both were 1MHz lower that what schematic indicated they should be.
> All other xtals are as stated in the schematic. I am not as yet very good at
> diagnosis/troubleshooting/repair...somethings.. for now.. are beyond my
> skill/equipment level. There is some other stuff going on...but, I think for
> now..it's going to go back in the closet..maybe when I take it out...it will
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>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 5:01:20 AM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> JOe,
>
> I have been following along with the problems and post with your TS-520. I
> really don't have anything to add or suggest but did notice something in your
> posts that I am curious about; not sure it has any bearing on your situation or
> not. A few post back you mentioned that there were two crystals that appeared to
> have been changed....X5 & X6 on the OSC board. I have a TS-520 that was modified
> for 11m and as far as I know there was only (1) crystal that was changed.
> Perhaps some of the other guys in the group might know more about the
> modification, but why (2) crystals? Is changing (2) required for the
> modification or did something go bad and get changed? Perhaps verification of
> the freq. of the 2nd crystal is inorder? Also, as I think you already know,
> inorder to change the crystal they would have had to disassembled the coil pack.
> It appears that the disassembly/ reassembly process is very tidious. I would
> verify that the coil pack has been reassembled propery. I would bet that even

> the length and position of the spacers would affect the operation of the OSC and
> coils. Just some thoughts on your situation.
>
>
> Dan KI4AX
>
> TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
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> > Mike & Charlie,
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> > I never gave that a thought...but guess what? You're right....sure enough
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> > two XTAL's X5 & X6 on the OSC board have been changed. I should have been
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> > of the "new" cans has "KENWOOD" printed on it....I do have some of the proper
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> > area...then go back to the receive problem...this is getting deep...but a VERY
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> > good learning lesson! TNX!!
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> > 73's joe wb7uqu
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> >
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> > _____
> > From: "Charlie , W5COV" <cvest@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, January 1, 2011 8:00:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
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> > on 520's to have been either partially or completely changed over to CB and the
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> > 73 ,
> >
> > Charlie , W5COV
> >
> > [Non-text portions of this message have been removed]

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29152. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 05:01:56 UTC
From: Joseph Stiles
Topic: 29117 Message: 29152

Gordon,

Nice to "see" ya..hope all is still well....I'm taking a break from that rig
for a few..but I'll save this post..and check it out and let you and the group
know what else I find out. This was not a real sloppy "hack" job. Who ever did
the OSC board had the proper un-wrap/wrap tool..you had to look real close to
see just a bit of copper under the nickel plating that was scraped off the
wires. The rig has multiple problems..as you can tell...and right now my skill
level is not up to some of the problems(s) I may encounter...but with you, mike,
and the rest of the group I've already come a long way... well enough for now

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 5:03:00 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Joe,
It sounds like Q5 on the RF board is bad since WWV goes through Q9,
but BEWARE, I have had a 520 thru here that was backwards from the
Schematic. Q5 was for WWV and Q9 was for normal operation.
You need to check them both. I'll bet one is Bad causing your no
reception other then WWV

73,
Gordon
N6WK

On 1/3/2011 1:42 PM, Joseph Stiles wrote:
>
> Mike & group,
>
> Well..here's the news..replaced the "hack" xtals with the proper
> ones...thank
> GOD I had an un-rap/rap tool. Put it back together...and...prayed..hit
> the power
> switch...and power...but no audio...I can however I can turn on the
> JJY/WWV
> switch and rcv WWV ...adjusting the AF gain here works fine....just
> nothing...when JJY/WWV switch not on.. DEAD.I think for now..I'll put it
> up...and take a breather.. I can not detect any overt changes except
> for what
> was stated in prior messages. This is currently beyond my skill/equipment
> level...so unless someone out there...has any ideas..it's going back

> to the
> closet for awhile.
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, January 3, 2011 7:37:16 AM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
> Joe, Les, and others,
>
> The original CB band starts at 26.965 for channel "1" and ends at
> 27.405 for
> channel "40". You can see the individual change frequencies at the
> following
> website.
>
> http://www.firestik.com/Tech_Docs/CBFREQ.htm
>
> You will notice that each channel has a 10Khz space between each
> channel but not
> all channels have the same 10Khz spacing, some are spaced "15Khz"
> apart such as
> between channels 3 and 4, channels 11 and 12, and so on.
>
> Ham gear, such as the TS-520, that has been modified to operate on 11
> meters
> typically changes the 28.0 and 28.5 band switch HET OSC crystals. This
> provides
> the CB operator a range of frequencies from 27.0Mhz to 28.0Mhz, a 1Mhz
> range of
> frequencies! When modified, the TS-520 VFO is NOT channalized but rather
> "variable between any frequency from 27.0Mhz to 28.0Mhz is available
> to the
> operator!
>
> I won't repeat what I said in an earlier response, how the mixing
> process occurs
> and how each mixer's output produces the desired signal at certain
> points along
> the signal path and how the HET OSC crystal affects both transmit and
> receive
> mising.
>
> When the modifications are performed, the appropriate HET OSC coil and
> DRIVER
> coils must be readjusted. This will affect the 520's 10 meter receive and

> transmit when the CB Hacker crystals are replaced with the original
> ham band 10
> meter HET OSC crystals! The CBer, in most cases, not all, is not
> interested in
> the other bands. He/she is only interested in talking to his buddies
> on 27Mhz to
> 28Mhz.
>
> It's not a simple matter of only replacing the HET OSC crystals then
> starting
> transmitting on 10 meters again! I have said a number of times that a
> thorough
> inspection, after replacing the CB HET OSC crystals with the proper
> ham band
> crystals, should be done. I say this because you do NOT know what has
> been done
> to the 520 other than changing the HET OSC crystals! You also do not
> know the
> skill of the person doing the modification either! Most CB mods to the
> 520 only
> adjust the HET OSC Coil and driver coils for the bands they modified.
> When that
> happens it upsets the entire receiver and driver Coil Pack which
> affects ALL
> bands! This is why I say an alignment should be done, to ensure the
> 520 is
> operating at peak performance after installing the original HET OSC
> crystals! As
> I always say, never assume anything, always check and make adjustment
> as needed
> to be sure!
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...>
> wrote:
> >
> > Les,
> >
> > I do not remember if it was known to work on the CB band or not It's
> been
> > stuck back in the closet...and a couple of week
> ago..it's....hey..what's this
> > box? I am progressing on the diagnosis/repair thanks to Mike, w5rkl
> and,
> > others.....I will continue to post updates...and as usual ask a

> bunch of
> > questions....
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> > _____
> > From: Leslie Smith <vk2bcu@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sun, January 2, 2011 10:54:32 AM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
> >
> > Morning Joe/Mike,
> > I have been following the case with interest. I note your comments (Joe)
> > that the soldering has been poorly done and (2) Mike that the front end
> > may be out of alignment.
> >
> > I ask: Was the set known to be working in the citizens band? I offer
> > the possibility that an unknown person began to modify your set for CB
> > operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain
> > ability - and the poor solder joints observed may indicate that was
> > lacking.
> >
> > Good success & 73s
> >
> > Les
> > ex VK2BCU
> >
> > ----- Original Message -----
> > From: "w5rkl"
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > Date: Sun, 02 Jan 2011 15:09:08 -0000
> >
> >
> >
> > Morning Joe,
> >
> > The individual band ANT COIL Unit coils are wired in "series".
> > Adjusting of each coil is performed in a specific order.
> >
> > Since we now know that the 520 has been modified for 11 meter
> > operation, the ANT COIL Unit alignment is more than likely "out of
> > alignment" which can easily affect receive. We also do not know what
> > other changes/modifications have been done. Therefore a thorough

> > visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
> > boards should be done using the 520 service manual's RF UNIT
> > schematic as your guide.
> >
> > You said the soldering of the board was poor. I recommend checking
> > the solder connections to be sure they are done properly. A fault
> > ground due to poor soldering can affect how the coils in the ANT,
> > MIXER, and DRIVER are working. A poor solder connection may show a
> > good "DC" indication but will fail or present a high resistance to
> > RF.
> >
> > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > specific order as outlined on page 40 of the 520 service manual.
> > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > correct HET OSC crystals, I recommend you perform an alignment
> > starting on page 39 of the 520 service manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > <stilesjoseph@> wrote:
> > >
> > > Mike & Charlie,
> > >
> > > I never gave that a thought...but guess what? You're right....sure
> > enough
> > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > have been
> > > tipped off by the sloppy resolder job on the grounding
> > foil/plate/screws...not
> > > to mention the "silver xtal cans" vs the grey plastic coated
> > ones...at least one
> > > of the "new" cans has "KENWOOD" printed on it....I do have some of
> > the proper
> > > XTALS on a junk 520 I can use for repair...then I'll check the
> > final cage
> > > area...then go back to the receive problem...this is getting
> > deep...but a VERY
> > > good learning lesson! TNX!!
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > _____
> > > From: "Charlie , W5COV" <cvest@>

> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
> > >
> > > Has someone removed a crystal and replaced it with a CB crystal ??
> > Very common
> > > on 520's to have been either partially or completely changed over
> > to CB and the
> > > freeband or whatever they call it frequencies . Might have a look
> > at the crystal
> > > frequencies and list them .
> > >
> > > 73 ,
> > >
> > > Charlie , W5COV
> > >
> > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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> > --
> > _____
> > Surf the Web in a faster, safer and easier way:
> > Download Opera 9 at http://www.opera.com
> >
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29153. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 05:06:08 UTC
From: Joseph Stiles
Topic: 29117 Message: 29153

Dan,

Well...got the board done and back in...turned it on..got lights..but now no audio..except when JJY/WWV switch is activated...Gordon, n6wk, most likely Q-5 or Q-9 if there was a "wiring" change. I'm going to take a break from it..and chill out for a day or two

73's joe wb7uqu

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 5:41:35 PM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Joe,

After installing the new crystals did you try tuning as Mike had suggested?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Dan,
>
> X5 & X6 on the OSC board were both changed during the "MOD." I removed the
> board...that was fun..and the "cans" had their freqs imprinted on the
> outside...both were 1MHz lower that what schematic indicated they should be.
> All other xtals are as stated in the schematic. I am not as yet very good at
> diagnosis/troubleshooting/repair...somethings.. for now.. are beyond my
> skill/equipment level. There is some other stuff going on...but, I think for
> now..it's going to go back in the closet..maybe when I take it out...it will
> cooperate! hi hi
>
> 73's joe wb7uqu
>
>
>
>
> ---
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 5:01:20 AM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>

> JOe,
>
> I have been following along with the problems and post with your TS-520. I
> really don't have anything to add or suggest but did notice something in your
> posts that I am curious about; not sure it has any bearing on your situation or
>
> not. A few post back you mentioned that there were two crystals that appeared
>to
>
> have been changed....X5 & X6 on the OSC board. I have a TS-520 that was
>modified
>
> for 11m and as far as I know there was only (1) crystal that was changed.
> Perhaps some of the other guys in the group might know more about the
> modification, but why (2) crystals? Is changing (2) required for the
> modification or did something go bad and get changed? Perhaps verification of
> the freq. of the 2nd crystal is inorder? Also, as I think you already know,
> inorder to change the crystal they would have had to disassembled the coil
>pack.
>
> It appears that the disassembly/ reassembly process is very tidious. I would
> verify that the coil pack has been reassembled propery. I would bet that even
> the length and position of the spacers would affect the operation of the OSC
>and
>
> coils. Just some thoughts on your situation.
>
>
> Dan KI4AX
>
> TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Mike & Charlie,
> >
> > I never gave that a thought...but guess what? You're right....sure
>enough
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>foil/plate/screws...not
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> > to mention the "silver xtal cans" vs the grey plastic coated ones...at least

> >one
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> > of the "new" cans has "KENWOOD" printed on it....I do have some of the proper
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> > XTALS on a junk 520 I can use for repair...then I'll check the final cage

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> > good learning lesson! TNX!!
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> > Sent: Sat, January 1, 2011 8:00:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
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29154. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 05:19:35 UTC
From: Martin
Topic: 29117 Message: 29154

Hi Guys. Back in 1990 when I was first licensed, I had a TS-520 that had been "converted" for 11M use. Not only had the 10M crystals been changed, but CW mode had been converted to AM (still worked on CW with mic removed). I managed to change the crystals to the correct ones and performed the alignment in the manual. I never did figure out how to reverse the AM mod though.

I don't have the radio anymore, but it worked pretty well on SSB. A year or three ago I came across an AM mod for the TS-520. It was a fairly involved mod. It is too bad that these radios are modified for 11M use, sometimes by those not qualified to do so.

TTYL

On 01/03/2011 07:41 PM, ki4ax wrote:
> Joe,
>
> After installing the new crystals did you try tuning as Mike had suggested?
>
> Dan KI4AX
H

--

CUL8R

KBOHAE kb0hae@... Martin Campbell
A Satisfied Aptosid Linux user! To get Aptosid go to: www.aptosid.com
They say that if you play a Microsoft CD backwards, you hear satanic voices. That's nothing, because if you play it forwards, it installs Windows!

29155. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 07:09:57 UTC
From: ki4ax
Topic: 29117 Message: 29155

Joe,

Where did you get the wrap/ un-wrap tool? Are they still available?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Gordon,
>
> Nice to "see" ya..hope all is still well....I'm taking a break from that rig
> for a few..but I'll save this post..and check it out and let you and the group
> know what else I find out. This was not a real sloppy "hack" job. Who ever did
> the OSC board had the proper un-wrap/wrap tool..you had to look real close to
> see just a bit of copper under the nickel plating that was scraped off the
> wires. The rig has multiple problems..as you can tell...and right now my skill
> level is not up to some of the problems(s) I may encounter...but with you, mike,
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> 73's joe wb7uqu
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> Sent: Mon, January 3, 2011 5:03:00 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> reception other then WWV
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> Gordon
> N6WK
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> On 1/3/2011 1:42 PM, Joseph Stiles wrote:
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> > Well..here's the news..replaced the "hack" xtals with the proper
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> > closet for awhile.
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> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles

> > <stilesjoseph@>
> > wrote:
> > >
> > > Les,
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> > > I do not remember if it was known to work on the CB band or not It's
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> > >
> > >
> > > _____
> > > From: Leslie Smith <vk2bcu@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Sun, January 2, 2011 10:54:32 AM
> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
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> > > Morning Joe/Mike,
> > > I have been following the case with interest. I note your comments (Joe)
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> > > Good success & 73s
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> > > From: "w5rkl"
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> > >
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> > >
> > > Since we now know that the 520 has been modified for 11 meter
> > > operation, the ANT COIL Unit alignment is more than likely "out of
> > > alignment" which can easily affect receive. We also do not know what
> > > other changes/modifications have been done. Therefore a thorough
> > > visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
> > > boards should be done using the 520 service manual's RF UNIT
> > > schematic as your guide.
> > >
> > > You said the soldering of the board was poor. I recommend checking
> > > the solder connections to be sure they are done properly. A fault
> > > ground due to poor soldering can affect how the coils in the ANT,
> > > MIXER, and DRIVER are working. A poor solder connection may show a
> > > good "DC" indication but will fail or present a high resistance to
> > > RF.
> > >
> > > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > > specific order as outlined on page 40 of the 520 service manual.
> > > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > > correct HET OSC crystals, I recommend you perform an alignment
> > > starting on page 39 of the 520 service manual.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@> wrote:
> > > >
> > > > Mike & Charlie,
> > > >
> > > > I never gave that a thought...but guess what? You're right....sure
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> > > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > > have been
> > > > tipped off by the sloppy resolder job on the grounding
> > > foil/plate/screws...not
> > > > to mention the "silver xtal cans" vs the grey plastic coated
> > > ones...at least one
> > > > of the "new" cans has "KENWOOD" printed on it....I do have some of
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> > > > XTALS on a junk 520 I can use for repair...then I'll check the

> > > final cage
> > > > area...then go back to the receive problem...this is getting
> > > deep...but a VERY
> > > > good learning lesson! TNX!!
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> > > > 73's joe wb7uqu
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > > From: "Charlie , W5COV" <cvest@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > >
> > > >
> > > > Has someone removed a crystal and replaced it with a CB crystal ??
> > > Very common
> > > > on 520's to have been either partially or completely changed over
> > > to CB and the
> > > > freeband or whatever they call it frequencies . Might have a look
> > > at the crystal
> > > > frequencies and list them .
> > > >
> > > > 73 ,
> > > >
> > > > Charlie , W5COV
> > > >
> > > > [Non-text portions of this message have been removed]
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> > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > > --
> > > _____
> > > Surf the Web in a faster, safer and easier way:
> > > Download Opera 9 at http://www.opera.com
> > >
> > > [Non-text portions of this message have been removed]
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29156. Re: [TS-520_820_530_830] New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 11:33:29 UTC
From: G4jbr
Topic: 29150 Message: 29156

Hi Jacob ...you did quite a good report of symptoms.!!...all I can say is thaT i HAVE A 530 (VERY SIMILAR TO 820) AND AT THE EDGES OF THE vfo tuning range THE AUDIO GOES SILLY which I assume to be a dirt problem 'cos turning the dial back and forth over the dodgy area clears it .
Cheers Pete

-----Original Message-----
From: jacob <chambersjacob@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Tue, 4 Jan 2011 3:45
Subject: [TS-520_820_530_830] New member, new rig, small problem

Hi OM/YL's;

I'm happy to join the group after just getting a TS-820. I'm a 2 year ham veteran (HI HI). The rig looks good, cost $150, and worked FB to my surprise - since when I bought her the digital display was dead and little info was known about the rig in general. Well, I got it home and even the digital dial worked (though I have to clean it as sometimes it flakes out and dies) and I made many QSO's on 40,20,15, and 10m cw and some on SSB where I got great audio reports. She sounds so good and has great ears! I finally know what that means!

Then, this morning my heart sank as the FB CW sigs started chirping like a sick little chick! This is intermittent - mostly the rig sounds good, but off and on chirps.

The chirp seems to happen:

1. irrespective of the rig being warm or just turned on after a long or short rest
2. on all the bands CW and also when I check SSB (it is wavering too)
3. I tried flipping all switches at random and nothing helps
4. I noticed that "tuning around" seemed to correlate with it getting better, but can't be sure (could be coincidence e.g. post hoc ergo propter hoc)
5. but, 4 above made me start to play with the main tuning dial and I noticed the sigs waver a bit when I touch the dial or push in on the center of it toward the rig.

I know this is a sketchy outline and that chirp might well be a tough nut to crack, but any ideas?

I am a real neophyte on radios (built a couple of kits) so I might be sending it off, but if it is something like a VFO cleaning and lube maybe I could try it out.....

VRY 73, DE Jacob K4JQV

and thanks!

[Non-text portions of this message have been removed]

29157. Re: New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 16:02:34 UTC
From: ki4ax
Topic: 29150 Message: 29157

Sounds like you need to clean the main tuning capacitor with some tuner cleaner. Make sure you clean the end with the clip/ contact on it. I used a non-residue contact cleaner on the fins and deoxit on the clip when I did mine. After 20-30 years of service the contact may have developed a tiny bit of corrosion and needs to be cleaned.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, G4jbr <g4jbr@...> wrote:
>
>
> Hi Jacob ...you did quite a good report of symptoms.!!...all I can say is thaT i HAVE A 530 (VERY SIMILAR TO 820) AND AT THE EDGES OF THE vfo tuning range THE AUDIO GOES SILLY which I assume to be a dirt problem 'cos turning the dial back and forth over the dodgy area clears it .
> Cheers Pete
>
>
>
>
>
>
>
>
> -----Original Message-----
> From: jacob <chambersjacob@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Tue, 4 Jan 2011 3:45
> Subject: [TS-520_820_530_830] New member, new rig, small problem
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>
> Hi OM/YL's;
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> I know this is a sketchy outline and that chirp might well be a tough nut to crack, but any ideas?
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> I am a real neophyte on radios (built a couple of kits) so I might be sending it off, but if it is something like a VFO cleaning and lube maybe I could try it out.....
>
> VRY 73, DE Jacob K4JQV
>
> and thanks!
>
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> [Non-text portions of this message have been removed]
>

29158. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 16:56:32 UTC
From: w5rkl
Topic: 29117 Message: 29158

The reason the 520's receiver appears dead, nothing heard in the speaker other than thermal and mixer noise "hiss" when tuning the normal ham bands is because there is no signal to process! The JJY/WWV receive works but ham bands do not. That, in itself, eliminates a lot of circuits as the source of the problem. The problem lies on the RF Unit, either in the RF amplifier Q5 or the COIL Unit. Having read the response numerous times, it is my belief the problem is Q5.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Dan,
>
> Well...got the board done and back in...turned it on..got lights..but now no
> audio..except when JJY/WWV switch is activated...Gordon, n6wk, most likely Q-5
> or Q-9 if there was a "wiring" change. I'm going to take a break from it..and
> chill out for a day or two
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 5:41:35 PM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> Joe,
>
> After installing the new crystals did you try tuning as Mike had suggested?
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Dan,
> >
> > X5 & X6 on the OSC board were both changed during the "MOD." I removed the
> > board...that was fun..and the "cans" had their freqs imprinted on the

> > outside...both were 1MHz lower that what schematic indicated they should be.
> > All other xtals are as stated in the schematic. I am not as yet very good at
> > diagnosis/troubleshooting/repair...somethings.. for now.. are beyond my
> > skill/equipment level. There is some other stuff going on...but, I think for
> > now..it's going to go back in the closet..maybe when I take it out...it will
> > cooperate! hi hi
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> > 73's joe wb7uqu
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> >
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> >
> > _____
> > From: ki4ax <dan8barb@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Mon, January 3, 2011 5:01:20 AM
> > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
> >
> > JOe,
> >
> > I have been following along with the problems and post with your TS-520. I
> > really don't have anything to add or suggest but did notice something in your
> > posts that I am curious about; not sure it has any bearing on your situation or
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> > not. A few post back you mentioned that there were two crystals that appeared
> >to
> >
> > have been changed....X5 & X6 on the OSC board. I have a TS-520 that was
> >modified
> >
> > for 11m and as far as I know there was only (1) crystal that was changed.
> > Perhaps some of the other guys in the group might know more about the
> > modification, but why (2) crystals? Is changing (2) required for the
> > modification or did something go bad and get changed? Perhaps verification of
> > the freq. of the 2nd crystal is inorder? Also, as I think you already know,
> > inorder to change the crystal they would have had to disassembled the coil
> >pack.
> >
> > It appears that the disassembly/ reassembly process is very tidious. I would
> > verify that the coil pack has been reassembled propery. I would bet that even
> > the length and position of the spacers would affect the operation of the OSC
> >and
> >
> > coils. Just some thoughts on your situation.
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> >
> > Dan KI4AX
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> > TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:

> > >
> > > Mike & Charlie,
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> > > I never gave that a thought...but guess what? You're right....sure
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> > > to mention the "silver xtal cans" vs the grey plastic coated ones...at least
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> > > _____
> > > From: "Charlie , W5COV" <cvest@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
> > >
> > > Has someone removed a crystal and replaced it with a CB crystal ?? Very
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> > > 73 ,
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> > > Charlie , W5COV
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> > > [Non-text portions of this message have been removed]
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29159. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 17:02:04 UTC
From: n6wk@n6wk.com
Topic: 29117 Message: 29159

That is my thought also Mike. I would definitely start by checking Q5

Gordon
N6WK

On 1/4/2011 8:56 AM, w5rkl wrote:
>
> The reason the 520's receiver appears dead, nothing heard in the
> speaker other than thermal and mixer noise "hiss" when tuning the
> normal ham bands is because there is no signal to process! The JJY/WWV
> receive works but ham bands do not. That, in itself, eliminates a lot
> of circuits as the source of the problem. The problem lies on the RF
> Unit, either in the RF amplifier Q5 or the COIL Unit. Having read the
> response numerous times, it is my belief the problem is Q5.
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> 73s
> Mike
> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
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> > Dan,
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> > Well...got the board done and back in...turned it on..got
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> > 73's joe wb7uqu
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> > From: ki4ax <dan8barb@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, January 3, 2011 5:41:35 PM
> > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> > Joe,
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Mon, January 3, 2011 5:01:20 AM
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> > > JOe,
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> > > I have been following along with the problems and post with your
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> > > Dan KI4AX
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> > > TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@> wrote:
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> > > > Mike & Charlie,
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> > > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> > > > >
> > > > Has someone removed a crystal and replaced it with a CB crystal
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29160. RE: [TS-520_820_530_830] Re: TS-830S Parts needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 17:10:40 UTC
From: Greg Anders
Topic: 29137 Message: 29160

There is an ad placed last night on eham.net from K5FTF indicating he has hybrid parts (lots of em). The picture in the ad shows two 8 ft rack shelving units crammed with kenwood parts rigs.

FYI,

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
Sent: Monday, January 03, 2011 7:17 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-830S Parts needed

--- In TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...> wrote:
>
> I am in need of a PLL board and a Counter board for a TS-830S.
> I also need the AF control Knob.
>
> Please email me off list if you can help.
>
> Thanks,
> Gordon
> N6WK
>

Hi Gordon,
I have what you need...
Send me an email...
ke5ftf"at"mail.com
Bob Mansker
Littleton, CO

[Non-text portions of this message have been removed]

29161. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 17:11:06 UTC
From: jsloss
Topic: 29117 Message: 29161

Joe: Give me a call at 425.747.5349 Bellevue. I have a good 3SK35 that you can try in your 520's RF board at Q-5.

joe k7mks

[Non-text portions of this message have been removed]

29162. RE: [TS-520_820_530_830] New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 17:17:27 UTC
From: Greg Anders
Topic: 29150 Message: 29162

You have a dirty VFO tuning capacitor. After 30+ years the capacitors need a clean-out. All you need to do is open up the VFO spray de-oxit on the capacitor rotor ground clips mounted on the end frame and clipped into the rotor. Work the VFO numerous times thru the complete frequency range and the de-oxit will clean and lubricat the clips and rotor so you have a consistently good ground connection.

FYI,

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jacob
Sent: Monday, January 03, 2011 6:28 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] New member, new rig, small problem

Hi OM/YL's;

I'm happy to join the group after just getting a TS-820. I'm a 2 year ham veteran (HI HI). The rig looks good, cost $150, and worked FB to my surprise - since when I bought her the digital display was dead and little info was known about the rig in general. Well, I got it home and even the digital dial worked (though I have to clean it as sometimes it flakes out and dies) and I made many QSO's on 40,20,15, and 10m cw and some on SSB where I got great audio reports. She sounds so good and has great ears! I finally know what that means!

Then, this morning my heart sank as the FB CW sigs started chirping like a sick little chick! This is intermittent - mostly the rig sounds good, but off and on chirps.

The chirp seems to happen:

1. irrespective of the rig being warm or just turned on after a long or short rest
2. on all the bands CW and also when I check SSB (it is wavering too)
3. I tried flipping all switches at random and nothing helps
4. I noticed that "tuning around" seemed to correlate with it getting better, but can't be sure (could be coincidence e.g. post hoc ergo propter hoc)
5. but, 4 above made me start to play with the main tuning dial and I noticed the sigs waver a bit when I touch the dial or push in on the center of it toward the rig.

I know this is a sketchy outline and that chirp might well be a tough nut to crack, but any ideas?

I am a real neophyte on radios (built a couple of kits) so I might be sending it off, but if it is something like a VFO cleaning and lube maybe I could try it out.....

VRY 73, DE Jacob K4JQV

and thanks!

[Non-text portions of this message have been removed]

29163. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 17:35:22 UTC
From: John Becker
Topic: 29117 Message: 29163

At 10:56 AM 1/4/2011, you wrote:
>The reason the 520's receiver appears dead, nothing heard in the speaker other than thermal and mixer noise "hiss" when tuning the normal ham bands is because there is no signal to process! The JJY/WWV receive works but ham bands do not. That, in itself, eliminates a lot of circuits as the source of the problem. The problem lies on the RF Unit, either in the RF amplifier Q5 or the COIL Unit. Having read the response numerous times, it is my belief the problem is Q5.
>
>
>73s
>Mike
>W5RKL

I have to agree with Mike.
Look At Q5

29164. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:06:55 UTC
From: Joseph Stiles
Topic: 29117 Message: 29164

Dan,

Something about 3 months ago told me ..."YOU NEED THIS!" I usually don't
listen to the voices in my head anymore...but this would not go away..hihi.
There are several companies/dealers..but the cheapest...if you can call $49.95
(USD) cheap for a metal stick to twist wires..well...this is a quality tool...
Made to both wrap and unwrap 22-24 awg wires...no insulation can be on the
length being twisted. It is made by JONARD...Model # WDUD-2224... I got it
through Circuit Specialists, Inc....www.web-tronics.com

73's joe wb7uqu

_____
From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 11:09:57 PM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Joe,

Where did you get the wrap/ un-wrap tool? Are they still available?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Gordon,
>
> Nice to "see" ya..hope all is still well....I'm taking a break from that rig
>
> for a few..but I'll save this post..and check it out and let you and the group

> know what else I find out. This was not a real sloppy "hack" job. Who ever did

> the OSC board had the proper un-wrap/wrap tool..you had to look real close to
> see just a bit of copper under the nickel plating that was scraped off the
> wires. The rig has multiple problems..as you can tell...and right now my skill

> level is not up to some of the problems(s) I may encounter...but with you,
>mike,
>
> and the rest of the group I've already come a long way... well enough for
now
>
> 73's joe wb7uqu
>

>
>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 5:03:00 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
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> Joe,
> It sounds like Q5 on the RF board is bad since WWV goes through Q9,
> but BEWARE, I have had a 520 thru here that was backwards from the
> Schematic. Q5 was for WWV and Q9 was for normal operation.
> You need to check them both. I'll bet one is Bad causing your no
> reception other then WWV
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> 73,
> Gordon
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> > closet for awhile.
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> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, January 3, 2011 7:37:16 AM
> > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
> > Joe, Les, and others,

> >
> > The original CB band starts at 26.965 for channel "1" and ends at
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> > website.
> >
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> > You will notice that each channel has a 10Khz space between each
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> > to be sure!
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> > W5RKL
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
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> > > Les,
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> > > I do not remember if it was known to work on the CB band or not It's
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> > > box? I am progressing on the diagnosis/repair thanks to Mike, w5rkl
> > and,
> > > others.....I will continue to post updates...and as usual ask a
> > bunch of
> > > questions....
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > > _____
> > > From: Leslie Smith <vk2bcu@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Sun, January 2, 2011 10:54:32 AM

> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
> > >
> > > Morning Joe/Mike,
> > > I have been following the case with interest. I note your comments (Joe)
> > > that the soldering has been poorly done and (2) Mike that the front end
> > > may be out of alignment.
> > >
> > > I ask: Was the set known to be working in the citizens band? I offer
> > > the possibility that an unknown person began to modify your set for CB
> > > operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain
> > > ability - and the poor solder joints observed may indicate that was
> > > lacking.
> > >
> > > Good success & 73s
> > >
> > > Les
> > > ex VK2BCU
> > >
> > > ----- Original Message -----
> > > From: "w5rkl"
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > Date: Sun, 02 Jan 2011 15:09:08 -0000
> > >
> > >
> > >
> > > Morning Joe,
> > >
> > > The individual band ANT COIL Unit coils are wired in "series".
> > > Adjusting of each coil is performed in a specific order.
> > >
> > > Since we now know that the 520 has been modified for 11 meter
> > > operation, the ANT COIL Unit alignment is more than likely "out of
> > > alignment" which can easily affect receive. We also do not know what
> > > other changes/modifications have been done. Therefore a thorough
> > > visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
> > > boards should be done using the 520 service manual's RF UNIT
> > > schematic as your guide.
> > >
> > > You said the soldering of the board was poor. I recommend checking
> > > the solder connections to be sure they are done properly. A fault
> > > ground due to poor soldering can affect how the coils in the ANT,
> > > MIXER, and DRIVER are working. A poor solder connection may show a
> > > good "DC" indication but will fail or present a high resistance to
> > > RF.
> > >
> > > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > > specific order as outlined on page 40 of the 520 service manual.

> > > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > > correct HET OSC crystals, I recommend you perform an alignment
> > > starting on page 39 of the 520 service manual.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@> wrote:
> > > >
> > > > Mike & Charlie,
> > > >
> > > > I never gave that a thought...but guess what? You're right....sure
> > > enough
> > > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > > have been
> > > > tipped off by the sloppy resolder job on the grounding
> > > foil/plate/screws...not
> > > > to mention the "silver xtal cans" vs the grey plastic coated
> > > ones...at least one
> > > > of the "new" cans has "KENWOOD" printed on it....I do have some of
> > > the proper
> > > > XTALS on a junk 520 I can use for repair...then I'll check the
> > > final cage
> > > > area...then go back to the receive problem...this is getting
> > > deep...but a VERY
> > > > good learning lesson! TNX!!
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > > From: "Charlie , W5COV" <cvest@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > >
> > > >
> > > > Has someone removed a crystal and replaced it with a CB crystal ??
> > > Very common
> > > > on 520's to have been either partially or completely changed over
> > > to CB and the
> > > > freeband or whatever they call it frequencies . Might have a look
> > > at the crystal
> > > > frequencies and list them .

> > > >
> > > > 73 ,
> > > >
> > > > Charlie , W5COV
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > > --
> > > _____
> > > Surf the Web in a faster, safer and easier way:
> > > Download Opera 9 at http://www.opera.com
> > >
> > > [Non-text portions of this message have been removed]
> > >
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> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

29165. TRADE ??? TS-520 CW Filter wanted, Have VFO-820 or SP-520 to trade.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:30:03 UTC
From: Ken
Topic: 29165 Message: 29165

I am looking for a CW Filter for my TS-520 and have a working, calibrated, good looking VFO-820 with cable or an SP-520 in same condition to trade.

My contact info on QRZ.com is correct.

73,

Ken - KB7H

29166. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:36:28 UTC
From: Joseph Stiles
Topic: 29117 Message: 29166

Dan,

clarification..."no insulation on the ends being twisted"

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 4, 2011 12:06:55 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Dan,

Something about 3 months ago told me ..."YOU NEED THIS!" I usually don't
listen to the voices in my head anymore...but this would not go away..hihi.
There are several companies/dealers..but the cheapest...if you can call $49.95
(USD) cheap for a metal stick to twist wires..well...this is a quality tool...
Made to both wrap and unwrap 22-24 awg wires...no insulation can be on the
length being twisted. It is made by JONARD...Model # WDUD-2224... I got it
through Circuit Specialists, Inc....www.web-tronics.com

73's joe wb7uqu

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 3, 2011 11:09:57 PM
Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Joe,

Where did you get the wrap/ un-wrap tool? Are they still available?

Dan KI4AX

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> Nice to "see" ya..hope all is still well....I'm taking a break from that rig
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> for a few..but I'll save this post..and check it out and let you and the group

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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 5:03:00 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> Joe,
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> > To: TS-520_820_530_830@yahoogroups.com
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> > >
> > >
> > >
> > > _____
> > > From: Leslie Smith <vk2bcu@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Sun, January 2, 2011 10:54:32 AM
> > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > the solder connections to be sure they are done properly. A fault
> > > ground due to poor soldering can affect how the coils in the ANT,
> > > MIXER, and DRIVER are working. A poor solder connection may show a
> > > good "DC" indication but will fail or present a high resistance to
> > > RF.
> > >
> > > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > > specific order as outlined on page 40 of the 520 service manual.
> > > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > > correct HET OSC crystals, I recommend you perform an alignment
> > > starting on page 39 of the 520 service manual.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@> wrote:
> > > >
> > > > Mike & Charlie,
> > > >
> > > > I never gave that a thought...but guess what? You're right....sure
> > > enough
> > > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > > have been
> > > > tipped off by the sloppy resolder job on the grounding
> > > foil/plate/screws...not
> > > > to mention the "silver xtal cans" vs the grey plastic coated
> > > ones...at least one
> > > > of the "new" cans has "KENWOOD" printed on it....I do have some of
> > > the proper
> > > > XTALS on a junk 520 I can use for repair...then I'll check the
> > > final cage
> > > > area...then go back to the receive problem...this is getting
> > > deep...but a VERY
> > > > good learning lesson! TNX!!
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > > From: "Charlie , W5COV" <cvest@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Sat, January 1, 2011 8:00:30 PM

> > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > >
> > > >
> > > > Has someone removed a crystal and replaced it with a CB crystal ??
> > > Very common
> > > > on 520's to have been either partially or completely changed over
> > > to CB and the
> > > > freeband or whatever they call it frequencies . Might have a look
> > > at the crystal
> > > > frequencies and list them .
> > > >
> > > > 73 ,
> > > >
> > > > Charlie , W5COV
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
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> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > > > --
> > > > _____
> > > Surf the Web in a faster, safer and easier way:
> > > Download Opera 9 at http://www.opera.com
> > >
> > > [Non-text portions of this message have been removed]
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29167. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:40:20 UTC
From: Joseph Stiles
Topic: 29117 Message: 29167

Joe,

tnx fer kind offer...hang on to it for right now..I have 2 taken from a non-working unit...don't know right now is they are ok...if not...I have a couple to new NTE222's in the "bin."

73's joe wb7uqu

From: jsloss <k7mks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 4, 2011 9:11:06 AM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Joe: Give me a call at 425.747.5349 Bellevue. I have a good 3SK35 that you can try in your 520's RF board at Q-5.

joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29168. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:45:26 UTC
From: jsloss
Topic: 29117 Message: 29168

Joe: As Q5 is a plug in unit the NTE222 should be easy to install and also should work fine.

Joe k7mks

[Non-text portions of this message have been removed]

29169. Re: [TS-520_820_530_830] Re: New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:49:18 UTC
From: John Davidson
Topic: 29150 Message: 29169

My TS520 started acting like that a few years ago when tuning from one end of band to the other. When I want to tune out of my comfort range (3.5-3.565 kHz) I find various dead spots that can be recovered by rapidly tuning the knob back and forth a few times.
I have not taken the radio all apart to get at the VFO parts because I only use this rig on 80M CW !

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 4, 2011 11:02:34 AM
Subject: [TS-520_820_530_830] Re: New member, new rig, small problem
Sounds like you need to clean the main tuning capacitor with some tuner cleaner. Make sure you clean the end with the clip/ contact on it. I used a non-residue contact cleaner on the fins and deoxit on the clip when I did mine. After 20-30 years of service the contact may have developed a tiny bit of corrosion and needs to be cleaned. KI4AX
--- In TS-520_820_530_830@yahoogroups.com, G4jbr <g4jbr@...> wrote:>
> Hi Jacob ...you did quite a good report of symptoms.!!...all I can say is thaT
>i HAVE A 530 (VERY SIMILAR TO 820) AND AT THE EDGES OF THE vfo tuning range THE
>AUDIO GOES SILLY which I assume to be a dirt problem 'cos turning the dial back
>and forth over the dodgy area clears it .
> Cheers Pete OM/YL's;
>
> I'm happy to join the group after just getting a TS-820. I'm a 2 year ham
>veteran (HI HI). The rig looks good, cost $150, and worked FB to my surprise -
>since when I bought her the digital display was dead and little info was known
>about the rig in general. Well, I got it home and even the digital dial worked
>(though I have to clean it as sometimes it flakes out and dies) and I made many
>QSO's on 40,20,15, and 10m cw and some on SSB where I got great audio reports.
>She sounds so good and has great ears! I finally know what that means!
>
>
> Then, this morning my heart sank as the FB CW sigs started chirping like a sick
>little chick! This is intermittent - mostly the rig sounds good, but off and on
>chirps.
>
>
> The chirp seems to happen:
>
> 1. irrespective of the rig being warm or just turned on after a long or short
>rest
> 2. on all the bands CW and also when I check SSB (it is wavering too)
> 3. I tried flipping all switches at random and nothing helps
> 4. I noticed that "tuning around" seemed to correlate with it getting better,

>but can't be sure (could be coincidence e.g. post hoc ergo propter hoc)
>
> 5. but, 4 above made me start to play with the main tuning dial and I noticed
>the sigs waver a bit when I touch the dial or push in on the center of it toward
>the rig.
>
>
> I know this is a sketchy outline and that chirp might well be a tough nut to
>crack, but any ideas?
>
>
> I am a real neophyte on radios (built a couple of kits) so I might be sending
>it off, but if it is something like a VFO cleaning and lube maybe I could try it
>out.....
>
>
> VRY 73, DE Jacob K4JQV
>
> and thanks!
>
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

29170. Re: New member, new rig, small problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 20:09:24 UTC
From: jacob
Topic: 29150 Message: 29170

Thanks to all of you! I have the DeOXIT from Radio Shack and I will soon try to clean that VFO VC.

Best;
Jacob

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> You have a dirty VFO tuning capacitor. After 30+ years the capacitors need a clean-out. All you need to do is open up the VFO spray de-oxit on the capacitor rotor ground clips mounted on the end frame and clipped into the rotor. Work the VFO numerous times thru the complete frequency range and the de-oxit will clean and lubricat the clips and rotor so you have a consistently good ground connection.
>
> FYI,
>
> Greg
>
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jacob
> Sent: Monday, January 03, 2011 6:28 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] New member, new rig, small problem
>
>
>
> Hi OM/YL's;
>
> I'm happy to join the group after just getting a TS-820. I'm a 2 year ham veteran (HI HI). The rig looks good, cost $150, and worked FB to my surprise - since when I bought her the digital display was dead and little info was known about the rig in general. Well, I got it home and even the digital dial worked (though I have to clean it as sometimes it flakes out and dies) and I made many QSO's on 40,20,15, and 10m cw and some on SSB where I got great audio reports. She sounds so good and has great ears! I finally know what that means!
>
> Then, this morning my heart sank as the FB CW sigs started chirping like a sick little chick! This is intermittent - mostly the rig sounds good, but off and on chirps.
>
> The chirp seems to happen:
>
> 1. irrespective of the rig being warm or just turned on after a long or short rest
> 2. on all the bands CW and also when I check SSB (it is wavering too)
> 3. I tried flipping all switches at random and nothing helps

> 4. I noticed that "tuning around" seemed to correlate with it getting better, but can't be sure (could be coincidence e.g. post hoc ergo propter hoc)
> 5. but, 4 above made me start to play with the main tuning dial and I noticed the sigs waver a bit when I touch the dial or push in on the center of it toward the rig.
>
> I know this is a sketchy outline and that chirp might well be a tough nut to crack, but any ideas?
>
> I am a real neophyte on radios (built a couple of kits) so I might be sending it off, but if it is something like a VFO cleaning and lube maybe I could try it out.....
>
> VRY 73, DE Jacob K4JQV
>
> and thanks!
>
>
>
> [Non-text portions of this message have been removed]
>

29171. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 22:56:40 UTC
From: ki4ax
Topic: 29117 Message: 29171

Joe,

Thanks for the info. I'll go check out the link and see what it looks like. I am in no hurry so I'll look at the next hamfest; maybe I'll get lucky. I certainly did not expect them to be that expensive. I'm sure sooner or later I will find one more in line with my budget.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Dan,
>
> Something about 3 months ago told me ..."YOU NEED THIS!" I usually don't
> listen to the voices in my head anymore...but this would not go away..hihi.
> There are several companies/dealers..but the cheapest...if you can call $49.95
> (USD) cheap for a metal stick to twist wires..well...this is a quality tool...
> Made to both wrap and unwrap 22-24 awg wires...no insulation can be on the
> length being twisted. It is made by JONARD...Model # WDUD-2224... I got it
> through Circuit Specialists, Inc....www.web-tronics.com
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, January 3, 2011 11:09:57 PM
> Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
>
> Joe,
>
> Where did you get the wrap/ un-wrap tool? Are they still available?
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Gordon,
> >
> > Nice to "see" ya..hope all is still well....I'm taking a break from that rig
> >

> > for a few..but I'll save this post..and check it out and let you and the group
>
> > know what else I find out. This was not a real sloppy "hack" job. Who ever did
>
> > the OSC board had the proper un-wrap/wrap tool..you had to look real close to
> > see just a bit of copper under the nickel plating that was scraped off the
> > wires. The rig has multiple problems..as you can tell...and right now my skill
>
> > level is not up to some of the problems(s) I may encounter...but with you,
> >mike,
> >
> > and the rest of the group I've already come a long way... well enough for
> now
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> > _____
> > From: "n6wk@" <n6wk@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Mon, January 3, 2011 5:03:00 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> >
> >
> > Joe,
> > It sounds like Q5 on the RF board is bad since WWV goes through Q9,
> > but BEWARE, I have had a 520 thru here that was backwards from the
> > Schematic. Q5 was for WWV and Q9 was for normal operation.
> > You need to check them both. I'll bet one is Bad causing your no
> > reception other then WWV
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/3/2011 1:42 PM, Joseph Stiles wrote:
> > >
> > > Mike & group,
> > >
> > > Well..here's the news..replaced the "hack" xtals with the proper
> > > ones...thank
> > > GOD I had an un-rap/rap tool. Put it back together...and...prayed..hit
> > > the power
> > > switch...and power...but no audio...I can however I can turn on the
> > > JJY/WWV
> > > switch and rcv WWV ...adjusting the AF gain here works fine....just
> > > nothing...when JJY/WWV switch not on.. DEAD.I think for now..I'll put it
> > > up...and take a breather.. I can not detect any overt changes except

> > > for what
> > > was stated in prior messages. This is currently beyond my skill/equipment
> > > level...so unless someone out there...has any ideas..it's going back
> > > to the
> > > closet for awhile.
> > >
> > > 73's joe wb7uqu
> > >
> > > _____
> > > From: w5rkl <w5rkl@ <mailto:w5rkl%40yahoo.com>>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Mon, January 3, 2011 7:37:16 AM
> > > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > >
> > > Joe, Les, and others,
> > >
> > > The original CB band starts at 26.965 for channel "1" and ends at
> > > 27.405 for
> > > channel "40". You can see the individual change frequencies at the
> > > following
> > > website.
> > >
> > > http://www.firestik.com/Tech_Docs/CBFREQ.htm
> > >
> > > You will notice that each channel has a 10Khz space between each
> > > channel but not
> > > all channels have the same 10Khz spacing, some are spaced "15Khz"
> > > apart such as
> > > between channels 3 and 4, channels 11 and 12, and so on.
> > >
> > > Ham gear, such as the TS-520, that has been modified to operate on 11
> > > meters
> > > typically changes the 28.0 and 28.5 band switch HET OSC crystals. This
> > > provides
> > > the CB operator a range of frequencies from 27.0Mhz to 28.0Mhz, a 1Mhz
> > > range of
> > > frequencies! When modified, the TS-520 VFO is NOT channalized but rather
> > > "variable between any frequency from 27.0Mhz to 28.0Mhz is available
> > > to the
> > > operator!
> > >
> > > I won't repeat what I said in an earlier response, how the mixing
> > > process occurs
> > > and how each mixer's output produces the desired signal at certain
> > > points along
> > > the signal path and how the HET OSC crystal affects both transmit and
> > > receive
> > > mising.
> > >

> > > When the modifications are performed, the appropriate HET OSC coil and
> > > DRIVER
> > > coils must be readjusted. This will affect the 520's 10 meter receive and
> > > transmit when the CB Hacker crystals are replaced with the original
> > > ham band 10
> > > meter HET OSC crystals! The CBer, in most cases, not all, is not
> > > interested in
> > > the other bands. He/she is only interested in talking to his buddies
> > > on 27Mhz to
> > > 28Mhz.
> > >
> > > It's not a simple matter of only replacing the HET OSC crystals then
> > > starting
> > > transmitting on 10 meters again! I have said a number of times that a
> > > thorough
> > > inspection, after replacing the CB HET OSC crystals with the proper
> > > ham band
> > > crystals, should be done. I say this because you do NOT know what has
> > > been done
> > > to the 520 other than changing the HET OSC crystals! You also do not
> > > know the
> > > skill of the person doing the modification either! Most CB mods to the
> > > 520 only
> > > adjust the HET OSC Coil and driver coils for the bands they modified.
> > > When that
> > > happens it upsets the entire receiver and driver Coil Pack which
> > > affects ALL
> > > bands! This is why I say an alignment should be done, to ensure the
> > > 520 is
> > > operating at peak performance after installing the original HET OSC
> > > crystals! As
> > > I always say, never assume anything, always check and make adjustment
> > > as needed
> > > to be sure!
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@>
> > > wrote:
> > > >
> > > > Les,
> > > >
> > > > I do not remember if it was known to work on the CB band or not It's
> > > been
> > > > stuck back in the closet...and a couple of week
> > > ago..it's....hey..what's this

> > > > box? I am progressing on the diagnosis/repair thanks to Mike, w5rkl
> > > and,
> > > > others.....I will continue to post updates...and as usual ask a
> > > bunch of
> > > > questions....
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > > From: Leslie Smith <vk2bcu@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Sun, January 2, 2011 10:54:32 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > >
> > > >
> > > > Morning Joe/Mike,
> > > > I have been following the case with interest. I note your comments (Joe)
> > > > that the soldering has been poorly done and (2) Mike that the front end
> > > > may be out of alignment.
> > > >
> > > > I ask: Was the set known to be working in the citizens band? I offer
> > > > the possibility that an unknown person began to modify your set for CB
> > > > operation, BUT FAILED TO COMPLETE THE JOB. "Modding" demands a certain
> > > > ability - and the poor solder joints observed may indicate that was
> > > > lacking.
> > > >
> > > > Good success & 73s
> > > >
> > > > Les
> > > > ex VK2BCU
> > > >
> > > > ----- Original Message -----
> > > > From: "w5rkl"
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Subject: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > > Date: Sun, 02 Jan 2011 15:09:08 -0000
> > > >
> > > >
> > > >
> > > > Morning Joe,
> > > >
> > > > The individual band ANT COIL Unit coils are wired in "series".
> > > > Adjusting of each coil is performed in a specific order.
> > > >
> > > > Since we now know that the 520 has been modified for 11 meter

> > > > operation, the ANT COIL Unit alignment is more than likely "out of
> > > > alignment" which can easily affect receive. We also do not know what
> > > > other changes/modifications have been done. Therefore a thorough
> > > > visual inspection of the RF Unit and ANT, MIXER, and DRIVER COIL Unit
> > > > boards should be done using the 520 service manual's RF UNIT
> > > > schematic as your guide.
> > > > >
> > > > You said the soldering of the board was poor. I recommend checking
> > > > the solder connections to be sure they are done properly. A fault
> > > > ground due to poor soldering can affect how the coils in the ANT,
> > > > MIXER, and DRIVER are working. A poor solder connection may show a
> > > > good "DC" indication but will fail or present a high resistance to
> > > > RF.
> > > > >
> > > > In addition, the ANT, MIXER, and DRIVER coils must be adjusted in a
> > > > specific order as outlined on page 40 of the 520 service manual.
> > > > Therefore, once you replace the 10 meter HET OSC CB crystals with the
> > > > correct HET OSC crystals, I recommend you perform an alignment
> > > > starting on page 39 of the 520 service manual.
> > > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > > <stilesjoseph@> wrote:
> > > > > >
> > > > > Mike & Charlie,
> > > > > >
> > > > > I never gave that a thought...but guess what? You're right....sure
> > > > enough
> > > > > two XTAL's X5 & X6 on the OSC board have been changed. I should
> > > > have been
> > > > > tipped off by the sloppy resolder job on the grounding
> > > > foil/plate/screws...not
> > > > > to mention the "silver xtal cans" vs the grey plastic coated
> > > > ones...at least one
> > > > > of the "new" cans has "KENWOOD" printed on it....I do have some of
> > > > the proper
> > > > > XTALS on a junk 520 I can use for repair...then I'll check the
> > > > final cage
> > > > > area...then go back to the receive problem...this is getting
> > > > deep...but a VERY
> > > > > good learning lesson! TNX!!
> > > > > >
> > > > > 73's joe wb7uqu
> > > > > >
> > > > > >
> > > > > >

> > > > >
> > > > > _____
> > > > > From: "Charlie , W5COV" <cvest@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Sat, January 1, 2011 8:00:30 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
> > > > >
> > > > >
> > > > > Has someone removed a crystal and replaced it with a CB crystal ??
> > > > Very common
> > > > > on 520's to have been either partially or completely changed over
> > > > to CB and the
> > > > > freeband or whatever they call it frequencies . Might have a look
> > > > at the crystal
> > > > > frequencies and list them .
> > > > >
> > > > > 73 ,
> > > > >
> > > > > Charlie , W5COV
> > > > >
> > > > > [Non-text portions of this message have been removed]
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> > > > > [Non-text portions of this message have been removed]
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> > > >
> > > > --
> > > > _____
> > > > Surf the Web in a faster, safer and easier way:
> > > > Download Opera 9 at http://www.opera.com
> > > >
> > > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29172. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 23:01:25 UTC
From: w5rkl
Topic: 29117 Message: 29172

Some MOSFET transistors have a safety shorting wire wrapped around the leads. This helps prevent damage to the transistor from static discharge by simply handling the transistor with your fingers.

If the transistor comes with a safety shorting wire do not remove the shorting wire until the transistor is installed. Once the transistor is installed then remove the safety shorting wire. Don't forget to remove the safety shorting wire if the transistor comes with one. I forgot to remove the shorting wire when I built an HW-7 from a kit. The symptom was a "dead" receiver. When I removed the safety shorting wire the receive came to life. I'm not sure whether the NTE222 or a new 3SK35 comes with a safety shorting wire wrapped around the leads or not. Check to be sure.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jsloss" <k7mks@...> wrote:
>
> Joe: As Q5 is a plug in unit the NTE222 should be easy to install and also should work fine.
>
> Joe k7mks
>
> [Non-text portions of this message have been removed]
>

29173. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-04 23:25:50 UTC
From: n6wk@n6wk.com
Topic: 29117 Message: 29173

None of the NTE222's i have purchased have ever had a shorting wire.

Gordon

On 1/4/2011 3:01 PM, w5rkl wrote:
>
> Some MOSFET transistors have a safety shorting wire wrapped around the
> leads. This helps prevent damage to the transistor from static
> discharge by simply handling the transistor with your fingers.
>
> If the transistor comes with a safety shorting wire do not remove the
> shorting wire until the transistor is installed. Once the transistor
> is installed then remove the safety shorting wire. Don't forget to
> remove the safety shorting wire if the transistor comes with one. I
> forgot to remove the shorting wire when I built an HW-7 from a kit.
> The symptom was a "dead" receiver. When I removed the safety shorting
> wire the receive came to life. I'm not sure whether the NTE222 or a
> new 3SK35 comes with a safety shorting wire wrapped around the leads
> or not. Check to be sure.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "jsloss" <k7mks@...> wrote:
> >
> > Joe: As Q5 is a plug in unit the NTE222 should be easy to install
> and also should work fine.
> >
> > Joe k7mks
> >
> > [Non-text portions of this message have been removed]
> >
>
>

29174. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 04:26:46 UTC
From: Joseph Stiles
Topic: 29117 Message: 29174

Mike,

Tnx agn for the handy info...this NTE222 is still in the plastic (clear) and I can see that it does not have the shorting wire. Must remember to follow static precautions. I do really hope that it is Q-5..kinda of a "plug-n-play." If I have to get at Q-9 or any others for that matter..on that RF board...I might scream.

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 4, 2011 3:25:50 PM
Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

None of the NTE222's i have purchased have ever had a shorting wire.

Gordon

On 1/4/2011 3:01 PM, w5rkl wrote:
>
> Some MOSFET transistors have a safety shorting wire wrapped around the
> leads. This helps prevent damage to the transistor from static
> discharge by simply handling the transistor with your fingers.
>
> If the transistor comes with a safety shorting wire do not remove the
> shorting wire until the transistor is installed. Once the transistor
> is installed then remove the safety shorting wire. Don't forget to
> remove the safety shorting wire if the transistor comes with one. I
> forgot to remove the shorting wire when I built an HW-7 from a kit.
> The symptom was a "dead" receiver. When I removed the safety shorting
> wire the receive came to life. I'm not sure whether the NTE222 or a
> new 3SK35 comes with a safety shorting wire wrapped around the leads
> or not. Check to be sure.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "jsloss" <k7mks@...> wrote:
> >
> > Joe: As Q5 is a plug in unit the NTE222 should be easy to install
> and also should work fine.
> >

> > Joe k7mks
> >
> > [Non-text portions of this message have been removed]
> >
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

29175. Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 06:03:25 UTC
From: w5rkl
Topic: 29117 Message: 29175

No problem Joe. Older MOSFETs did have safety wires wrapped around their leads. However, more than likely today's MOSFET have diodes built in to the transistor that do the same thing the safety wire did in the old days of MOSFETs. I still remember to this day the MOSFET transistor in the HW-7. I saw the wire, left it on the transistor like the instructions said but I failed to remove it before powering up the HW7. I was ready to do some QRP work but what, the receiver's dead. I went through the instructions and when I came across the instruction about the wire I looked and sure enough it was still wrapped around the leads. I pulled it off and the receive came to life, didn't harm anything, just a bone head mistake by me!

Let us know what happens after replacing the receiver's RF amplifier. Make sure the schematic diagram of the RF Unit is the one for the RF Unit in you 520. The board has a number, X44-1080-0). Check your RF Unit board number with the number on your schematic, they should be the same. Changes made could cause the 'suffix' number to change from zero to 1 or possibly 01 so pay attention that that. You board number and the schematic board number should be the same.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Tnx agn for the handy info...this NTE222 is still in the plastic (clear) and I
> can see that it does not have the shorting wire. Must remember to follow static
> precautions. I do really hope that it is Q-5..kinda of a "plug-n-play." If I
> have to get at Q-9 or any others for that matter..on that RF board...I might
> scream.
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, January 4, 2011 3:25:50 PM
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
> None of the NTE222's i have purchased have ever had a shorting wire.
>
> Gordon
>

>
>
> On 1/4/2011 3:01 PM, w5rkl wrote:
> >
> > Some MOSFET transistors have a safety shorting wire wrapped around the
> > leads. This helps prevent damage to the transistor from static
> > discharge by simply handling the transistor with your fingers.
> >
> > If the transistor comes with a safety shorting wire do not remove the
> > shorting wire until the transistor is installed. Once the transistor
> > is installed then remove the safety shorting wire. Don't forget to
> > remove the safety shorting wire if the transistor comes with one. I
> > forgot to remove the shorting wire when I built an HW-7 from a kit.
> > The symptom was a "dead" receiver. When I removed the safety shorting
> > wire the receive came to life. I'm not sure whether the NTE222 or a
> > new 3SK35 comes with a safety shorting wire wrapped around the leads
> > or not. Check to be sure.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "jsloss" <k7mks@> wrote:
> > >
> > > Joe: As Q5 is a plug in unit the NTE222 should be easy to install
> > and also should work fine.
> > >
> > > Joe k7mks
> > >
> > > [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

29176. no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 08:59:45 UTC
From: m0dbo
Topic: 29176 Message: 29176

Hi all i have just tried to fire up my ts530sp after a few months of inactivity. i can not getany out put power on any of the bands. the receiver seems to be performing ok, any ideas what to look for would be appreciated.
many thanks nigel m0dbo

29177. Re: no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 14:57:11 UTC
From: w5rkl
Topic: 29176 Message: 29177

Nigel,

What mode (TUNE, CW, USB, or LSB) are you experiencing loss of RF output? If you are transmitting in USB or LSB mode then you will need a microphone connected to the 530's microphone socket, press the PTT button, and adjust the MIC gain control while speaking into the microphone to achieve any RF output. This is assuming the 530 is properly tuned up for the frequency you intent to use and the 530 is connected to either a dummy load or an antenna cut for or resonant to the intended frequency.

If you do not have the 530 operator's manual then go to Gordon's website

www.n6wk.com/kenwood/

and download the manual free. Take some time and read the manual thoroughly before attempting to operate the 530.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "m0dbo" <m0dbo@...> wrote:
>
> Hi all i have just tried to fire up my ts530sp after a few months of inactivity. i can not getany out put power on any of the bands. the receiver seems to be performing ok, any ideas what to look for would be appreciated.
> many thanks nigel m0dbo
>

29178. Re: no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 15:01:56 UTC
From: w5rkl
Topic: 29176 Message: 29178

Nigel,

Also check the rear panel's "SG" switch, it must be in the "ON" position for normal operation. Quite often people handling or moving the transceiver can accidently move the SG switch to the OFF position which will result in loss of power output.

The front panel "HEATER" switch must also be turned ON otherwise the driver and final tube filaments will not heat up which can result in loss of power output in all modes.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "m0dbo" <m0dbo@...> wrote:
>
> Hi all i have just tried to fire up my ts530sp after a few months of inactivity. i can not getany out put power on any of the bands. the receiver seems to be performing ok, any ideas what to look for would be appreciated.
> many thanks nigel m0dbo
>

29179. Re: [TS-520_820_530_830] no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 16:42:16 UTC
From: n6wk@n6wk.com
Topic: 29176 Message: 29179

Check that the SG switch on the back is ON

Gordon
N6WK

On 1/5/2011 12:59 AM, m0dbo wrote:
>
> Hi all i have just tried to fire up my ts530sp after a few months of
> inactivity. i can not getany out put power on any of the bands. the
> receiver seems to be performing ok, any ideas what to look for would
> be appreciated.
> many thanks nigel m0dbo
>
>

29180. TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 15:26:44 UTC
From: ke7szc
Topic: 29180 Message: 29180

Good morning, I'm sitting here with my TS-520, and as much as I love it, I am hard-pressed to appreciate the VFO, I was curious if there's a good place in the radio to connect a frequency counter (I am aware that I most likely won't see the actual frequency), but I'm looking for a number that I can reference, I commonly run at the edge of 75m, and would prefer not to transmit out of band..

I also feel kind of silly tossing my call a few kc's off of frequency, and would like to be dead on when I key up... I've shelved my FT-857D in favor of this rig due to the better receive qualities in comparison, but I long for a digital reference to my analog frequency adjustment...

Any assistance, input, crude commentary, would be greatly appreciated.

73, KE7SZC, Bill.

29181. Re: [TS-520_820_530_830] TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 17:16:45 UTC
From: mike mackin
Topic: 29180 Message: 29181

Bill,
I have had my TS-520 for about 25 years. I bought it second hand and it came with A Spectronics DG-5 that tracked real well just like just like a built in frequency display. This was hit by lightning and I never saw another one. I then purchased an external frequency display from Palomar Engineers. They made these units specific for many of the old Kenwood and Yaesu hybrids that did not have displays. This was about 10 years ago and I am not sure if they are still available. I am still using it and it works real well. Kenwood also made a DG-5 that was a nice display specific for the 520 and 520s. That would be your best bet. You sometimes see them on Ebay. Make sure it comes with the connection module and wring information.

Good luck, 73s
Mike N8YOK

--- On Wed, 1/5/11, ke7szc <ke7szc@...> wrote:

From: ke7szc <ke7szc@...>
Subject: [TS-520_820_530_830] TS-520 frequency counter query...
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, January 5, 2011, 10:26 AM

Good morning, I'm sitting here with my TS-520, and as much as I love it, I am hard-pressed to appreciate the VFO, I was curious if there's a good place in the radio to connect a frequency counter (I am aware that I most likely won't see the actual frequency), but I'm looking for a number that I can reference, I commonly run at the edge of 75m, and would prefer not to transmit out of band..

I also feel kind of silly tossing my call a few kc's off of frequency, and would like to be dead on when I key up... I've shelved my FT-857D in favor of this rig due to the better receive qualities in comparison, but I long for a digital reference to my analog frequency adjustment...

Any assistance, input, crude commentary, would be greatly appreciated.

73, KE7SZC, Bill.

Yahoo! Groups Links

[Non-text portions of this message have been removed]

29182. Re: TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 17:23:53 UTC
From: w5rkl
Topic: 29180 Message: 29182

Hi Bill,

A frequency counter connected to the VFO will only display the VFO frequency which is between 5.500Mhz (zero on the VFO dial) to 5.000Mhz (500 on the VFO dial). Using this method you would have to mathematically calculate your actual operating frequency from the frequency counter display (3.39x.y + VFO = 8Mhz TIF frequency. Then subtract the 8Mhz TIF signal from the HET OSC crystal frequency to achieve the actual transmit frequency). For example if the frequency counter displays 5.425, the actual operating frequency will be:

Approximate transmit and receive frequency (40 meters CW)

3.395.0 + 5.425 = 8.820Mhz (TIF frequency fed to the RF Unit transmit mixer)

15.895 - 8.820 = 7.075Mhz (actual operating frequency)

3.395.0Mhz signal is the CAR Unit crystal frequency selected by the "Mode" switch.

5.425Mhz is the output frequency of the VFO set to x.070 on the dial.

15.895Mhz is the 40 meter HET OSC crystal frequency.

A better solution is to use the Kenwood DG-5 which will display your actual transmit and receive frequency. Depending on the model of 520 you have will determine whether the DG-5 is "plug and play" with your 520. The first 520 did not have HET, VFO, and CAR sockets plus a 13.6VDC power socket on the rear panel connect the DG-5 to the 520 and to power the DG-5. If your 520 is the first 520 then you will have to modify (add connections to the VFO, HET OSC, and CAR Unit outputs) for those signals and voltage to appear at the rear panel sockets.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ke7szc" <ke7szc@...> wrote:
>
> Good morning, I'm sitting here with my TS-520, and as much as I love it, I am hard-pressed to appreciate the VFO, I was curious if there's a good place in the radio to connect a frequency counter (I am aware that I most likely won't see the actual frequency), but I'm looking for a number that I can reference, I commonly run at the edge of 75m, and would prefer not to transmit out of band..
>
> I also feel kind of silly tossing my call a few kc's off of frequency, and would like to be dead on when I key up... I've shelved my FT-857D in favor of this rig due to the better receive qualities in comparison, but I long for a digital reference to my analog frequency adjustment...
>
> Any assistance, input, crude commentary, would be greatly appreciated.

>
> 73, KE7SZC, Bill.
>

29183. They're back!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 18:11:52 UTC
From: sceneryguru
Topic: 29183 Message: 29183

Good Afternoon Group:

It has taken several years, to get the mothballed HF station back on the air after moving into our condo, especially with the condo Gestapo and all of the restrictions that implies.

Made my first contact this past weekend on 40 and felt like a novice again.

Which leads me to ask... are there any mods for the TS-820S that will result in upgraded performance or convenience of operation?.

In closing, I would like to extend my thanks and appreciation to the many members of the invaluable group who give of their time and talents so freely.

Remember, that for every Ham that may ask a question, there are countless lurking in the shadows and learning through the camaraderie that this Group imparts.

tnx es 73, 76

Tom G, Sr.
K3SSB

29184. yk-88sn filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 19:05:31 UTC
From: aa0rb
Topic: 29184 Message: 29184

Is the yk-88sn and yk-88sn-1 the same filter minus pc board?
Can I unsoder the pc board from the yk-88sn-1 and install it in the ts-530?
thanks,
AA0RB

29185. Re: [TS-520_820_530_830] Re: no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 19:34:26 UTC
From: nigel head
Topic: 29176 Message: 29185

Hi Mike
the sg switch was in the on position, but i slide it on and off a few times. I have the set up procedures and have followed them. I am trying to get it going in cw at the moment because my mic has gone missing in the loft somewhere. After playing with the sg switch and following the set up procedure i can now get 50watts out maximum in cw mode. i will try and dig out the mic tomorrow. many thanks for your advice from Nigel

--- On Wed, 5/1/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: no out put power on ts530sp
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, 5 January, 2011, 14:57

Nigel,

What mode (TUNE, CW, USB, or LSB) are you experiencing loss of RF output? If you are transmitting in USB or LSB mode then you will need a microphone connected to the 530's microphone socket, press the PTT button, and adjust the MIC gain control while speaking into the microphone to achieve any RF output. This is assuming the 530 is properly tuned up for the frequency you intent to use and the 530 is connected to either a dummy load or an antenna cut for or resonant to the intended frequency.

If you do not have the 530 operator's manual then go to Gordon's website

www.n6wk.com/kenwood/

and download the manual free. Take some time and read the manual thoroughly before attempting to operate the 530.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "m0dbo" <m0dbo@...> wrote:
>
> Hi all i have just tried to fire up my ts530sp after a few months of inactivity. i can not getany out put power on any of the bands. the receiver seems to be performing ok, any ideas what to look for would be appreciated.
> many thanks nigel m0dbo
>

[Non-text portions of this message have been removed]

29186. Re: [TS-520_820_530_830] no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 19:37:23 UTC
From: nigel head
Topic: 29176 Message: 29186

Hi Gordon
thanks for the advice

--- On Wed, 5/1/11, n6wk@n6wk.com <n6wk@...> wrote:

From: n6wk@... <n6wk@...>
Subject: Re: [TS-520_820_530_830] no out put power on ts530sp
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, 5 January, 2011, 16:42

Check that the SG switch on the back is ON

Gordon
N6WK

On 1/5/2011 12:59 AM, m0dbo wrote:
>
> Hi all i have just tried to fire up my ts530sp after a few months of
> inactivity. i can not getany out put power on any of the bands. the
> receiver seems to be performing ok, any ideas what to look for would
> be appreciated.
> many thanks nigel m0dbo
>
>

[Non-text portions of this message have been removed]

29187. Re: yk-88sn filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 20:14:59 UTC
From: w5rkl
Topic: 29184 Message: 29187

The YK-88SN is the 1.8Khz sideband filter verses the 2.1Khz YK-88S sideband filter. The filters themselves are the same except for the bandwidth and that the YK-88SN-1 is mounted to a PC board. Check the 530's service and/or operator's manual on installing the narrow sideband filter for any changes you need to make "BEFORE" you install the narrow sideband filter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "aa0rb" <fealingood@...> wrote:
>
> Is the yk-88sn and yk-88sn-1 the same filter minus pc board?
> Can I unsoder the pc board from the yk-88sn-1 and install it in the ts-530?
> thanks,
> AA0RB
>

29188. Re: no out put power on ts530sp

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 20:20:54 UTC
From: w5rkl
Topic: 29176 Message: 29188

There should be more than enough drive from the driver tube to produce a full scale ALC indication during tune up in TUNE mode with the CAR control set to no higher than 11 or 12 o'clock and adjusting the DRIVE control. If the ALC indication peaks then drops off without touching anything then the driver tube should be replaced. Don't replace tubes unless you are sure they are the source of low power output.

Check the final tube's HV at the Rectifier Unit's "800" terminal first. It should be approximately 925VDC in standby (receive) and less in transmit depending on the final amplifier's power output. A weak HV filter capacitor could lead to lower final tube plate voltage which can affect the power output. I'm not saying the HV filter capacitors in your 530 are bad, just another possible cause for low power output. A bad HV filter capcitor can result in the HV becoming half it it normal voltage level.

Naturally cleaning the band switch and mode switch wafers can help as well.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, nigel head <m0dbo@...> wrote:
>
> Hi Mike
> Â Â Â Â Â Â Â Â Â Â Â Â the sg switch was in the on position, but i slide it on and off a few times. I have the set up procedures and have followed them. I am trying to get it going in cw at the moment because my mic has gone missing in the loft somewhere. After playing with the sg switch and following the set up procedure i can now get 50watts out maximum in cw mode. i will try and dig out the mic tomorrow. many thanks for your advice from Nigel
>
> --- On Wed, 5/1/11, w5rkl <w5rkl@...> wrote:
>
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: no out put power on ts530sp
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, 5 January, 2011, 14:57
>
>
> Â
>
>
>
> Nigel,
>
> What mode (TUNE, CW, USB, or LSB) are you experiencing loss of RF output? If you are transmitting in USB or LSB mode then you will need a microphone connected to the 530's microphone socket, press the PTT button, and adjust the MIC gain control while speaking

into the microphone to achieve any RF output. This is assuming the 530 is properly tuned up for the frequency you intent to use and the 530 is connected to either a dummy load or an antenna cut for or resonant to the intended frequency.
>
> If you do not have the 530 operator's manual then go to Gordon's website
>
> www.n6wk.com/kenwood/
>
> and download the manual free. Take some time and read the manual thoroughly before attempting to operate the 530.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "m0dbo" <m0dbo@> wrote:
> >
> > Hi all i have just tried to fire up my ts530sp after a few months of inactivity. i can not getany out put power on any of the bands. the receiver seems to be performing ok, any ideas what to look for would be appreciated.
> > many thanks nigel m0dbo
> >
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>
> [Non-text portions of this message have been removed]
>

29189. Kenwood TS-830S Gold Label

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 21:16:31 UTC
From: w3okc
Topic: 29189 Message: 29189

I would to know what I should do to get the best performance from this rig on cw recieve. What filters should I get to enhance the performance
I like to work cw and get good signal reports but I would like to have a more selective and quiet recieve. I have considered buying another rig for cw but hate to spend the money if it isn,t necessary.

Thanks
Steve
W3OKC

29190. TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 21:20:27 UTC
From: w3okc
Topic: 350 Message: 29190

What should I do to the the most out this rig for cw, I work alot of cw and considered buying another rig for cw but don't want to spend the money if it isn't necessary. I get great reports on ssb and like the radio alot.

Thanks
Steve
W3OKC

29191. Re: [TS-520_820_530_830] TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 21:58:47 UTC
From: Charlie , W5COV
Topic: 350 Message: 29191

Do you have any CW filters in it ? Is it adjacent stations that are your complaint ?

Charlie , W5COV

[Non-text portions of this message have been removed]

29192. Re: TS-830S Parts needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-05 22:13:38 UTC
From: james27613
Topic: 29137 Message: 29192

hi

ad was placed by KE5FTF

http://www.eham.net/classifieds/detail/334405

73 james ke4drn

29193. Re: [TS-520_820_530_830] TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 07:01:01 UTC
From: MICHAEL MIHAILOVIC
Topic: 29180 Message: 29193

Hi Bill.
There is a guy in your part of the world that sells frequency counter kits fer that rig i am looking at getting one from him fer my ts520 i just have to locate the address info will give it to u he has a web site as well.
Will let u know friday evening7/01/11 via email his info u can then go to web site a look.
73'S
MIKE
VK2OZ

From: ke7szc <ke7szc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 6 January, 2011 2:26:44 AM
Subject: [TS-520_820_530_830] TS-520 frequency counter query...

Good morning, I'm sitting here with my TS-520, and as much as I love it, I am hard-pressed to appreciate the VFO, I was curious if there's a good place in the radio to connect a frequency counter (I am aware that I most likely won't see the actual frequency), but I'm looking for a number that I can reference, I commonly run at the edge of 75m, and would prefer not to transmit out of band..

I also feel kind of silly tossing my call a few kc's off of frequency, and would like to be dead on when I key up... I've shelved my FT-857D in favor of this rig due to the better receive qualities in comparison, but I long for a digital reference to my analog frequency adjustment...

Any assistance, input, crude commentary, would be greatly appreciated.

73, KE7SZC, Bill.

[Non-text portions of this message have been removed]

29194. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 16:19:15 UTC
From: w3okc
Topic: 350 Message: 29194

--- In TS-520_820_530_830@yahoogroups.com, "Charlie , W5COV" <cvest@...> wrote:
>
> Do you have any CW filters in it ? Is it adjacent stations that are your complaint ?
>
> Charlie , W5COV
>
> [Non-text portions of this message have been removed]
>
It is the adjacent stations that are causing the problem, I don't have any filter in it.

29195. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 17:07:02 UTC
From: w5rkl
Topic: 350 Message: 29195

The TS-830S has 2 factory 2.7Khz sideband filters installed. One is an 8Mhz IF filter and the other is a 455Khz filter. The narrow sideband and CW narrow or wide filters are "optional". You can purchase additional filters for your 830 from INRAD at the following link:

http://www.inrad.net/home.php?cat=55

If you change filters, such as changing to a more narrow sideband filter or adding CW filters, you should change both 8Mhz and 455Khz filters. The same goes for installing CW filters, install both, not just one.

Adjacent interference can be reduced and/or eliminated by adding better filters. If adding filters is not an option at this time then use the IF SHIFT control which can help reduce adjacent frequency interference. The IF SHIFT will not reduce or eliminate all interference but it will help reduce it until you install better, more narrow, filters. Even then you may have to use the IF SHIFT and the more narrow filters to reduce and/or eliminate adjacent frequency interference. Some adjacent interference cannot and will not be eliminated with filters and IF SHIFT control especially if the offending station is operating within 500Hz to 1.5Khz of your operating frequency. If that is the case then the offending station's signal will fall within the filter's band pass and be heard. Adjusting the offending station or your frequency is about the only way to reduce or eliminate the interference.

If the 830's noise blanker is turned ON with noise present, you may experience what I call "ghost" or "phantom" interference signals. This is caused by the action of the noise limiter, opening and closing the signal path very rapidly when noise is being reduced. This is not a problem that can be fixed with tighter filtering but by simply turning the noise limiter OFF.

Use the IF Shift control until you have installed tighter filtering but remember, as I said, you may also need, at times, to use the IF SHIFT in addition to using the tighter filters to reduce and/or eliminate adjacent interference.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w3okc" <w3okc@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Charlie , W5COV" <cvest@> wrote:
> >
> > Do you have any CW filters in it ? Is it adjacent stations that are your complaint ?
> >
> > Charlie , W5COV
> >

> > [Non-text portions of this message have been removed]
> >
> It is the adjacent stations that are causing the problem, I don't have any filter in it.
>

29196. Re: [TS-520_820_530_830] TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 17:10:53 UTC
From: Joseph Stiles
Topic: 29180 Message: 29196

Bill,

Check out "Almost All Digital" at www.aade.com he's in Auburn, WA.
The frequency counter/display he has for the 520 is NOT plug-n-play, so some internal connections will have to be made....or you can go with another type...that will sample the RF signal externally.

73's joe wb7uqu tacoma

From: MICHAEL MIHAILOVIC <vk2oz@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 5, 2011 11:01:01 PM
Subject: Re: [TS-520_820_530_830] TS-520 frequency counter query...

Hi Bill.
There is a guy in your part of the world that sells frequency counter kits fer that rig i am looking at getting one from him fer my ts520 i just have to locate

the address info will give it to u he has a web site as well.
Will let u know friday evening7/01/11 via email his info u can then go to web site a look.
73'S
MIKE
VK2OZ

From: ke7szc <ke7szc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 6 January, 2011 2:26:44 AM
Subject: [TS-520_820_530_830] TS-520 frequency counter query...

Good morning, I'm sitting here with my TS-520, and as much as I love it, I am hard-pressed to appreciate the VFO, I was curious if there's a good place in the

radio to connect a frequency counter (I am aware that I most likely won't see the actual frequency), but I'm looking for a number that I can reference, I commonly run at the edge of 75m, and would prefer not to transmit out of band..

I also feel kind of silly tossing my call a few kc's off of frequency, and would

like to be dead on when I key up... I've shelved my FT-857D in favor of this rig

due to the better receive qualities in comparison, but I long for a digital reference to my analog frequency adjustment...

Any assistance, input, crude commentary, would be greatly appreciated.

73, KE7SZC, Bill.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29197. Re: TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 17:21:50 UTC
From: w5rkl
Topic: 29180 Message: 29197

For test purposes only, a few years back, I tried using a frequency counter connected through an attenuator, a wire wrapped around the coax cable to sample the transmitter's transmit signal. Although this did display the transmit frequency, the display is not stable because the transmit signal "level" varies. In addition, the display only displays the "transmit" frequency, not the "receive" frequency. This method is quite stable when used with an AM transmitter that has a constant carrier in transmit but, again, it does not display the "receive" frequency.

Modifications will have to be made to the transceiver if after market displays are used. Modifications will also have to be made to the transceiver if the transceiver is the original 520, whether after market or using the DG-5.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Bill,
>
> Check out "Almost All Digital" at www.aade.com he's in Auburn, WA.
> The frequency counter/display he has for the 520 is NOT plug-n-play, so some
> internal connections will have to be made....or you can go with another
> type...that will sample the RF signal externally.
>
> 73's joe wb7uqu tacoma
>
>
>
>
>
>
>
> _____
> From: MICHAEL MIHAILOVIC <vk2oz@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 5, 2011 11:01:01 PM
> Subject: Re: [TS-520_820_530_830] TS-520 frequency counter query...
>
>
>
> Hi Bill.
> There is a guy in your part of the world that sells frequency counter kits fer
> that rig i am looking at getting one from him fer my ts520 i just have to locate
>
> the address info will give it to u he has a web site as well.
> Will let u know friday evening7/01/11 via email his info u can then go to web
> site a look.

> 73'S
> MIKE
> VK2OZ
>
> _____
> From: ke7szc <ke7szc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, 6 January, 2011 2:26:44 AM
> Subject: [TS-520_820_530_830] TS-520 frequency counter query...
>
>
> Good morning, I'm sitting here with my TS-520, and as much as I love it, I am
> hard-pressed to appreciate the VFO, I was curious if there's a good place in the
>
> radio to connect a frequency counter (I am aware that I most likely won't see
> the actual frequency), but I'm looking for a number that I can reference, I
> commonly run at the edge of 75m, and would prefer not to transmit out of band..
>
> I also feel kind of silly tossing my call a few kc's off of frequency, and would
>
> like to be dead on when I key up... I've shelved my FT-857D in favor of this rig
>
> due to the better receive qualities in comparison, but I long for a digital
> reference to my analog frequency adjustment...
>
> Any assistance, input, crude commentary, would be greatly appreciated.
>
> 73, KE7SZC, Bill.
>
> [Non-text portions of this message have been removed]
>
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>
>
> [Non-text portions of this message have been removed]
>

29198. Re: Kenwood TS-830S Gold Label

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-06 22:37:20 UTC
From: Hartlessone
Topic: 29189 Message: 29198

Steve,
You have perhaps the best cw rig ever with the exception of perhaps these "Starwars" rigs. I've never used one! The TS830 has been my primary rig for a long time. It is the best CW rig I've ever used. I too thought it should perform better... and it did. My problem was that I did not spend enough time learning how to use VBT and the IF SHIFT. I installed a CW filter before learning to use these controls, but now I never use the CW filter. My advice is read the I.B. and practice using the controls.
Gook luck,
Bill
W5ZV

--- In TS-520_820_530_830@yahoogroups.com, "w3okc" <w3okc@...> wrote:
>
> I would to know what I should do to get the best performance from this rig on cw recieve. What filters should I get to enhance the performance
> I like to work cw and get good signal reports but I would like to have a more selective and quiet recieve. I have considered buying another rig for cw but hate to spend the money if it isn,t necessary.
>
> Thanks
> Steve
> W3OKC
>

29199. TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 16:18:15 UTC
From: w5rkl
Topic: 350 Message: 29199

I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:

w5rkl@yahoo.com

73s
Mike
W5RKL

29200. RE: [TS-520_820_530_830] TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 16:24:37 UTC
From: Greg Anders
Topic: 350 Message: 29200

Mike,

A guy with a "5" call posted an add on Eham earlier this week. Showed a picture of two shelving units full of Kenwood hybrid parts rigs. He is looking to sell units or parts.

FYI,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Friday, January 07, 2011 8:18 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830S

I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:

w5rkl@...<mailto:w5rkl%40yahoo.com>

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

29201. RE: [TS-520_820_530_830] TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 16:46:47 UTC
From: Greg Anders
Topic: 350 Message: 29201

HI Mike,

Found it,

2011-01-03
KE5FTF<http://www.eham.net/user/profile/KE5FTF> [cid:image001.png@01CBAE47.6B634510]

HF Radios

Kenwood hybrid PARTS<http://www.eham.net/classifieds/detail/334405>

I have a good selection of Kenwood hybrid Parts... Models TS-520 to 830S... Thanks, Bob
Email me at ke5ftf@...
Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Friday, January 07, 2011 8:18 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830S

I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:

w5rkl@...<mailto:w5rkl%40yahoo.com>

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

29202. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 16:54:30 UTC
From: Bob
Topic: 350 Message: 29202

Mike and Group
The call sign of the fellow is KE5FTF and his E-Mail address is KE5FTF@... and it looks like he has close to 25 parted out radios on the shelf.
73's
KB6KPK
Bob

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:
>
> w5rkl@...
>
> 73s
> Mike
> W5RKL
>

29203. Re: [TS-520_820_530_830] TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 16:54:42 UTC
From: James Hall
Topic: 350 Message: 29203

I bought a function switch for my ts-520s from him last week. It got here in
barely 3 days, it was quicker than I expected.

My 520s is finally working, it was the switch this entire time.
I'm ecstatic that I'll finally be able to use it.

James
N9XLC

On Fri, Jan 7, 2011 at 11:46 AM, Greg Anders <greg.anders@...>wrote:

>
>
> HI Mike,
>
> Found it,
>
> 2011-01-03
> KE5FTF<http://www.eham.net/user/profile/KE5FTF> [cid:
> image001.png@01CBAE47.6B634510 <image001.png%4001CBAE47.6B634510>]
>
> HF Radios
>
> Kenwood hybrid PARTS<http://www.eham.net/classifieds/detail/334405>
>
> I have a good selection of Kenwood hybrid Parts... Models TS-520 to 830S...
> Thanks, Bob Email me at ke5ftf@... <ke5ftf%40mail.com>
>
> Greg
> KG6YV
>
> From: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>[mailto:
> TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830%40yahoogroups.com>]
> On Behalf Of w5rkl
> Sent: Friday, January 07, 2011 8:18 AM
> To: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] TS-830S
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special"
> that are willing to part with, drop me an e-mail. My e-mail address is good
> on the group's "email" link or if you wish, e-mail me at:
>
> w5rkl@... <w5rkl%40yahoo.com><mailto:w5rkl%40yahoo.com<w5rkl%2540yahoo.com>
> > >
>
> 73s

> Mike
> W5RKL
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

29204. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 17:00:40 UTC
From: w5rkl
Topic: 350 Message: 29204

Thanks Greg. I sent him an e-mail. Will have to wait and see what he has. I would consider 2 "partial" 830S as long as I could take parts from one to make a complete 830 out of the other.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> Mike,
>
> A guy with a "5" call posted an add on Eham earlier this week. Showed a picture of two shelving units full of Kenwood hybrid parts rigs. He is looking to sell units or parts.
>
> FYI,
>
> Greg
> KG6YV
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
> Sent: Friday, January 07, 2011 8:18 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] TS-830S
>
>
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:
>
> w5rkl@...<mailto:w5rkl%40yahoo.com>
>
> 73s
> Mike
> W5RKL
>
>
>
> [Non-text portions of this message have been removed]
>

29205. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 17:03:04 UTC
From: aschichler
Topic: 350 Message: 29205

You can also narrow the IF bandwidth with the VBT (Variable Bandwidth Tuning) control. If you turn it counter-clockwise, the IF bandwidth gets very narrow. Not as good selectivity as with CW filters, but not too bad. You will probably have to play with the IF Shift also, to get the best CW reception, but it should reduce some of the interference from nearby signals.

Al, WA2AS

> Adjacent interference can be reduced and/or eliminated by adding better filters. If adding filters is not an option at this time then use the IF SHIFT control which can help reduce adjacent frequency interference. The IF SHIFT will not reduce or eliminate all interference but it will help reduce it until you install better, more narrow, filters. Even then you may have to use the IF SHIFT and the more narrow filters to reduce and/or eliminate adjacent frequency interference. Some adjacent interference cannot and will not be eliminated with filters and IF SHIFT control especially if the offending station is operating within 500Hz to 1.5Khz of your operating frequency. If that is the case then the offending station's signal will fall within the filter's band pass and be heard. Adjusting the offending station or your frequency is about the only way to reduce or eliminate the interference.
>
> If the 830's noise blanker is turned ON with noise present, you may experience what I call "ghost" or "phantom" interference signals. This is caused by the action of the noise limiter, opening and closing the signal path very rapidly when noise is being reduced. This is not a problem that can be fixed with tighter filtering but by simply turning the noise limiter OFF.
>
> Use the IF Shift control until you have installed tighter filtering but remember, as I said, you may also need, at times, to use the IF SHIFT in addition to using the tighter filters to reduce and/or eliminate adjacent interference.
>
> 73s
> Mike
> W5RKL
>

> > It is the adjacent stations that are causing the problem, I don't have any filter in it.
> >

29206. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 17:09:22 UTC
From: w5rkl
Topic: 350 Message: 29206

Well he responded, rather quickly I might add, but said he only sells "parts" for the hybrids, not a partial or complete transceiver. I'll keep him in mind if I get one and need a part.

There are 2 on eBay being sold as "Tech Specials". I don't like using eBay because bidders tend to push the prices way over board making a "Tech Special" not worth the money, then there's the shipping cost added to the inflated over prices Tech Special. I should never have sold my TS-530S!! I want one I can fix that isn't going to cost as much as a new TS-2000. Oh well, I'll keep on looking. Thanks again for the tip.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, James Hall <nyxxenator@...> wrote:
>
> I bought a function switch for my ts-520s from him last week. It got here in
> barely 3 days, it was quicker than I expected.
>
> My 520s is finally working, it was the switch this entire time.
> I'm ecstatic that I'll finally be able to use it.
>
> James
> N9XLC
>
> On Fri, Jan 7, 2011 at 11:46 AM, Greg Anders <greg.anders@...>wrote:
>
> > >
> > >
> > > HI Mike,
> > >
> > > Found it,
> > >
> > > 2011-01-03
> > > KE5FTF<http://www.eham.net/user/profile/KE5FTF> [cid:
> > > image001.png@... <image001.png%4001CBAE47.6B634510>]
> > >
> > > HF Radios
> > >
> > > Kenwood hybrid PARTS<http://www.eham.net/classifieds/detail/334405>
> > >
> > > I have a good selection of Kenwood hybrid Parts... Models TS-520 to 830S...
> > > Thanks, Bob Email me at ke5ftf@... <ke5ftf%40mail.com>
> > >
> > > Greg
> > > KG6YV

> >
> > From: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>[mailto:
> > TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830%40yahoogroups.com>]
> > On Behalf Of w5rkl
> > Sent: Friday, January 07, 2011 8:18 AM
> > To: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] TS-830S
> >
> > I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special"
> > that are willing to part with, drop me an e-mail. My e-mail address is good
> > on the group's "email" link or if you wish, e-mail me at:
> >
> > w5rkl@... <w5rkl%40yahoo.com><mailto:w5rkl%40yahoo.com<w5rkl%2540yahoo.com>
> > >
> >
> > 73s
> > Mike
> > W5RKL
> >
> > [Non-text portions of this message have been removed]
> >
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> >
>
>
> [Non-text portions of this message have been removed]
>

29207. test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 18:55:03 UTC
From: Joseph Stiles
Topic: 29207 Message: 29207

Greeting Group,

I am getting more into diagnosis/repair thanks to the members of this group.
I have a/some questions:

A "slow sweep generator" is stated in the service manuals to properly adjust areas of these rigs. I am confused about the specifications, as I have a TS520s service manual in font of me..and it states that the "center frequency" should be 8.83Mhz..that I can understand..but I have looked at numerous ones for sale on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what the unit is capable of tuning through? If one unit is say... 10Mhz...would that satisfy the 8.83Mhz BPF freq requirement?

73's joe wb7uqu

[Non-text portions of this message have been removed]

29208. Re: [TS-520_820_530_830] test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 19:11:31 UTC
From: Mel Farrer
Topic: 29207 Message: 29208

Hi Joe,

I'm Mel. In the simple application a "slow sweep generator" can be a manually tuned signal generator plus a method of seeing the response with an oscilloscope. It is better to have a RF generator capable of sweeping at various rates. So if you are looking at obtaining a signal source, let your budget do the talking. If this is a one time effort, I would borrow one. They tend to be on the pricey side. I find more use testing having a good two channel scope and a manual RF generator. However, if you really want to get into it in a big way, you need to define the equipment you need and shop for deals. A simple test set up will run you around $500 for used equipment. 5 to 10K for new full service equipment. Having said that, I have set my shop up over the years of careful buying and can do just about any testing I need to do. Cost probably 10K, new about 35K. But then I can test anything to 12GHz.

I hope this helps.

Mel, K6KBE

_____
From: Joseph Stiles <stilesjoseph@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 7, 2011 10:55:03 AM
Subject: [TS-520_820_530_830] test equipment

Greeting Group,

I am getting more into diagnosis/repair thanks to the members of this group. I have a/some questions:

A "slow sweep generator" is stated in the service manuals to properly adjust areas of these rigs. I am confused about the specifications, as I have a TS520s service manual in font of me..and it states that the "center frequency" should be 8.83Mhz..that I can understand..but I have looked at numerous ones for sale on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what the unit is capable of tuning through? If one unit is say... 10Mhz...would that satisfy the 8.83Mhz BPF freq requirement?

73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29209. Re: TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 15:49:11 UTC
From: Al N6TEZ
Topic: 29180 Message: 29209

Morning,

Recent posts about frequency counters (digital displays)have got me thinking about buying one for my TS-520SE.
Has anyone had experience with (or any thoughts on)the "DD-103 Universal Digital Dial" from wwww.electronicspecialtyproducts.com/dd103.html
It sells for $125.00 plus $10.00 US Shipping. It comes with a Universal Interface.
ALSO a "Plug And Play" cable is available for the TS-520 (for $15.00).

Tnx, Al, N6TEZ

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Bill,
>
> Check out "Almost All Digital" at www.aade.com he's in Auburn, WA.
> The frequency counter/display he has for the 520 is NOT plug-n-play, so some
> internal connections will have to be made....or you can go with another
> type...that will sample the RF signal externally.
>
> 73's joe wb7uqu tacoma
>
>
>
>
>
>
>
> _____
> From: MICHAEL MIHAILOVIC <vk2oz@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 5, 2011 11:01:01 PM
> Subject: Re: [TS-520_820_530_830] TS-520 frequency counter query...
>
>
> Hi Bill.
> There is a guy in your part of the world that sells frequency counter kits fer
> that rig i am looking at getting one from him fer my ts520 i just have to locate
>
> the address info will give it to u he has a web site as well.
> Will let u know friday evening7/01/11 via email his info u can then go to web
> site a look.
> 73'S
> MIKE
> VK2OZ
>
> _____

> From: ke7szc <ke7szc@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, 6 January, 2011 2:26:44 AM
> Subject: [TS-520_820_530_830] TS-520 frequency counter query...
>
>
> Good morning, I'm sitting here with my TS-520, and as much as I love it, I am
> hard-pressed to appreciate the VFO, I was curious if there's a good place in the
>
> radio to connect a frequency counter (I am aware that I most likely won't see
> the actual frequency), but I'm looking for a number that I can reference, I
> commonly run at the edge of 75m, and would prefer not to transmit out of band..
>
> I also feel kind of silly tossing my call a few kc's off of frequency, and would
>
> like to be dead on when I key up... I've shelved my FT-857D in favor of this rig
>
> due to the better receive qualities in comparison, but I long for a digital
> reference to my analog frequency adjustment...
>
> Any assistance, input, crude commentary, would be greatly appreciated.
>
> 73, KE7SZC, Bill.
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29210. Re: test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-07 20:28:14 UTC
From: w5rkl
Topic: 29207 Message: 29210

Hi Joe,

I don't know what those people on eBay are talking about. They may be speaking some mythical nonsense or some other nonsense.

Here are the facts, not some half bake mythical coffee house nonsense.

First, the IF frequency in the TS-520 series transceivers is "3.395Mhz" not "8.830Mhz". The TS-530, TS-820, and TS-830 have an 8Mhz IF frequency and the method of generating and receiving single sideband is similar but different.

The various hybrid model's IF frequencies and crystal filters do NOT have a 2Mhz, 10Mhz, or 20Mhz spread!

My explanation that follows is for the TS-520 since that is the transceiver you have in front of you.

Second, the typical factory band width of the sideband filter in the hybrid models is 2.7Khz and the CW filter's bandwidth is typically 500Hz, not "2Mhz", "10Mhz" or "20Mhz". Note "Mhz" and "Khz", where "Mhz" means "Mega Hertz" (1 million hertz) and "Khz" means "Kilo Hertz" or "1,000 Hertz", there is a huge difference between the two when referring to frequencies. Your house voltage has a frequency of "60hz" which means "60 sine waves" every "second". One Mhz means 1 million sine wave cycles "every second"! The same for One Khz, 1,000 sine wave cycles "per second"!

The 520, 530, 820, and 830 all have a "variable" "TIF" and "RIF" band pass frequency between 8.895Mhz to 8.395Mhz. This frequency varies depending on the frequency of the "incoming" receive signal and the "transmit" signal frequency. There are "2" variable band pass signals, one for transmit which is referred to as the "TIF" frequency which stands for "Transmit Intermediate Frequency" and the receive "RIF" which stands for "Receive Intermediate Frequency". Now do NOT become fooled into believing the 520 has an IF frequency of 8Mhz because if you believe that then you would be wrong!

For example, lets use 80 meters and a receive signal of 3.750Mhz from Goober in Any Town, USA. A frequency of 3.750Mhz is about in the middle of the 80 meter band. The VFO is set to 275 on the dial or tuned for a digital display of 3.750Mhz on the digital display. This same process occurs on "ALL" bands except the band switch selected RF Unit heterodyne crystal oscillator frequency is different for each band.

The receive signal arrives at the COIL UNIT board from the antenna and flows through the COIL UNIT band switch selected antenna coil then on to the receiver's RF amplifier. The signal is amplified by the receiver RF amplifier then fed to the first receiver mixer where it is mixed with the 80 meter 12.395Mhz heterodyne oscillator frequency producing the following results, or as I like to call it, "the desired frequency"!

12.395Mhz - 3.750Mhz = 8.645Mhz

12.395Mhz is the 80 meter RF Unit heterodyne oscillator crystal frequency.

3.750Mhz is the frequency of the receive signal.

8.645MNhz is the first receiver's mixer output, or "desired signal". Notice it falls within the 8.895Mhz to 8.395Mhz band pass frequency range which is now referred to as the receiver's "RIF" (Receive Intermediate Frequency) signal.

The 8.645Mhz RIF signal is then applied to the IF UNIT then on to the receiver's "second" mixer where it mixes with the 5.250Mhz VFO signal producing the following results:

8.645Mhz = 5.250Mhz = "3.395Mhz"

8.645Mhz is the same "desired RIF signal" from the RF Unit's first receiver mixer

5.250Mhz is the VFO's output frequency when the VFO is tuned to 250 on the dial. The VFO tunes between 5.500Mhz and 5.000Mhz, where 5.500Mhz is the bottom of "ALL" bands and 5.000Mhz is the top of all bands! The VFO frequency range remains the same regardless of the band switch and Mode switch position.

3.395Mhz is the 520's "IF" frequency. Remember I said don't be fooled into believing the 520's IF frequency is the "8Mhz" signal! The crystal filters have a center frequency of "3.395Mhz" and will NOT pass an 8Mhz signal no matter how hard one tries to do it!

The "3.395Mhz" signal is "NOW" the 520's actual "IF" frequency which is then applied to the Mode switch selected crystal filter where, depending on the Mode setting, SSB (USB or LSB) or TUNE/CW modes, the signal flows through the filter.

The signal exits the output of the crystal filter and is then applied to the IF amplifiers where the IF signal is amplified. The IF signal is then applied to the AGC amplifier where AGC is produced and display on the meter as "S Units". At the same time the IF signal is also applied to the "GENERATOR UNIT" where it is then applied to the balanced or "ring" detector. At the same time the CAR Unit Mode switch selected crystal oscillator signal is also applied to the GENERATOR UNIT's balance or "ring" detector where it is mixed with the IF signal where the transmit station's "audio" is recovered. The recovered audio is then applied to the AF AVR Unit's audio amplifier where it is amplified then fed to the speaker where you hear, "Ok Bill, thanks for the report...".

The process is "reversed" in transmit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greeting Group,
>
> I am getting more into diagnosis/repair thanks to the members of this group.
> I have a/some questions:
>
> A "slow sweep generator" is stated in the service manuals to properly adjust
> areas of these rigs. I am confused about the specifications, as I have a TS520s
> service manual in font of me..and it states that the "center frequency" should
> be 8.83Mhz..that I can understand..but I have looked at numerous ones for sale
> on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what the

> unit is capable of tuning through? If one unit is say... 10Mhz...would that
> satisfy the 8.83Mhz BPF freq requirement?
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29211. Re: test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 04:20:29 UTC
From: n6wk_skcc3
Topic: 29207 Message: 29211

Mike,
Great Tutorial. Good job explaining it. I think what Joe is asking is that in the Service manual for the 520s under Equipment needed it states: Page 45
8)

Slow Sweep Generator
1) Center Frequency 8.83 MHZ
2) Frequency Deviation Maximum +/- 5 KHZ
3) Output Voltage more then 0.1 Volt
4) Sweep rate at least .5 sec/cm

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Joe,
>
> I don't know what those people on eBay are talking about. They may be speaking some mythical nonsense or some other nonsense.
>
> Here are the facts, not some half bake mythical coffee house nonsense.
>
> First, the IF frequency in the TS-520 series transceivers is "3.395Mhz" not "8.830Mhz". The TS-530, TS-820, and TS-830 have an 8Mhz IF frequency and the method of generating and receiving single sideband is similar but different.
>
> The various hybrid model's IF frequencies and crystal filters do NOT have a 2Mhz, 10Mhz, or 20Mhz spread!
>
> My explanation that follows is for the TS-520 since that is the transceiver you have in front of you.
>
> Second, the typical factory band width of the sideband filter in the hybrid models is 2.7Khz and the CW filter's bandwidth is typically 500Hz, not "2Mhz", "10Mhz" or "20Mhz". Note "Mhz" and "Khz", where "Mhz" means "Mega Hertz" (1 million hertz) and "Khz" means "Kilo Hertz" or "1,000 Hertz", there is a huge difference between the two when referring to frequencies. Your house voltage has a frequency of "60hz" which means "60 sine waves" every "second". One Mhz means 1 million sine wave cycles "every second"! The same for One Khz, 1,000 sine wave cycles "per second"!
>
> The 520, 530, 820, and 830 all have a "variable" "TIF" and "RIF" band pass frequency between 8.895Mhz to 8.395Mhz. This frequency varies depending on the frequency of the "incoming" receive signal and the "transmit" signal frequency. There are "2" variable band pass signals, one for transmit which is referred to as the "TIF" frequency which stands for

"Transmit Intermediate Frequency" and the receive "RIF" which stands for "Receive Intermediate Frequency". Now do NOT become fooled into believing the 520 has an IF frequency of 8Mhz because if you believe that then you would be wrong!
>
> For example, lets use 80 meters and a receive signal of 3.750Mhz from Goober in Any Town, USA. A frequency of 3.750Mhz is about in the middle of the 80 meter band. The VFO is set to 275 on the dial or tuned for a digital display of 3.750Mhz on the digital display. This same process occurs on "ALL" bands except the band switch selected RF Unit heterodyne crystal oscillator frequency is different for each band.
>
> The receive signal arrives at the COIL UNIT board from the antenna and flows through the COIL UNIT band switch selected antenna coil then on to the receiver's RF amplifier. The signal is amplified by the receiver RF amplifier then fed to the first receiver mixer where it is mixed with the 80 meter 12.395Mhz heterodyne oscillator frequency producing the following results, or as I like to call it, "the desired frequency"!
>
> 12.395Mhz - 3.750Mhz = 8.645Mhz
>
> 12.395Mhz is the 80 meter RF Unit heterodyne oscillator crystal frequency.
>
> 3.750Mhz is the frequency of the receive signal.
>
> 8.645MNhz is the first receiver's mixer output, or "desired signal". Notice it falls within the 8.895Mhz to 8.395Mhz band pass frequency range which is now referred to as the receiver's "RIF" (Receive Intermediate Frequency) signal.
>
> The 8.645Mhz RIF signal is then applied to the IF UNIT then on to the receiver's "second" mixer where it mixes with the 5.250Mhz VFO signal producing the following results:
>
> 8.645Mhz = 5.250Mhz = "3.395Mhz"
>
> 8.645Mhz is the same "desired RIF signal" from the RF Unit's first receiver mixer
>
> 5.250Mhz is the VFO's output frequency when the VFO is tuned to 250 on the dial. The VFO tunes between 5.500Mhz and 5.000Mhz, where 5.500Mhz is the bottom of "ALL" bands and 5.000Mhz is the top of all bands! The VFO frequency range remains the same regardless of the band switch and Mode switch position.
>
> 3.395Mhz is the 520's "IF" frequency. Remember I said don't be fooled into believing the 520's IF frequency is the "8Mhz" signal! The crystal filters have a center frequency of "3.395Mhz" and will NOT pass an 8Mhz signal no matter how hard one tries to do it!
>
> The "3.395Mhz" signal is "NOW" the 520's actual "IF" frequency which is then applied to the Mode switch selected crystal filter where, depending on the Mode setting, SSB (USB or LSB) or TUNE/CW modes, the signal flows through the filter.
>
> The signal exits the output of the crystal filter and is then applied to the IF amplifiers where the IF signal is amplified. The IF signal is then applied to the AGC amplifier where AGC is produced and display on the meter as "S Units". At the same time the IF signal is also applied to the "GENERATOR UNIT" where it is then applied to the balanced or "ring" detector. At the same time the CAR Unit Mode switch selected crystal oscillator

signal is also applied to the GENERATOR UNIT's balance or "ring" detector where it is mixed with the IF signal where the transmit station's "audio" is recovered. The recovered audio is then applied to the AF AVR Unit's audio amplifier where it is amplified then fed to the speaker where you hear, "Ok Bill, thanks for the report...".
>
> The process is "reversed" in transmit.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Greeting Group,
> >
> > I am getting more into diagnosis/repair thanks to the members of this group.
> > I have a/some questions:
> >
> > A "slow sweep generator" is stated in the service manuals to properly adjust
> > areas of these rigs. I am confused about the specifications, as I have a TS520s
> > service manual in font of me..and it states that the "center frequency" should
> > be 8.83Mhz..that I can understand..but I have looked at numerous ones for sale
> > on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what the
> > unit is capable of tuning through? If one unit is say... 10Mhz...would that
> > satisfy the 8.83Mhz BPF freq requirement?
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29212. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 12:14:54 UTC
From: na7i_dick
Topic: 350 Message: 29212

Mike,

Just for my edification, what is a 'tech special' ?

I have an 830s 'Gold' (original owner, works great), meaning it has the gold 'TS-830s' label. The gold label radios are supposed to have some filters, etc standard. I do have a narrow cw filter, but that may be on all 830s's.

A truly great radio.

Dick NA7I

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:
>
> w5rkl@...
>
> 73s
> Mike
> W5RKL
>

29213. Re: [TS-520_820_530_830] Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 12:31:55 UTC
From: Jim Atkins
Topic: 350 Message: 29213

A tech special is a radio that needs work in order to make it usable. Great for those with the technical knowledge to fix them and usually at a lower cost.

----- Original Message -----
From: na7i_dick
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 08, 2011 7:14 AM
Subject: [TS-520_820_530_830] Re: TS-830S

Mike,

Just for my edification, what is a 'tech special' ?

I have an 830s 'Gold' (original owner, works great), meaning it has the gold 'TS-830s' label. The gold label radios are supposed to have some filters, etc standard. I do have a narrow cw filter, but that may be on all 830s's.

A truly great radio.

Dick NA7I

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:
>
> w5rkl@...
>
> 73s
> Mike
> W5RKL
>

[Non-text portions of this message have been removed]

29214. Re: [TS-520_820_530_830] Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 15:07:12 UTC
From: John Davidson
Topic: 350 Message: 29214

A TECH special is a radio that has a problem that is difficult to diagnose or repair...beyond the capabilities of a casual tinkerer
.

From: na7i_dick <jrich@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 8, 2011 7:14:54 AM
Subject: [TS-520_820_530_830] Re: TS-830S

Mike,

Just for my edification, what is a 'tech special' ?

I have an 830s 'Gold' 0s's.

A truly great radio.

Dick NA7I

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special"
>that are willing to part with, drop me an e-mail> W5RKL
>

[Non-text portions of this message have been removed]

29215. Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 15:26:38 UTC
From: w5rkl
Topic: 350 Message: 29215

Good morning Dick,

Jim and John both provided correct answers to your "Tech Special" question.

Some radios, such as the Kenwood TS-430, TS-430, Yaesu FT-757GX/GXII and other similar CPU controlled radios that are advertised as "Tech Specials" require an thorough in-depth knowledge and understanding of digital control circuit technology in order to diagnose and make repairs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "na7i_dick" <jrich@...> wrote:
>
> Mike,
>
> Just for my edification, what is a 'tech special' ?
>
> I have an 830s 'Gold' (original owner, works great), meaning it has the gold 'TS-830s' label. The gold label radios are supposed to have some filters, etc standard. I do have a narrow cw filter, but that may be on all 830s's.
>
> A truly great radio.
>
> Dick NA7I
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:
> >
> > w5rkl@
> >
> > 73s
> > Mike
> > W5RKL
> >
>

29216. Re: TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 15:52:25 UTC
From: Al N6TEZ
Topic: 29180 Message: 29216

Oops, to many W's try this link

www.electronicspecialtyproducts.com/dd103.html

Al N6TEZ

--- In TS-520_820_530_830@yahoogroups.com, "Al N6TEZ" <n6tez@...> wrote:
>
> Morning,
>
> Recent posts about frequency counters (digital displays)have got me thinking about buying one for my TS-520SE.
> Has anyone had experience with (or any thoughts on)the "DD-103 Universal Digital Dial"
> from wwww.electronicspecialtyproducts.com/dd103.html
> It sells for $125.00 plus $10.00 US Shipping. It comes with a Universal Interface.
> ALSO a "Plug And Play" cable is available for the TS-520 (for $15.00).
>
> Tnx, Al, N6TEZ
>
>
> >

29217. PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 13:42:40 UTC
From: jwpjr2003
Topic: 29217 Message: 29217

I would like to know what product, those of which use PSK/Rtty, everyone is using to get on the air. I have a TS-530S. Do I need any other filters other than the standard SSB?

TNX, John
ND1X

29218. Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 13:47:05 UTC
From: kd5fx
Topic: 29218 Message: 29218

Just got an old TS830S in rough condition and checking it out I find that the xmit is about 2 KC off from the rec. The RIT and XIT are both off. I've got the service manual and did the Carrier adjustment on page 33 but that didn't help. What should I do?
Thanks & 73, Dave

29219. Re: TS-520 frequency counter query...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 14:40:48 UTC
From: Clyde
Topic: 29180 Message: 29219

Al,

Go here for some useful info on the AADE digital display for the TS-520 series:

http://www.aade.com/C520/C520.htm

As I understand the DD-103, for the 520's you have to tell the unit which band the rig is on.

The AADE does a nice job with the 520S and 520SE. It utilizes the three signals at HET, OSC, and VFO on the back panel of the rig to calculate the operating frequency. It also shows the mode of the rig. All automatically.

I have modified the AADE unit for my 520SE to send the operating frequency to logging programs (MixW, N1MM, etc.).

73, Clyde K9JWI

29220. YG 88C install problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 15:48:55 UTC
From: jacob
Topic: 29220 Message: 29220

Dear Group;

I recently bought a YG-88C for my TS- 820 and put it in. I tried the jumper on the IF board in both other positions - meaning position "B" and "C"- with the same result: signals are attenuated so much I cannot hear anything; the receiver is essentially deaf. When I switch to any other mode, like USB, I can hear all kinds of strong signals.

Anyone have advice? Is it possible the filter was DOA? Bad Soldering job (it looks pretty good)? something else?

Thanks;
Jacob K4JQV

29221. Re: [TS-520_820_530_830] Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 16:36:07 UTC
From: n6wk@n6wk.com
Topic: 29218 Message: 29221

Dave,
To adjust the RIT control, you do it with the VR2 on the AF board
Be sure that you did Step3 in the service manual where you adjust VR2 on
the PLL board so that the Rx and TX frequencies are the same.
I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
on the PLL board until the TX and RX are the same.
Hope that helps.

73,
Gordon
N6WK

On 1/8/2011 5:47 AM, kd5fx wrote:
>
> Just got an old TS830S in rough condition and checking it out I find
> that the xmit is about 2 KC off from the rec. The RIT and XIT are both
> off. I've got the service manual and did the Carrier adjustment on
> page 33 but that didn't help. What should I do?
> Thanks & 73, Dave
>
>

29222. Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 16:40:27 UTC
From: kd5fx
Topic: 29218 Message: 29222

But I've got the RIT (and XIT) buttons OFF, could they still affect the xmit/rec offset if they are OFF?
Thanks,
Dave

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Dave,
> To adjust the RIT control, you do it with the VR2 on the AF board
> Be sure that you did Step3 in the service manual where you adjust VR2 on
> the PLL board so that the Rx and TX frequencies are the same.
> I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
> on the PLL board until the TX and RX are the same.
> Hope that helps.
>
> 73,
> Gordon
> N6WK
>
>
> On 1/8/2011 5:47 AM, kd5fx wrote:
> >
> > Just got an old TS830S in rough condition and checking it out I find
> > that the xmit is about 2 KC off from the rec. The RIT and XIT are both
> > off. I've got the service manual and did the Carrier adjustment on
> > page 33 but that didn't help. What should I do?
> > Thanks & 73, Dave
> >
> >
>

29223. Re: [TS-520_820_530_830] Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 16:46:31 UTC
From: n6wk@n6wk.com
Topic: 29218 Message: 29223

They should not , if they are off unless one of the switches is bad.
How far off is the RIT? and is the Knob on correctly?
It can be inserted in many positions, but only one is correct to give
you no change when pushing in the button.
Centered in its travel the line should be straight up.
73,
Gordon
N6WK

On 1/8/2011 8:40 AM, kd5fx wrote:
>
> But I've got the RIT (and XIT) buttons OFF, could they still affect
> the xmit/rec offset if they are OFF?
> Thanks,
> Dave
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Dave,
> > To adjust the RIT control, you do it with the VR2 on the AF board
> > Be sure that you did Step3 in the service manual where you adjust
> VR2 on
> > the PLL board so that the Rx and TX frequencies are the same.
> > I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
> > on the PLL board until the TX and RX are the same.
> > Hope that helps.
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 1/8/2011 5:47 AM, kd5fx wrote:
> > >
> > > Just got an old TS830S in rough condition and checking it out I find
> > > that the xmit is about 2 KC off from the rec. The RIT and XIT are
> both
> > > off. I've got the service manual and did the Carrier adjustment on
> > > page 33 but that didn't help. What should I do?
> > > Thanks & 73, Dave
> > >
> > >
> > >

>
>

29224. RE: [TS-520_820_530_830] PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 16:50:46 UTC
From: Troy Craig
Topic: 29217 Message: 29224

John

I have an ts-830s and I use the SignaLink usb. It works really well for me and has a built in soundcard so you don't have to use the computers.

73's

Tcraig

KC9RRV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jwpjr2003
Sent: Saturday, January 08, 2011 8:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] PSK

I would like to know what product, those of which use PSK/Rtty, everyone is using to get on the air. I have a TS-530S. Do I need any other filters other than the standard SSB?

TNX, John
ND1X

[Non-text portions of this message have been removed]

29225. Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 17:55:42 UTC
From: kd5fx
Topic: 29218 Message: 29225

RIT knob is centered and in the middle of it's movement. RIT switch is OFF. When I turn it ON and the LED lights up I can tell a difference so looks like it's working OK.
I did Step3 in the service manual where you adjust VR2 on the PLL board so that the Rx and TX frequencies are the same. I used a Freq Counter on TP3 of the IF board to measure as I adjust VR2 on the PLL board until the TX and RX were the same. But I'm still off from Xmit to Rec. So.... What else could it be?
73, Dave

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> They should not , if they are off unless one of the switches is bad.
> How far off is the RIT? and is the Knob on correctly?
> It can be inserted in many positions, but only one is correct to give
> you no change when pushing in the button.
> Centered in its travel the line should be straight up.
> 73,
> Gordon
> N6WK
>
> On 1/8/2011 8:40 AM, kd5fx wrote:
> >
> > But I've got the RIT (and XIT) buttons OFF, could they still affect
> > the xmit/rec offset if they are OFF?
> > Thanks,
> > Dave
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Dave,
> > > To adjust the RIT control, you do it with the VR2 on the AF board
> > > Be sure that you did Step3 in the service manual where you adjust
> > VR2 on
> > > the PLL board so that the Rx and TX frequencies are the same.
> > > I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
> > > on the PLL board until the TX and RX are the same.
> > > Hope that helps.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > >
> > > On 1/8/2011 5:47 AM, kd5fx wrote:
> > > >

> > > > Just got an old TS830S in rough condition and checking it out I find
> > > > that the xmit is about 2 KC off from the rec. The RIT and XIT are
> > both
> > > > off. I've got the service manual and did the Carrier adjustment on
> > > > page 33 but that didn't help. What should I do?
> > > > Thanks & 73, Dave
> > > >
> > > >
> > >
> >
> >
>

29226. Re: [TS-520_820_530_830] Re: test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 18:01:12 UTC
From: Joseph Stiles
Topic: 29207 Message: 29226

Gordon & Mike,

Gordon..that's what I was talking about...sometimes what I want to say doesn't always come out on "paper" the way it's in the brain. I do have an RF sig gen and a 2 channel scope..just don't know about a sweep generator. I agree also that Mike's tutorial is great..thanks Mike!

73's joe wb7uqu

From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 7, 2011 8:20:29 PM
Subject: [TS-520_820_530_830] Re: test equipment

Mike,
Great Tutorial. Good job explaining it. I think what Joe is asking is that in the Service manual for the 520s under Equipment needed it states: Page 45
8)

Slow Sweep Generator
1) Center Frequency 8.83 MHZ
2) Frequency Deviation Maximum +/- 5 KHZ
3) Output Voltage more then 0.1 Volt
4) Sweep rate at least .5 sec/cm

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Joe,
>
> I don't know what those people on eBay are talking about. They may be speaking
>some mythical nonsense or some other nonsense.
>
>
> Here are the facts, not some half bake mythical coffee house nonsense.
>
> First, the IF frequency in the TS-520 series transceivers is "3.395Mhz" not
>"8.830Mhz". The TS-530, TS-820, and TS-830 have an 8Mhz IF frequency and the
>method of generating and receiving single sideband is similar but different.
>
> The various hybrid model's IF frequencies and crystal filters do NOT have a
>2Mhz, 10Mhz, or 20Mhz spread!
>

> My explanation that follows is for the TS-520 since that is the transceiver you
>have in front of you.
>
> Second, the typical factory band width of the sideband filter in the hybrid
>models is 2.7Khz and the CW filter's bandwidth is typically 500Hz, not "2Mhz",
>"10Mhz" or "20Mhz". Note "Mhz" and "Khz", where "Mhz" means "Mega Hertz" (1
>million hertz) and "Khz" means "Kilo Hertz" or "1,000 Hertz", there is a huge
>difference between the two when referring to frequencies. Your house voltage has
>a frequency of "60hz" which means "60 sine waves" every "second". One Mhz means
>1 million sine wave cycles "every second"! The same for One Khz, 1,000 sine wave
>cycles "per second"!
>
> The 520, 530, 820, and 830 all have a "variable" "TIF" and "RIF" band pass
>frequency between 8.895Mhz to 8.395Mhz. This frequency varies depending on the
>frequency of the "incoming" receive signal and the "transmit" signal frequency.
>There are "2" variable band pass signals, one for transmit which is referred to
>as the "TIF" frequency which stands for "Transmit Intermediate Frequency" and
>the receive "RIF" which stands for "Receive Intermediate Frequency". Now do NOT
>become fooled into believing the 520 has an IF frequency of 8Mhz because if you
>believe that then you would be wrong!
>
>
> For example, lets use 80 meters and a receive signal of 3.750Mhz from Goober in
>Any Town, USA. A frequency of 3.750Mhz is about in the middle of the 80 meter
>band. The VFO is set to 275 on the dial or tuned for a digital display of
>3.750Mhz on the digital display. This same process occurs on "ALL" bands except
>the band switch selected RF Unit heterodyne crystal oscillator frequency is
>different for each band.
>
>
> The receive signal arrives at the COIL UNIT board from the antenna and flows
>through the COIL UNIT band switch selected antenna coil then on to the
>receiver's RF amplifier. The signal is amplified by the receiver RF amplifier
>then fed to the first receiver mixer where it is mixed with the 80 meter
>12.395Mhz heterodyne oscillator frequency producing the following results, or as
>I like to call it, "the desired frequency"!
>
> 12.395Mhz - 3.750Mhz = 8.645Mhz
>
> 12.395Mhz is the 80 meter RF Unit heterodyne oscillator crystal frequency.
>
> 3.750Mhz is the frequency of the receive signal.
>
> 8.645MNhz is the first receiver's mixer output, or "desired signal". Notice it
>falls within the 8.895Mhz to 8.395Mhz band pass frequency range which is now
>referred to as the receiver's "RIF" (Receive Intermediate Frequency) signal.
>
> The 8.645Mhz RIF signal is then applied to the IF UNIT then on to the
>receiver's "second" mixer where it mixes with the 5.250Mhz VFO signal producing
>the following results:

>
> 8.645Mhz = 5.250Mhz = "3.395Mhz"
>
> 8.645Mhz is the same "desired RIF signal" from the RF Unit's first receiver
>mixer
>
> 5.250Mhz is the VFO's output frequency when the VFO is tuned to 250 on the
>dial. The VFO tunes between 5.500Mhz and 5.000Mhz, where 5.500Mhz is the bottom
>of "ALL" bands and 5.000Mhz is the top of all bands! The VFO frequency range
>remains the same regardless of the band switch and Mode switch position.
>
> 3.395Mhz is the 520's "IF" frequency. Remember I said don't be fooled into
>believing the 520's IF frequency is the "8Mhz" signal! The crystal filters have
>a center frequency of "3.395Mhz" and will NOT pass an 8Mhz signal no matter how
>hard one tries to do it!
>
> The "3.395Mhz" signal is "NOW" the 520's actual "IF" frequency which is then
>applied to the Mode switch selected crystal filter where, depending on the Mode
>setting, SSB (USB or LSB) or TUNE/CW modes, the signal flows through the filter.
>
> The signal exits the output of the crystal filter and is then applied to the IF
>amplifiers where the IF signal is amplified. The IF signal is then applied to
>the AGC amplifier where AGC is produced and display on the meter as "S Units".
>At the same time the IF signal is also applied to the "GENERATOR UNIT" where it
>is then applied to the balanced or "ring" detector. At the same time the CAR
>Unit Mode switch selected crystal oscillator signal is also applied to the
>GENERATOR UNIT's balance or "ring" detector where it is mixed with the IF signal
>where the transmit station's "audio" is recovered. The recovered audio is then
>applied to the AF AVR Unit's audio amplifier where it is amplified then fed to
>the speaker where you hear, "Ok Bill, thanks for the report...".
>
> The process is "reversed" in transmit.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
wrote:
> >
> > Greeting Group,
> >
> > I am getting more into diagnosis/repair thanks to the members of this
>group.
>
> > I have a/some questions:
> >
> > A "slow sweep generator" is stated in the service manuals to properly

>adjust
>
> > areas of these rigs. I am confused about the specifications, as I have a
>TS520s
>
> > service manual in font of me..and it states that the "center frequency"
>should
>
> > be 8.83Mhz..that I can understand..but I have looked at numerous ones for
>sale
>
> > on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what
>the
>
> > unit is capable of tuning through? If one unit is say... 10Mhz...would that
> > satisfy the 8.83Mhz BPF freq requirement?
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

29227. Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 18:49:53 UTC
From: w5rkl
Topic: 29218 Message: 29227

Dave,

Did you also perform step "7" "VFO, RIT, FIX CH check and adjustment"? If not then you should also perform step 7.

The RIT control varies a DC voltage (9VDC) from the AF Unit's 9VDC supply, through AF Unit plug 7 pin 9 (RIT, to the RIT pot. When RIT is enabled and the RIT control is rotated CW or CCW, the 9VDC applied to the VFO plug pin 2 (RIT) varies the voltage applied to varicap diode D2. By varying the voltage to D2 the capacitance of D2 changes resulting in a change in the VFO's output signal without touching the VFO knob. The relay on the AF Unit disables the RIT know in transmit allowing the VFO to return to it non-RIT adjusted frequency. Turning RIT off disables the RIT control whether in receive or transmit.

Step 7 says to adjust the VFO for a VFO output frequency of 5750Khz, center the RIT control, turn RIT ON, then adjust VR2 on the AF Unit so the VFO output frequency is 5750Khz with RIT ON and OFF. This should solve you slight off frequency problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd5fx" <kd5fx@...> wrote:
>
> RIT knob is centered and in the middle of it's movement. RIT switch is OFF. When I turn it ON and the LED lights up I can tell a difference so looks like it's working OK.
> I did Step3 in the service manual where you adjust VR2 on the PLL board so that the Rx and TX frequencies are the same. I used a Freq Counter on TP3 of the IF board to measure as I adjust VR2 on the PLL board until the TX and RX were the same. But I'm still off from Xmit to Rec. So.... What else could it be?
> 73, Dave
>
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > They should not , if they are off unless one of the switches is bad.
> > How far off is the RIT? and is the Knob on correctly?
> > It can be inserted in many positions, but only one is correct to give
> > you no change when pushing in the button.
> > Centered in its travel the line should be straight up.
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/8/2011 8:40 AM, kd5fx wrote:
> > >
> > > But I've got the RIT (and XIT) buttons OFF, could they still affect

> > > the xmit/rec offset if they are OFF?
> > > Thanks,
> > > Dave
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Dave,
> > > > To adjust the RIT control, you do it with the VR2 on the AF board
> > > > Be sure that you did Step3 in the service manual where you adjust
> > > VR2 on
> > > > the PLL board so that the Rx and TX frequencies are the same.
> > > > I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
> > > > on the PLL board until the TX and RX are the same.
> > > > Hope that helps.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > > On 1/8/2011 5:47 AM, kd5fx wrote:
> > > > >
> > > > > Just got an old TS830S in rough condition and checking it out I find
> > > > > that the xmit is about 2 KC off from the rec. The RIT and XIT are
> > > both
> > > > > off. I've got the service manual and did the Carrier adjustment on
> > > > > page 33 but that didn't help. What should I do?
> > > > > Thanks & 73, Dave
> > > > >
> > > > >
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29228. ts-820s service manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 20:39:34 UTC
From: enelson7273
Topic: 29228 Message: 29228

Hi Folks,
I am new here but looks like a great place for anyone using the hybrids. I am looking to buy a ts-820s service manual, not a PDF file but a real honest to goodness paper manual. Does anyone have one or know where I may be able to find one. Any help would be greatly appreciated. Thanks and have a good new year.
Ed WA0WNF

29229. Re: ts-820s service manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 21:35:37 UTC
From: w5rkl
Topic: 29228 Message: 29229

You can purchase the TS-820 operator and service manuals plus tech info at the following link:

http://www.vintagemanuals.com/search.php?find=TS-820

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "enelson7273" <enelson7273@...> wrote:
>
> Hi Folks,
> I am new here but looks like a great place for anyone using the hybrids. I am looking to buy a ts-820s service manual, not a PDF file but a real honest to goodness paper manual. Does anyone have one or know where I may be able to find one. Any help would be greatly appreciated. Thanks and have a good new year.
> Ed WA0WNF
>

29230. Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-08 22:07:07 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29230

Gentlemen, I have a problem with my TS-820S and seek your opinions.

I had my 820S all adjusted, installed a new INRAD SSB filter, ran INRAD's recommended tests and all was looking good. Power output on CW was 90W into a dummy load on 160 □ 20 M and rather less above that.

Then last weekend the digital display went screwy. I confirmed that it was just the display, removed it and cleaned all the contacts in it and put it back together. The display was fine then but I found the rig was not receiving, and after a few minutes it blew the main AC fuse. I opened it up, found that the most forward connector to the driver board had come partially loose during the previous work. I plugged that connector back in, put in a new fuse and everything is almost right again.

Thing is, the rig acts like the finals have gotten weak all of a sudden. Best CW output into the dummy load is maybe 60W. The Plate current indication is low, commensurate with the measured RF output. HV is 840V. ALC is fine in Tune and CW. I am wondering how the loose plug problem may have caused this.

Any ideas?

Thanks!

Robert

29232. Re: [TS-520_820_530_830] Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 01:01:48 UTC
From: n6wk@n6wk.com
Topic: 29218 Message: 29232

If the RIT is centered and you push the RIT switch, you should NOT hear
a difference. The Freq should be exactly the same. That is why you
adjust VR2 so they are.
When the RIT is on, rotating the RIT knob should make a difference but
centered, it should be the same whether RIT is on or Off

Gordon
N6WK

On 1/8/2011 4:51 PM, kd5fx wrote:
>
> RIT knob is centered and in the middle of it's movement. RIT switch is
> OFF. When I turn it ON and the LED lights up I can tell a difference
> so looks like it's working OK.
> I did Step3 in the service manual where you adjust VR2 on the PLL
> board so that the Rx and TX frequencies are the same. I used a Freq
> Counter on TP3 of the IF board to measure as I adjust VR2 on the PLL
> board until the TX and RX were the same. But I'm still off from Xmit
> to Rec. So.... What else could it be?
> 73, Dave
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > They should not , if they are off unless one of the switches is bad.
> > How far off is the RIT? and is the Knob on correctly?
> > It can be inserted in many positions, but only one is correct to give
> > you no change when pushing in the button.
> > Centered in its travel the line should be straight up.
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/8/2011 8:40 AM, kd5fx wrote:
> > >
> > > But I've got the RIT (and XIT) buttons OFF, could they still affect
> > > the xmit/rec offset if they are OFF?
> > > Thanks,
> > > Dave
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >

> > > > Dave,
> > > > To adjust the RIT control, you do it with the VR2 on the AF board
> > > > Be sure that you did Step3 in the service manual where you adjust
> > > VR2 on
> > > > the PLL board so that the Rx and TX frequencies are the same.
> > > > I use a Freq Counter on TP3 of the IF board to measure as I
> adjust VR2
> > > > on the PLL board until the TX and RX are the same.
> > > > Hope that helps.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > > On 1/8/2011 5:47 AM, kd5fx wrote:
> > > > >
> > > > > Just got an old TS830S in rough condition and checking it out
> I find
> > > > > that the xmit is about 2 KC off from the rec. The RIT and XIT are
> > > both
> > > > > off. I've got the service manual and did the Carrier adjustment on
> > > > > page 33 but that didn't help. What should I do?
> > > > > Thanks & 73, Dave
> > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> >
> >

29233. Re: [TS-520_820_530_830] ts-820s service manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 01:11:38 UTC
From: pmarkavage@juno.com
Topic: 29228 Message: 29233

You can check my web site, http://www.manualman.com I have them available
in real and recycled paper. Just put the model number in the Search Box
and click GO.
Pete, wa2cwa

On Sat, 08 Jan 2011 20:39:34 -0000 "enelson7273" <enelson7273@...>
writes:
> Hi Folks,
> I am new here but looks like a great place for anyone using the
> hybrids. I am looking to buy a ts-820s service manual, not a PDF
> file but a real honest to goodness paper manual. Does anyone have
> one or know where I may be able to find one. Any help would be
> greatly appreciated. Thanks and have a good new year.
> Ed WA0WNF

29234. Re: Help! TS830S Xmit & Rec are not together

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 02:04:59 UTC
From: kd5fx
Topic: 29218 Message: 29234

Mike,
THANKS!!!!! That fixed it! It was off about 2KC or so. Seems to all be working well now.
73, Dave KD5FX

PS - I pick up ANOTHER TS830S on Monday to take a look at! Not sure if anything is wrong with it, been in storage for several years but is supposed to be in good condition....

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Dave,
>
> Did you also perform step "7" "VFO, RIT, FIX CH check and adjustment"? If not then you should also perform step 7.
>
> The RIT control varies a DC voltage (9VDC) from the AF Unit's 9VDC supply, through AF Unit plug 7 pin 9 (RIT, to the RIT pot. When RIT is enabled and the RIT control is rotated CW or CCW, the 9VDC applied to the VFO plug pin 2 (RIT) varies the voltage applied to varicap diode D2. By varying the voltage to D2 the capacitance of D2 changes resulting in a change in the VFO's output signal without touching the VFO knob. The relay on the AF Unit disables the RIT know in transmit allowing the VFO to return to it non-RIT adjusted frequency. Turning RIT off disables the RIT control whether in receive or transmit.
>
> Step 7 says to adjust the VFO for a VFO output frequency of 5750Khz, center the RIT control, turn RIT ON, then adjust VR2 on the AF Unit so the VFO output frequency is 5750Khz with RIT ON and OFF. This should solve you slight off frequency problem.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "kd5fx" <kd5fx@> wrote:
> >
> > RIT knob is centered and in the middle of it's movement. RIT switch is OFF. When I turn it ON and the LED lights up I can tell a difference so looks like it's working OK.
> > I did Step3 in the service manual where you adjust VR2 on the PLL board so that the Rx and TX frequencies are the same. I used a Freq Counter on TP3 of the IF board to measure as I adjust VR2 on the PLL board until the TX and RX were the same. But I'm still off from Xmit to Rec. So.... What else could it be?
> > 73, Dave
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:

> > >
> > > They should not , if they are off unless one of the switches is bad.
> > > How far off is the RIT? and is the Knob on correctly?
> > > It can be inserted in many positions, but only one is correct to give
> > > you no change when pushing in the button.
> > > Centered in its travel the line should be straight up.
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > On 1/8/2011 8:40 AM, kd5fx wrote:
> > > >
> > > > But I've got the RIT (and XIT) buttons OFF, could they still affect
> > > > the xmit/rec offset if they are OFF?
> > > > Thanks,
> > > > Dave
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > > >
> > > > > Dave,
> > > > > To adjust the RIT control, you do it with the VR2 on the AF board
> > > > > Be sure that you did Step3 in the service manual where you adjust
> > > > VR2 on
> > > > > the PLL board so that the Rx and TX frequencies are the same.
> > > > > I use a Freq Counter on TP3 of the IF board to measure as I adjust VR2
> > > > > on the PLL board until the TX and RX are the same.
> > > > > Hope that helps.
> > > > >
> > > > > 73,
> > > > > Gordon
> > > > > N6WK
> > > > >
> > > > >
> > > > > On 1/8/2011 5:47 AM, kd5fx wrote:
> > > > > >
> > > > > > Just got an old TS830S in rough condition and checking it out I find
> > > > > > that the xmit is about 2 KC off from the rec. The RIT and XIT are
> > > > both
> > > > > > off. I've got the service manual and did the Carrier adjustment on
> > > > > > page 33 but that didn't help. What should I do?
> > > > > > Thanks & 73, Dave
> > > > > >
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29235. Re: [TS-520_820_530_830] Re: TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 04:04:50 UTC
From: Martin
Topic: 350 Message: 29235

Hi Mike. I have a TS-530S that has an odd problem. When the RF Gain is rotated clockwise past about 8, the RX drops off somewhat. Everything else works pretty well. Cosmetically its about a 6-7 out of 10. A few marks on the face, and a few larger ones on the case halves. It may need aligned. I have 3 NOS GE 6146B and 2 NOS 12BY7A tubes. No mic included.

If you are interested, I will sell it for $175.00 shipped. I can take some pics an send them to you if you are interested.

TTYL

On 01/08/2011 09:26 AM, w5rkl wrote:
> Good morning Dick,
>
> Jim and John both provided correct answers to your "Tech Special" question.
>
> Some radios, such as the Kenwood TS-430, TS-430, Yaesu FT-757GX/GXII and other similar CPU controlled radios that are advertised as "Tech Specials" require an thorough in-depth knowledge and understanding of digital control circuit technology in order to diagnose and make repairs.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "na7i_dick"<jrich@...> wrote:
>>
>> Mike,
>>
>> Just for my edification, what is a 'tech special' ?
>>
>> I have an 830s 'Gold' (original owner, works great), meaning it has the gold 'TS-830s' label. The gold label radios are supposed to have some filters, etc standard. I do have a narrow cw filter, but that may be on all 830s's.
>>
>> A truly great radio.
>>
>> Dick NA7I
>>
>> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl"<w5rkl@> wrote:
>>>
>>> I'm looking for a TS-830S "Tech Special". If you have one, a "Tech Special" that are willing to part with, drop me an e-mail. My e-mail address is good on the group's "email" link or if you wish, e-mail me at:

>>>
>>> w5rkl@
>>>
>>> 73s
>>> Mike
>>> W5RKL
>>>
>>
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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>
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>

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CUL8R

KBOHAE kb0hae@... Martin Campbell
A Satisfied Aptosid Linux user! To get Aptosid go to: www.aptosid.com
They say that if you play a Microsoft CD backwards, you hear satanic
voices. That's nothing, because if you play it forwards, it installs
Windows!

29236. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 14:40:05 UTC
From: w5rkl
Topic: 29230 Message: 29236

Morning Robert,

What are the IP and HV meter indications when the 820 is producing 60 watts output?

When tuning for a peak ALC indication in TUNE mode is the meter indication stable or does it slowly or otherwise drop back toward zero once you achieve a peak DRIVE control ALC indication?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Gentlemen, I have a problem with my TS-820S and seek your opinions.
>
> I had my 820S all adjusted, installed a new INRAD SSB filter, ran INRAD's recommended tests and all was looking good. Power output on CW was 90W into a dummy load on 160 ☐ 20 M and rather less above that.
>
> Then last weekend the digital display went screwy. I confirmed that it was just the display, removed it and cleaned all the contacts in it and put it back together. The display was fine then but I found the rig was not receiving, and after a few minutes it blew the main AC fuse. I opened it up, found that the most forward connector to the driver board had come partially loose during the previous work. I plugged that connector back in, put in a new fuse and everything is almost right again.
>
> Thing is, the rig acts like the finals have gotten weak all of a sudden. Best CW output into the dummy load is maybe 60W. The Plate current indication is low, commensurate with the measured RF output. HV is 840V. ALC is fine in Tune and CW. I am wondering how the loose plug problem may have caused this.
>
> Any ideas?
>
> Thanks!
>
> Robert
>

29237. TS-820S Mods / Enhancements

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 15:54:32 UTC
From: sceneryguru
Topic: 29237 Message: 29237

Good Morning Group:

This is a follow-up to my earlier post regarding the TS-820S.

I would certainly be interested in comments from the group, regarding improving on an already terrific transceiver. What enhancements or mods (if any) are considered most desirable?

I look forward to all constructive commentary.

tnx es 73, 76

Tom G, Sr.
K3SSB

29238. TS 820 VFO has busted a gut

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 05:41:10 UTC
From: jacob
Topic: 29238 Message: 29238

Hi;

I cleaned my VFO as others here suggested which solved my chirp problem. Thanks!

But, some days later I turned the bezel behind the main tuning knob - to sync the sub dial to the digital display- but in a fit I turned it too far and something popped. Now the main tuning dial encounters resistance at one point while turning. I looked with a flashlight - with the case off - and it turns out one of the small split gears has half a spring sticking out (this hits the VFO shaft and makes the resistance). Anyone have luck fixing such a mess?

Help please.

Best;
Jacob

29239. TS 820 vs TS 820S manual - the same

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 05:43:35 UTC
From: jacob
Topic: 29239 Message: 29239

Hi - looking for the TS 820 manual. I have the -S manual which is widely available inline. Are they the same? I am having trouble getting my CW filter to work and need to make sure I have the right info. Any help appreciated. Also see me post asking for help on the filter.

Thanks to all who may help - I really need it!

VRY 73;
Jacob

29240. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 17:16:18 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29240

Good afternoon, Mike:

The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.

IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.

The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.

And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.

Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.

I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.

I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.

Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.

I would appreciate any thoughts!

Best regards,

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Morning Robert,
>
> What are the IP and HV meter indications when the 820 is producing 60 watts output?
>
> When tuning for a peak ALC indication in TUNE mode is the meter indication stable or does it slowly or otherwise drop back toward zero once you achieve a peak DRIVE control ALC indication?
>
> 73s

> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Gentlemen, I have a problem with my TS-820S and seek your opinions.
> >
> > I had my 820S all adjusted, installed a new INRAD SSB filter, ran INRAD's recommended tests and all was looking good. Power output on CW was 90W into a dummy load on 160 □ 20 M and rather less above that.
> >
> > Then last weekend the digital display went screwy. I confirmed that it was just the display, removed it and cleaned all the contacts in it and put it back together. The display was fine then but I found the rig was not receiving, and after a few minutes it blew the main AC fuse. I opened it up, found that the most forward connector to the driver board had come partially loose during the previous work. I plugged that connector back in, put in a new fuse and everything is almost right again.
> >
> > Thing is, the rig acts like the finals have gotten weak all of a sudden. Best CW output into the dummy load is maybe 60W. The Plate current indication is low, commensurate with the measured RF output. HV is 840V. ALC is fine in Tune and CW. I am wondering how the loose plug problem may have caused this.
> >
> > Any ideas?
> >
> > Thanks!
> >
> > Robert
> >
>

29241. Re: [TS-520_820_530_830] PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 17:09:32 UTC
From: John Becker
Topic: 29217 Message: 29241

Here it is has been done the same way for years and years.
TS 520 and one of 3 model 28 ASR's. No added filtering.

John, W0JAB

At 07:42 AM 1/8/2011, you wrote:
>I would like to know what product, those of which use PSK/Rtty, everyone is using to get on the air. I have a TS-530S. Do I need any other filters other than the standard SSB?
>
>TNX, John
>ND1X
>
>
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>Yahoo! Groups Links
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29242. Re: PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 18:19:26 UTC
From: oz1hyi
Topic: 29217 Message: 29242

I use homebrew interface to my old Compaq deskpro EN 1Ghz computer.
software is Linux Ubuntu 10.10 with Hamscope 1.56 via wine
TRX is my Kenwood TS 830S with no other filters as it was born with, and working fine...
output ca 10- 15 W
Vy 73 77 de (on digital PSK 31) 5P1W - OZ1HYI Willy

>
> At 07:42 AM 1/8/2011, you wrote:
> >I would like to know what product, those of which use PSK/Rtty, everyone is using to get on the air. I have a TS-530S. Do I need any other filters other than the standard SSB?
> >
> >TNX, John
> >ND1X
> >
> >
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> >
> >Yahoo! Groups Links
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>

29243. Re: [TS-520_820_530_830] PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 18:44:54 UTC
From: Martin
Topic: 29217 Message: 29243

Hi Joe. I have used a TS-530S on PSK31. I Had only the standard SSB filter (YK-88S) installed. I used a very simple interface that connects the headphone output of a laptop to the mic plug on the radio via a 20:1 audio transformer, and that connects the headphone jack on the radio to the mic input on the laptop via another 20:1 audio transformer. I had the 20:1 transformers in the junkbox, and they save me from needing any attenuation. I used VOX to key the radio.

This setup worked very well, still does with my TS-130SE and TS-430S. I used Digipan on a Compaq P133 laptop with Win98se and 32 meg ram. I now use FLdigi on an IBM T41 with 512 meg ram, P4 1.6 Ghz, running Aptosid GNU/Linux with the same interface.

TTYL

X> I would like to know what product, those of which use PSK/Rtty,
> everyone is using to get on the air. I have a TS-530S. Do I need any
> other filters other than the standard SSB?
>
> TNX, John ND1X
>
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> Yahoo! Groups Links
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CUL8R

KBOHAE kb0hae@... Martin Campbell
A Satisfied Aptosid Linux user! To get Aptosid go to: www.aptosid.com
They say that if you play a Microsoft CD backwards, you hear satanic voices. That's nothing, because if you play it forwards, it installs Windows!

29244. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 19:54:08 UTC
From: w5rkl
Topic: 29230 Message: 29244

Afternoon Robert,

The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.

RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!

If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".

I doubt the problem is the HV supply.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Good afternoon, Mike:
>
> The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
>
> IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
>
> The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
>
> And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.

>
> Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
>
> I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
>
> I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
>
> Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
>
> I would appreciate any thoughts!
>
> Best regards,
>
> Robert

29245. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 23:30:01 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29245

Mike:

Ran some more transmit tests and here is what I found.

When I fired it up this time on 20M I could get about 80W on CW, less than before but still pretty good.

With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds pretty good.

But as I let the set run it deteriorated. It was never been as good on output on the other bands as it was on 20M, but 80M was noticeably down from before.

And after letting it run for a couple of hours or more with occasional short transmits the power output got worse. HV under load deteriorated down to maybe 780V.

The funny thing was that on 20M as you let it transit the Ip would go up with time and stay up.

I will let it cool down and try it again to see if power is back up.

And I will check to see about those resistors you mentioned and plan to put another set of finals in. The HV deterioration with time sounds like the HV caps are getting old.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Afternoon Robert,
>
> The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
>
> RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
>
> If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the

current flow through the final tubes will be "less".
>
> I doubt the problem is the HV supply.
>
> 73s
> Mike
> W5RKL
>
>
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>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Good afternoon, Mike:
> >
> > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> >
> > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> >
> > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> >
> > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> >
> > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> >
> > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> >
> > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> >
> > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> >
> > I would appreciate any thoughts!
> >

> > Best regards,
> >
> > Robert
>

29246. Re: TRADE ??? TS-520 CW Filter FOUND... SP-520 in the mail

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-09 23:30:46 UTC
From: Ken
Topic: 29165 Message: 29246

Trade in progress. THANKS to the Group!

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <atm_ken_hunter@...> wrote:
>
> I am looking for a CW Filter for my TS-520 and have a working, calibrated, good looking VFO-820 with cable or an SP-520 in same condition to trade.
>
> My contact info on QRZ.com is correct.
>
> 73,
>
> Ken - KB7H
>

29247. Re: [TS-520_820_530_830] test equipment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 00:15:56 UTC
From: Joseph Stiles
Topic: 29207 Message: 29247

Greetings Mel,

Tnx fer your info. I really don't want to spend big bux on something not in use all the time. There are a couple of units on ebay that are relatively cheap and carry well known names, Wavetek and BK for two. I am just wondering how to properly adjust the BPF (band pass filter) for TX & RX. Some of this stuff is new to me.

73's joe wb7uqu

From: Mel Farrer <farrerfolks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 7, 2011 11:11:31 AM
Subject: Re: [TS-520_820_530_830] test equipment

Hi Joe,

I'm Mel. In the simple application a "slow sweep generator" can be a manually tuned signal generator plus a method of seeing the response with an oscilloscope. It is better to have a RF generator capable of sweeping at various rates. So if you are looking at obtaining a signal source, let your budget do the talking. If this is a one time effort, I would borrow one. They tend to be on the pricey side. I find more use testing having a good two channel scope and a manual RF generator. However, if you really want to get into it in a big way, you need to define the equipment you need and shop for deals. A simple test set up will run you around $500 for used equipment. 5 to 10K for new full service equipment. Having said that, I have set my shop up over the years of careful buying and can do just about any testing I need to do. Cost probably 10K, new about 35K. But then I can test anything to 12GHz.

I hope this helps.

Mel, K6KBE

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 7, 2011 10:55:03 AM
Subject: [TS-520_820_530_830] test equipment

Greeting Group,

I am getting more into diagnosis/repair thanks to the members of this group. I have a/some questions:

A "slow sweep generator" is stated in the service manuals to properly adjust areas of these rigs. I am confused about the specifications, as I have a TS520s

service manual in font of me..and it states that the "center frequency" should be 8.83Mhz..that I can understand..but I have looked at numerous ones for sale on ebay with various descriptions of: 2Mhz, 10, or 20+ Mhz. Is this what the unit is capable of tuning through? If one unit is say... 10Mhz...would that satisfy the 8.83Mhz BPF freq requirement?

73's joe wb7uqu

[Non-text portions of this message have been removed]

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[Non-text portions of this message have been removed]

29248. Anybody want to sell a Kenwood VFO-240?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 01:28:40 UTC
From: wc0l
Topic: 29248 Message: 29248

Hi everybody. I have been refurbing an old 830 and have located the AT-230 and SP-230. I am trying to locate a VFO-240 to go with it. If you have one you want to sell for a reasonable price, let me know.
Thanks and 73,
Mike, WC0L
Wichita, KS

29249. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 02:40:10 UTC
From: w5rkl
Topic: 29230 Message: 29249

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Mike:
>
> Ran some more transmit tests and here is what I found.
>
> When I fired it up this time on 20M I could get about 80W on CW,
> less than before but still pretty good.
>
> With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> pretty good.

When you measure the HV is the 820 keyed with the SG switch ON and OFF? The only way the HV meter switch setting with display HV is in transmit. In receive the Relay Unit relay terminals disables all meter switch settings and the meter displays receive signal strength, S Units, ONLY.

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It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.

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> plan to put another set of finals in. The HV deterioration with
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See my response above.

>
> Thanks!
>
> Robert

73s
Mike
W5RKL

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> > Afternoon Robert,
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> > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
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> > > I would appreciate any thoughts!
> > >
> > > Best regards,
> > >
> > > Robert
> >
>

29250. Re: PSK

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 06:31:32 UTC
From: wb6yte
Topic: 29217 Message: 29250

John,

I have used my TS-530 on PSK for the last few years. The internal VFO drifts a little so I added a VFO-230. A minor modification was made to the radio to use the 500Hz CW filter in USB mode. This is not essential but it helps when there are strong signals on the band.

The interface to the computer is homebrew. The interface is plugged into the external speaker jack on the back and has an audio amplifier to drive another speaker. This enables adjustment of the external speaker volume independently from the audio level to the computer.

Ed
WB6YTE

--- In TS-520_820_530_830@yahoogroups.com, "jwpjr2003" <jwpjj@...> wrote:
>
> I would like to know what product, those of which use PSK/Rtty, everyone is using to get on the air. I have a TS-530S. Do I need any other filters other than the standard SSB?
>
> TNX, John
> ND1X
>

29251. VFO 230 .. AT 230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 16:07:14 UTC
From: wlinn.linn
Topic: 29251 Message: 29251

These two items are for sale. Lost the transformer in my 830 and sold it for parts so these are excess. Both work fine and are in good cosmetic condition. VFO has new cable from NWK..

Prices include shipping for the lower 48.

VFO 230 $225
AT 230 $200

Bill
W7WEL

29252. tv-506 transverter for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-10 20:57:31 UTC
From: Michael
Topic: 29252 Message: 29252

I puchased this tv-506 (6 meter transverter), from a fellow ham about a year ago, it works perfectly and has the connecting cable and manual. It had been my intention to acquire an ts-820s to use it with. Things change though and I am no longer going to do that. It is in perfect condition and has no rust, smoke enviroment, dents,scratches, etc. --- the bottom left hand cornor of the front edge has a slight 'mar', not a scratch, other than that it is perfect and will be guaranteed not to be DOA.
The shipping weight in a bubble wrapped and popcorn filled box is right at 15 pounds and I will send it via USPS or UPS, your choice. I want $200 plus $20 shipping for it, paid with a USPS money order. You can contact me at ke7kly@.... If I don't sell it in the next few days it will go on to eham and then ebay.

29253. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 01:49:51 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29253

Mike:

First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.

I took out the S-2001A's and put in two 6146's ☐ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!

I have not yet run the neutralization procedure on these tubes. I guess I will do that next.

I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.

I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how the B models will do in the 820S.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
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> > When I fired it up this time on 20M I could get about 80W on CW,
> > less than before but still pretty good.
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> See my response above.
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> >
> > Thanks!
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> > > > I would appreciate any thoughts!
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> > > > Best regards,
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> > > > Robert
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> >
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29254. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 03:58:10 UTC
From: w5rkl
Topic: 29230 Message: 29254

Robert,

I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be

750 x .225 = 187.5 watts DC input

That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.

If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.

A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.

Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.

I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.

The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.

73s
Mike
W5RKL

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> Mike:
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> > > > > Best regards,
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> > > > > Robert
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> >

29255. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 13:33:50 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29255

Mike:

No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!

I plan to do two things:

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And I guess I could run the INRAD alignment procedure again as well. Would be interesting to see how with the new tubes output power varies with the freqs applied to the mike input and the Mike level.

Thanks again!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
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> I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
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> 750 x .225 = 187.5 watts DC input
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> That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
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> If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB

mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
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> A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
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> > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
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> > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
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> > > > less than before but still pretty good.
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> > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
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> > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
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> > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
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> > > > > > Good afternoon, Mike:
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> > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > >
> > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > >
> > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the

right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > >
> > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > >
> > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > >
> > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > >
> > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > >
> > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > >
> > > > > > I would appreciate any thoughts!
> > > > > >
> > > > > > Best regards,
> > > > > >
> > > > > > Robert
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> > > >
> > >
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29256. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 15:08:55 UTC
From: w5rkl
Topic: 29230 Message: 29256

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
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> Mike:
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> No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!

Yes, I agree, especially the CW IP current being much higher.

> I plan to do two things:
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> 1. The alternate alignment instructions I used had you adjust not
> only the Drive coil on the RF board but also a coil on the IF board
> (I'm at work now and dfo not have my manuals so I do not know what
> teh designation of that coil is). As a result in CW and Tune modes
> on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> the Drive control peaked. Setting the Drive coil helped ALC a lot
> but the coil on the IF board really maxed it out. I plan to back
> off on that coil on the IF board a bit.

The first step in transmitter alignment is on page 49 of the 820 service manual titled

"4. Adjustment of Transmitter Section".

This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB without applying audio to the speech amplifier. The step does not state whether to have a CW key plugged into the CW socket or not. I recommend removing any CW key from the CW socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in the CW socket during this transmitter alignment step.

The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.

The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil

pack adjustment serves 2 purposes

1. Tunes the driver tube's plate circuit for the band selected
2. Acts as a tuned input to the final amplifier

> 2. I am going to neutralize the tubes as I did the last time, by
> turning the SG Switch Off, running the output to my oscilloscope,
> and Teeing off from that to a dummy load, key up, then tune for
> minimum voltage. Before, given the sensitivity of the scope, I
> found that I could neutalize the rig right down to nothing, with no
> output with the SG switch back on. We will see this time.

Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.

>
> True, I do need to check idling current with these new tubes.

This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.

> Also, I would like to see how the 6146B's I have perform. I do not
> have any known good 6146B's but have a number of mainly used
> 6146's, one probably good S-2001A and I think a set of 6146A's that
> may be good.

One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.

> And I guess I could run the INRAD alignment procedure again as
> well. Would be interesting to see how with the new tubes output
> power varies with the freqs applied to the mike input and the Mike
> level.

I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.

>
> Thanks again!
>
> Robert

I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.

73s
Mike
W5RKL

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> > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
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> > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > >
> > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > >
> > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > > > >
> > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > >
> > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > >

> > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > >
> > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > >
> > > > > > > I would appreciate any thoughts!
> > > > > > > >
> > > > > > > Best regards,
> > > > > > > >
> > > > > > > Robert
> > > > > > >
> > > > > >
> > > > >
> > >
>

29257. Re: TS-520SE IC part supplier?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 16:09:47 UTC
From: Charles
Topic: 29040 Message: 29257

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
> Does anyone know of a parts supply source for the TC4518BP IC for a TS-520SE? The few places that I've tried only deal in large, business related orders and don't sell to individuals.
> Also, I see that Mouser sells a replacement IC. Has anyone used this part and does it work?
> Thanks.
>
> Charlie Shaw
> KB3BTO

Update: both Mouser and Jameco have replacement IC's. Anyone else running into this situation should look under "Texas Instruments, CMOS Dual Up-Counters" and part numbers CD4518B, CD4520B.
I ordered a few from Mouser only because they are T.I. parts. Jameco listed the manufacturer as "manufacturer may vary." They are cheaper at Jameco but I went with T.I. due to their reputation.
Hopefully, I'll never need to use them but at least I'll have 'em!

73
Charlie
KB3BTO

29258. TS-520SE reducing output power setting question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 16:19:48 UTC
From: Charles
Topic: 29258 Message: 29258

I'm new to hybrids, so please be kind. Anyway, how does one go about setting the rig to run at less than full power? I've read the manual several times, searched postings here and at e.ham but, so far, keep coming up empty. I read a posting on how to do this about a year ago, but I didn't have the 520SE then and, naturally, I can't find the posting now.
If I wanted to put out a signal at 50 watts what exact steps should I be following? Please advise.

73
Charlie Shaw
KB3BTO

29259. Re: TS-520SE reducing output power setting question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 16:37:58 UTC
From: w5rkl
Topic: 29258 Message: 29259

Hello Charlie,

You didn't say what Mode you intend on using and for what purpose, such as PSK-31, RTTY, SSTV, or normal sideband or CW operation. Knowing which mode will help use help you and your desire to operate at a lower power output level. Until we know what mode you will be operating in, the following is a simple explanation how "normal" power output is controlled in the various modes the 520SE operates in.

Normal power output in USB or LSB Modes is controlled by the "MIC" gain control. This controls the level of audio from the microphone amplifier to the balance modulator.

Normal power output in TUNE/CW mode is controlled by the "CAR" control. Power output in CW mode can be set to 50 watts output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
> I'm new to hybrids, so please be kind. Anyway, how does one go about setting the rig to run at less than full power? I've read the manual several times, searched postings here and at e.ham but, so far, keep coming up empty. I read a posting on how to do this about a year ago, but I didn't have the 520SE then and, naturally, I can't find the posting now.
> If I wanted to put out a signal at 50 watts what exact steps should I be following? Please advise.
>
> 73
> Charlie Shaw
> KB3BTO
>

29260. New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 16:35:18 UTC
From: silverstone38s
Topic: 29260 Message: 29260

I am studying for both the Tech and General license. I have no communications or electrical training. I am a licensed automotive mechanic, but haven't worked in that industry in years. I am now an Operations Manager (mostly marketing, payment systems technology, etc.) Bascially, I'm very IT saavy and good with my hands (soldering and desoldering is getting better every day!). I am more of a hands-on learner and know enough to know when I don't know enough.

I understand that the TS-530S is not a plug n'play solid state unit. But I am on a PC and Blackberry all day long and would prefer something more manual in design. Also, by having to tune the TS-530S each time I change frequencies, etc., I believe I'll learn more about the radio's function at a faster rate, than say an ICOM 718. I have had my fair share of hobbies: RC Cars, model trains, and in fact whip up my own cream and wet-shave every day (you have to try that!). In my mid forties, I find I want to slow some things down, enjoy them more, etc.

My questions are:

1 - do you recommend the TS-530S as a first radio?

2 - Are my assumptions about learning on the TS-530 incorrect?

3 - Do these units have specific eqipment requirements, with regard to antenna, etc., or can I start with very basic equipment and go/grow from there?

I'm really looking to better understand radio, electronics, etc. as a hobby. Don't laugh, but I actually baught, well Santa brought me, a Radio Shack Electronics Lab, with the Workbooks written by Forrest Mimms. Rudementary to many of you, but I needed to start with the basics.

I have been perusing K4EAA's site as well. I also picked up an inexpensive 2 meter mobile, and two HTX-202s that were new in the box. Straight 2 meter units.

Thank you in advance for any advice.

29261. Re: TS-520SE IC part supplier?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 16:49:44 UTC
From: w5rkl
Topic: 29040 Message: 29261

Charles,

Binary up counters are manufactured by a number of different companies. The important thing is to ensure the chip is the same binary up counter with same or very similar voltage specifications and same pin designations. IC chips are almost all made in China, Taiwan, or other foreign countries and companies such as Toshiba and Texas Instruments simply have their name put on the chips. There are very few, if any, IC chips made in America.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@> wrote:
> >
> > Does anyone know of a parts supply source for the TC4518BP IC for a TS-520SE? The few places that I've tried only deal in large, business related orders and don't sell to individuals.
> > Also, I see that Mouser sells a replacement IC. Has anyone used this part and does it work?
> > Thanks.
> >
> > Charlie Shaw
> > KB3BTO
>
> Update: both Mouser and Jameco have replacement IC's. Anyone else running into this situation should look under "Texas Instruments, CMOS Dual Up-Counters" and part numbers CD4518B, CD4520B.
> I ordered a few from Mouser only because they are T.I. parts. Jameco listed the manufacturer as "manufacturer may vary." They are cheaper at Jameco but I went with T.I. due to their reputation.
> Hopefully, I'll never need to use them but at least I'll have 'em!
>
> 73
> Charlie
> KB3BTO
>

29262. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 17:05:32 UTC
From: John Davidson
Topic: 29230 Message: 29262

where is your loading capacitor set>?
On 80 M my 520 loading capacitor is set nearly all the way CCW to get 200 mA Ip dip at 100 W output.
I'm sure it is farther clockwise on the higher bands but it has been a few years since I went off 80M

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 11, 2011 8:33:50 AM
Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Mike:

No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!

I plan to do two things:

1. The alternate alignment instructions I used had you adjust not only the Drive coil on the RF board but also a coil on the IF board (I'm at work now and dfo not have my manuals so I do not know what teh designation of that coil is). As a result in CW and Tune modes on 80-40-20 in Tune or CW the ALC indication pegs the needle with the Drive control peaked. Setting the Drive coil helped ALC a lot but the coil on the IF board really maxed it out. I plan to back off on that coil on the IF board a bit.
2. I am going to neutralize the tubes as I did the last time, by turning the SG Switch Off, running the output to my oscilloscope, and Teeing off from that to a dummy load, key up, then tune for minimum voltage. Before, given the sensitivity of the scope, I found that I could neutalize the rig right down to nothing, with no output with the SG switch back on. We will see this time.

True, I do need to check idling current with these new tubes.

Also, I would like to see how the 6146B's I have perform. I do not have any known good 6146B's but have a number of mainly used 6146's, one probably good S-2001A and I think a set of 6146A's that may be good.

And I guess I could run the INRAD alignment procedure again as well. Would be interesting to see how with the new tubes output power varies with the freqs applied to the mike input and the Mike level.

Thanks again!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Robert,
>
> I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well
>over 100 watts output. If that's true then power input would be
>
> 750 x .225 = 187.5 watts DC input
>
> That's 27 watts higher than the 820's designed CW mode 160 watts DC input power
>rating. Based on 55% efficiency input to output of the Class AB1 final amplifier
>that would equate to approximately 142.5 watts output.
>
> If you have a known good pair of 6146Bs, install them, check for 60ma of no
>signal idling current in USB or LSB mode, it doesn't matter what band has been
>selected, then retune the 820 into a dummy load.
>
>
> A known good 12BY7 driver tube can produce more than enough drive to the final
>tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC
>peak in TUNE mode should be stable, not drop back toward zero on it's own.
>
> Power input tuning should be smooth and full output should occur at the same
>point as maximum IP dip. If these 2 things do not occur at the same point then
>the final amplifier needs to be neutralized.
>
> I would not operate the 820 with an RF output of more than 110 watts as that
>can easily over stress the power supplies and shorten the life of the final
>tubes.
>
> The HV at maximum output will sag but not excessively. A HV drop of 100VDC is
>not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby
>(receive) and approximately 745VDC at full output in CW mode. Some hybrid owners
>use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV
>filter capacitors, same as the designed HV filter supply. The "80/20" rules
>applies when working with capacitors, no more than 80% higher than the original
>value and no lower than 20% of the original value. I decided to stick with the
>original values, 100ufd at 500VDC capacitors.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>
>
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
>wrote:
> >
> > Mike:
> >
> > First, with the SG switch off and with the key down I get 900V on the HV
>meter setting and with the SG switch on I get 850V to 750V, depending on output,
>band and which finals I have installed.
> >
> > I took out the S-2001A's and put in two 6146's – basic models, no A or B. The
>difference is dramatic. With a few short transmits into the dummy load I get
>about 250 ma of Ip current with the plate dipped and 90W indicated on the power
>meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV
>at that point. Obviously the high voltage power supply is putting out well. I
>have never seen RF output like this with this radio. It's too high!
> >
> > I have not yet run the neutralization procedure on these tubes. I guess I
>will do that next.
>
> >
> > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how
>to do that.
>
> >
> > I think that I also will try the 6146B's that originally came with the rig. I
>assumed they were not working properly at that time, but given the condition of
>the radio at that point it is not surprising. In my HW-100 they were a bit low
>on output but worked; of couwse that rig needs some work too so it is not a good
>example. I am curious to see how the B models will do in the 820S.
> >
> > Thanks!
> >
> > Robert
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
><roberteleazer@> wrote:
> > > >
> > > > Mike:
> > > >
> > > > Ran some more transmit tests and here is what I found.
> > > >
> > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > less than before but still pretty good.
> > > >

> > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > pretty good.
> > >
> > > ----------
> > >
> > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The
>only way the HV meter switch setting with display HV is in transmit. In receive
>the Relay Unit relay terminals disables all meter switch settings and the meter
>displays receive signal strength, S Units, ONLY.
> > >
> > > A more accurate method of measuring the 820's HV is to measure the HV at
>the Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit.
>Be very careful when measuring the voltage at the Rectifier Unit's 800 terminal
>with a DVM as this is where the final amplifier HV supply output feeds the final
>amplifier tubes! Do not attempt to do this if you are tired, being disrupted or
>distracted, as you can easily receive a severe electrical shock which can easily
>kill you!!! If you use a DVM to measure the HV at the 800 terminal on the
>Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000
>volts DC and the meter's voltage level switch is set to 1000VDC or higher
>otherwise you can easily burn out your meter!!!
> > >
> > > ----------
> > >
> > >
> > > > But as I let the set run it deteriorated. It was never been as
> > > > good on output on the other bands as it was on 20M, but 80M was
> > > > noticeably down from before.
> > > >
> > > > And after letting it run for a couple of hours or more with
> > > > occasional short transmits the power output got worse. HV under
> > > > load deteriorated down to maybe 780V.
> > > >
> > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > go up with time and stay up.
> > > >
> > > > I will let it cool down and try it again to see if power is back up.
> > > >
> > >
> > > ----------
> > >
> > > It is possible the HV filter capacitors are quite leaky due to age and
>previous usage. If a previous operator abuses the 820 but running it at above
>normal power output levels through improper LOAD control adjustments or other
>abusive behavior due to inexperience, it's not uncommon for this to happen, this
>could result in higher current demands being placed on the HV supply causing
>early failure in the power supply components.
>
> > >
> > > Electrolytic capacitors do age which can lead to higher internal leakage
>current. When this happens the HV power supply output suffers as the output

>voltage sages lower than normal during normal operation. The only fix is to
>replace both HV filter capacitors. Do not attempt to "reform" the capacitors,
>that simply will not fix an aging filter capacitor. I also recommend replacing
>the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc
>capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV
>rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and
>ordering.
> > >
> > > --
> > >
> > >
> > > > And I will check to see about those resistors you mentioned and
> > > > plan to put another set of finals in. The HV deterioration with
> > > > time sounds like the HV caps are getting old.
> > >
> > >
> > > --
> > >
> > > See my response above.
> > >
> > > --
> > >
> > >
> > > >
> > > > Thanks!
> > > >
> > > > Robert
> > >
> > >
> > > --
> > >
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Afternoon Robert,
> > > > >
> > > > > The only plug on the RF UNIT, the board you are referring to as the
>driver board, that can cause the fuse to blow is RF2.
> > > > >

> > > > > RF2 has 4 pins that can affect the driver and both final tube's bias
>voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not
>making contact with pins 7 thru 10 then the driver and both final tube's bias
>voltage will be "disconnected". This will result in the driver and both final
>tubes to conduct to "saturation" current levels which can easily lead to the
>fuse blowing. Depending on the condition of the driver and/or final tubes, this
>can lead to problems with the tubes which could easily lead to lower RF output
>power. In addition, this could lead to damage to the cathode resistors which
>also can lead to lower RF output. By the way, if the bias voltage is
>"disconnected" to the final tubes and the fuse does NOT blow, the plates of the
>final tubes will start turning "RED", even in "receive"!
> > > > >
> > > > > If you have a set of known good driver and final tubes then I recommend
>using them then test for power output. I also recommend checking and, if
>necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If
>these increase in resistance, for example, the current flow through the final
>tubes will be "less".
> > > > >
> > > > > I doubt the problem is the HV supply.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
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> > > > >
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> > > > >
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
><roberteleazer@> wrote:
> > > > > >
> > > > > > Good afternoon, Mike:
> > > > > >
> > > > > > The HV indication is about 840V but I think that after a while,
>following repeated short transmissions, it may go down to perhaps 820.
> > > > > >
> > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when
>tuning the plate. My first thought was that the short somehow took out one
>S-2001A. I have a spare but need to figure out which one might be bad before
>doing any swapping.
>
> > > > > >
> > > > > > The ALC indication on transmit for Tune and CW modes is very strong
>at peak, pegging the needle to the right when the Drive control is properly
>adjusted. On SSB modes there is much less ALC indication, but there is some
>there. There is no decay in ALC as transmit goes on, so I assume the driver tube
>is good.

> > > > > >
> > > > > > And yes, it sure sounds like power output is commensurate with Ip and
>voltage indications. I think the HV is lower than it used to be. I believe it
>was formerly up around 900 where it should be.
>
> > > > > > >
> > > > > > Perhaps that short that blew the fuse damaged the power supply. But
>it did not damage it too much, which sounds odd. I guess it could be a rectifier
>diode that is not quite doing the job. A total loss of HV due to that short
>would be believeable but a fairly small partial loss is not a failure mode I can
>explain right now.
>
> > > > > > >
> > > > > > I suppose that the HV caps getting old could cause a decrease in HV
>but why that would be apparantly associated with that loose connector and the
>short I have no idea.
> > > > > > >
> > > > > > I am going to go look at the manual and see what the HV should be at
>various points and maybe take some measurements.
> > > > > > >
> > > > > > Shucks! I was looking forward to setting this rig aside and working
>on an NC-155 where I need to rebuild the 2nd local oscillator.
>
> > > > > > >
> > > > > > I would appreciate any thoughts!
> > > > > > >
> > > > > > Best regards,
> > > > > > >
> > > > > > Robert
> > > > > > >
> > > > >
> > > >
> > >
> >
>

[Non-text portions of this message have been removed]

29263. Re: [TS-520_820_530_830] New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 12:25:29 UTC
From: JDF
Topic: 29260 Message: 29263

>
> I'm really looking to better understand radio, electronics, etc. as a
> hobby. Don't laugh, but I actually baught, well Santa brought me, a
> Radio Shack Electronics Lab, with the Workbooks written by Forrest
> Mimms. Rudementary to many of you, but I needed to start with the basics.
>
> I have been perusing K4EAA's site as well. I also picked up an
> inexpensive 2 meter mobile, and two HTX-202s that were new in the box.
> Straight 2 meter units.
>
> Thank you in advance for any advice.
>

The TS-530 and related radios are hybrids. They are primarily solid-state but use a few tubes in the transmitter. It will teach you about tuning a tank circuit, but it's not a true tube radio.

An all-tube radio will teach you more, but you might not like the lessons. At least not at first. The learning curve is steep and these radios are much older and usually require a good deal of work and adjustment due to age.

The TS-530 is easier to operate than most all-tube radios, mostly because it is frequency-stable once it warms up and it has a digital frequency readout. Many older all-tube radios tend to drift, unless it was a very expensive radio in its day.

The TS-830 has a more advanced receiver, and that's a good place to invest money. Your ability to hear a signal is more important than your ability to be heard.

The required antennas aren't unique, but since we're talking about HF you should be aware that HF antennas are huge. The best place to start is with a simple wire dipole. If you want a multi-band dipole use a fan dipole. There are other wire antennas like the G5RV that are multi-band and work well too, but aren't as simple as a dipole. Most people build their own wire antennas like the dipole and G5RV but you can get them pre-made or as kits too.

Good luck and enjoy!

[Non-text portions of this message have been removed]

29264. Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 18:09:46 UTC
From: w5rkl
Topic: 29260 Message: 29264

What ever you do to prepare for the amateur radio license exam, I recommend you actually study the license material. Don't be fooled into "memorizing" questions and answers just to pass the test. You learn absolutely nothing doing that.

I recommend you spend a few dollars and buy an older ARRL handbook, a version in the mid 60s will do. Start at the beginning, learn about resistors, capacitors, inductors, how to computer resistance in series, parallel, series/parallel, and how current flows in a resistor. Learn basic ohms law, I = E/R, R = E/I, E = I x E, and Pin = I x E. You will use these basic ohms law formulas every time you troubleshoot simple or complex problems in any piece of electronic equipment. You can pick up the older ARRL handbooks on eBay.

I also recommend purchasing the following book;

BASIC RADIO COURSE by John T. Frye

This book is out of print but quite often be found on the Internet, even Amazon.com or possibly at your local library. This book is written for people who have no electronic training and covers the basics, atoms, electrons, resistors, capacitors, inductors, ohms law, and vacuum tube including the various "types" of vacuum tubes, Diode, Triode, Tetrode, and Pentode and how each element is used to allow electrons to flow within the tube.

Do not rush to the advance topics until you have a thorough understanding of the basics! Jumping head first into advance and more complex circuits is a common mistake made by new hams. You can't run until you learn how to walk or you can't learn to swim by jumping into the deep end of the pool, you'll drown faster than you will learn how to swim!

While computer knowledge such as networking, network operating systems (NOS) and computer operating systems such as Windows, Linux, and Apple OS, along with digital electronics, for example, OR, AND, and NAND gate functions is good to know, these areas are applied in more advanced electronics AFTER you learn the basics.

Last but not least, what ever transceiver you decide to buy, make sure the manual comes with it. Read the manual "thoroughly" so you learn how to operate the radio, the warnings, if any, that you must follow, and how the features are used. More often than not many problems that pop up are "operator error" caused by not reading and understanding the manual. If you purchase, for example, a Kenwood TS-530S but there is no manual, no problem, you can download it from the following website, "free".

www.n6wk.com/kenwood/

In fact, if you want to read about any of the Kenwood hybrids you can download all of the manuals, both operator and service manuals, at the above link. Again, I can't state it enough, read the manuals so you have a thorough understanding of how to operate the transceiver. If you have questions about what is presented in the manual, come here and ask, that's what we are here for, to help YOU. There are a lot of "myths" floating around the ham community. Learning from people who are here to help you is how you learn how to "side step" those myths.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@...> wrote:
>
> I am studying for both the Tech and General license. I have no communications or electrical training. I am a licensed automotive mechanic, but haven't worked in that industry in years. I am now an Operations Manager (mostly marketing, payment systems technology, etc.) Bascially, I'm very IT saavy and good with my hands (soldering and desoldering is getting better every day!). I am more of a hands-on learner and know enough to know when I don't know enough.
>
> I understand that the TS-530S is not a plug n'play solid state unit. But I am on a PC and Blackberry all day long and would prefer something more manual in design. Also, by having to tune the TS-530S each time I change frequencies, etc., I believe I'll learn more about the radio's function at a faster rate, than say an ICOM 718. I have had my fair share of hobbies: RC Cars, model trains, and in fact whip up my own cream and wet-shave every day (you have to try that!). In my mid forties, I find I want to slow some things down, enjoy them more, etc.
>
> My questions are:
>
> 1 - do you recommend the TS-530S as a first radio?
>
> 2 - Are my assumptions about learning on the TS-530 incorrect?
>
> 3 - Do these units have specific eqipment requirements, with regard to antenna, etc., or can I start with very basic equipment and go/grow from there?
>
> I'm really looking to better understand radio, electronics, etc. as a hobby. Don't laugh, but I actually baught, well Santa brought me, a Radio Shack Electronics Lab, with the Workbooks written by Forrest Mimms. Rudementary to many of you, but I needed to start with the basics.
>
> I have been perusing K4EAA's site as well. I also picked up an inexpensive 2 meter mobile, and two HTX-202s that were new in the box. Straight 2 meter units.
>
> Thank you in advance for any advice.
>

29265. Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 18:36:02 UTC
From: silverstone38s
Topic: 29260 Message: 29265

I thank you both and welcome additional comments.

Actually, electronics, studying what resistors are, Ohms law, etc. is where I started and why I bought the Lab. I had a light blinking and a buzzer sounding - wife was not very impressed ;) My dad's 1969 Military manual on electronics and a 1990 Radio Shack book by Mimms on electronics were a great introduction. The military manual does touch on tubes as well. But I'll look up the books you recommended. Used book stores have nothing, since guys probably hang on these for reference.

I have the new ARRL Technician's Manual and am reading through that as well. I admit, I was tempted to learn the answers, just to get on the air with the 2 meter and be better connected with our local club. I've slowed myself down and will meet with them, when they convene again.

I do agree about the advanced topics and have no intention to connect a PC to a ham radio for a long time. Honestly, I'm trying move away from the PC for a bit.

I am familiar, at least with the dimensions and functionality of the GR5 series antenna and that's about as "big" as I want to go. I was actually thinking attic antenna, for a while anyway. My wife is worried that I'll be wearing a colandar hat and tin foil! She needs a sense of humor to tolerate my hobbies...

Who can blame here? Right now, I have a mobile Hustler antenna mounted on a cookie sheet in my car for 2 meter reception. New cars are not very gutter mount friendly, but the antenna was free. I guess I am a little crazy...

29266. Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 20:05:17 UTC
From: w5rkl
Topic: 29260 Message: 29266

If you are interested in mobile operation you might consider a magnetic mount 2 meter vertical. Mounting it in the middle of the roof gives you 360 degree radiation pattern using the car's roof as the "second" half of the antenna. The nice thing is there are no holes to drill and it can be removed rather easily when needed.

HF is another story.

If I may also suggestion something else. Take the license exams one step at a time. Quite often people tend to jump head first and take the Extra Class exam. By starting at the Technician level you can gain experience not only in VHF and above but also CW on HF in the frequency allocation for the Technician license. The Technician class license can also operate sideband on 10 meters.

I can't stress enough the importance of taking your time, starting at the beginning level, gaining experience and knowledge on how to operate. Read the exam study guide section that discusses about operating and read the FCC's part 97 Rules and Regulation, avialable from ARRL in pdf form plus download the Amateur Radio band color chart also from ARRL and study it. Remember, when you sign the license application you are telling the FCC that you understand and will abide by part 97 of the FCC Rules and Regulation that govern Amateur Radio. I started as a Novice many years ago, 1966, and took it one step at a time. It's not an easy task but if you stick with it, study, ask questions, then and only then will you honestly be prepared to take the exam.

If we can help, regardless of how silly you may think your question may see, don't hesitate to ask us here. We are here to help you, not make fun or talk down to you. Other ham forms may do that but not here!

I spent 15 years as a computer and network support technician professional working for a Fortune 500 company plus 10 years prior to that, in computers, as a hobby when computers first began to be sold as "home computers" (Radio Shack TRS-80 Model 1, 3, 4 and 4P). Therefore, I know what you mean by wanting to get away from it for awhile. I'm retired now, 62, and spend a lot of time here and operating on 40 meters CW. Since there is no requirement for CW in the exam, you should hold off learning CW until you get your feet wet by studying and passing the exam.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@...> wrote:
>
> I thank you both and welcome additional comments.
>
> Actually, electronics, studying what resistors are, Ohms law, etc. is where I started and why I bought the Lab. I had a light blinking and a buzzer sounding - wife was not very impressed ;) My dad's 1969 Military manual on electronics and a 1990 Radio Shack book by Mimms on electronics were a great introduction. The military manual does touch on tubes as

well. But I'll look up the books you recommended. Used book stores have nothing, since guys probably hang on these for reference.
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>
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> I am familiar, at least with the dimensions and functionality of the GR5 series antenna and that's about as "big" as I want to go. I was actually thinking attic antenna, for a while anyway. My wife is worried that I'll be wearing a colandar hat and tin foil! She needs a sense of humor to tolerate my hobbies...
>
> Who can blame here? Right now, I have a mobile Hustler antenna mounted on a cookie sheet in my car for 2 meter reception. New cars are not very gutter mount friendly, but the antenna was free. I guess I am a little crazy...
>

29267. Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 20:24:23 UTC
From: silverstone38s
Topic: 29260 Message: 29267

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If you are interested in mobile operation you might consider a magnetic mount 2 meter vertical. Mounting it in the middle of the roof gives you 360 degree radiation pattern using the car's roof as the "second" half of the antenna. The nice thing is there are no holes to drill and it can be removed rather easily when needed.
>
> HF is another story.
>
> If I may also suggestion something else. Take the license exams one step at a time. Quite often people tend to jump head first and take the Extra Class exam. By starting at the Technician level you can gain experience not only in VHF and above but also CW on HF in the frequency allocation for the Technician license. The Technician class license can also operate sideband on 10 meters.
>
> I can't stress enough the importance of taking your time, starting at the beginning level, gaining experience and knowledge on how to operate. Read the exam study guide section that discusses about operating and read the FCC's part 97 Rules and Regulation, avialable from ARRL in pdf form plus download the Amateur Radio band color chart also from ARRL and study it. Remember, when you sign the license application you are telling the FCC that you understand and will abide by part 97 of the FCC Rules and Regulation that govern Amateur Radio. I started as a Novice many years ago, 1966, and took it one step at a time. It's not an easy task but if you stick with it, study, ask questions, then and only then will you honestly be prepared to take the exam.
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> If we can help, regardless of how silly you may think your question may see, don't hesitate to ask us here. We are here to help you, not make fun or talk down to you. Other ham forms may do that but not here!
>
> I spent 15 years as a computer and network support technician professional working for a Fortune 500 company plus 10 years prior to that, in computers, as a hobby when computers first began to be sold as "home computers" (Radio Shack TRS-80 Model 1, 3, 4 and 4P). Therefore, I know what you mean by wanting to get away from it for awhile. I'm retired now, 62, and spend a lot of time here and operating on 40 meters CW. Since there is no requirement for CW in the exam, you should hold off learning CW until you get your feet wet by studying and passing the exam.
>
> 73s
> Mike
> W5RKL
>
>
> 62..wow, you're a youngster! The local ham I met with is 83 and he gave me that Hustler antenna. It was new in the wrap, sitting in his antique store (I use the term Antique losely). Great guy, has some homebrew equipment and an 80 foot beam antennna, which he sunk

in concrete. He's been out of it for quite a while though.

Thanks, You've already been more cordial than some.

I am looking for a magnet antenna, but he passed that Hustler on to me, so I gave it a whirl. I was hoping the cookie sheet would bounce, just as the roof does, and it doesn't work half bad with my HT.

Thanks for the info on the chart. I have found another, but it wouldn't expand to more than 30% and my eyes aren't that good! ARRL's is excellent.

I was thinking of the Tech and General at one time, only because of the timing of courses, etc. Plus, others have said that the tests are somewhat similar. I'm really not in a rush to gain access to the additional freqs that General, or even Extra provide. I was just looking to pass the first two classes, while everything was still fresh. This was going to be my first hobby where I didn't put the cart before the horse. Although, I am very tempted by that TS-530S...

29268. Re: [TS-520_820_530_830] Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 21:02:26 UTC
From: george dumond
Topic: 29260 Message: 29268

You are not crazy Just like a bunch of old F----s were many years ago. Its a great hobby and with guys like Mike to guide you it will be a blast. I have been at it since 1965 and in my honest opinion the older rigs are of a higher quality than a lot of the newer ones.
As far as the 530S is concerned I think it is one of the best ever made. Just need to read and understand the man. before attemting to use it. I am a boat anchor nut and love to build antennas. If I can ever be of help just let me know.
Welcome to the group. A great place to be they have helped me a bunch.
73s
George
k0gwd

From: silverstone38s <joseywale@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 11, 2011 2:24:23 PM
Subject: [TS-520_820_530_830] Re: New to Ham radio. Is the TS-530S a good place to start?

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If you are interested in mobile operation you might consider a magnetic mount 2
>meter vertical. Mounting it in the middle of the roof gives you 360 degree
>radiation pattern using the car's roof as the "second" half of the antenna. The
>nice thing is there are no holes to drill and it can be removed rather easily
>when needed.
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> HF is another story.
>
> If I may also suggestion something else. Take the license exams one step at a
>time. Quite often people tend to jump head first and take the Extra Class exam.
>By starting at the Technician level you can gain experience not only in VHF and
>above but also CW on HF in the frequency allocation for the Technician license.
>The Technician class license can also operate sideband on 10 meters.
>
>
> I can't stress enough the importance of taking your time, starting at the
>beginning level, gaining experience and knowledge on how to operate. Read the
>exam study guide section that discusses about operating and read the FCC's part
>97 Rules and Regulation, avialable from ARRL in pdf form plus download the
>Amateur Radio band color chart also from ARRL and study it. Remember, when you
>sign the license application you are telling the FCC that you understand and
>will abide by part 97 of the FCC Rules and Regulation that govern Amateur Radio.

>I started as a Novice many years ago, 1966, and took it one step at a time. It's
>not an easy task but if you stick with it, study, ask questions, then and only
>then will you honestly be prepared to take the exam.
>
> If we can help, regardless of how silly you may think your question may see,
>don't hesitate to ask us here. We are here to help you, not make fun or talk
>down to you. Other ham forms may do that but not here!
>
> I spent 15 years as a computer and network support technician professional
>working for a Fortune 500 company plus 10 years prior to that, in computers, as
>a hobby when computers first began to be sold as "home computers" (Radio Shack
>TRS-80 Model 1, 3, 4 and 4P). Therefore, I know what you mean by wanting to get
>away from it for awhile. I'm retired now, 62, and spend a lot of time here and
>operating on 40 meters CW. Since there is no requirement for CW in the exam, you
>should hold off learning CW until you get your feet wet by studying and passing
>the exam.
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> 73s
> Mike
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>
> 62..wow, you're a youngster! The local ham I met with is 83 and he gave me that
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>antennna, which he sunk in concrete. He's been out of it for quite a while
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[Non-text portions of this message have been removed]

29269. Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 22:01:21 UTC
From: jon_g4fut
Topic: 29269 Message: 29269

I am trying to repair my faithful TS530sp which has stopped receiving, possibly due to being on receive when too near another of my transmitters. I am looking for a source to buy things or their equivalents such as 3sk71,2sk125 etc.
Also what wattage soldering iron would be best for this rigs repair? Th one I have at the moment is 30 watts but the tip might be too thick.
Regards Jon
G4FUT

29270. RE: [TS-520_820_530_830] Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 22:03:01 UTC
From: Greg Anders
Topic: 29269 Message: 29270

NTE has a website with a cross-reference to modern parts currently available.

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jon_g4fut
Sent: Tuesday, January 11, 2011 2:01 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Source of TS530 semi-conductors

I am trying to repair my faithful TS530sp which has stopped receiving, possibly due to being on receive when too near another of my transmitters. I am looking for a source to buy things or their equivalents such as 3sk71,2sk125 etc.
Also what wattage soldering iron would be best for this rigs repair? Th one I have at the moment is 30 watts but the tip might be too thick.
Regards Jon
G4FUT

[Non-text portions of this message have been removed]

29271. Re: [TS-520_820_530_830] Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 22:12:30 UTC
From: n6wk@n6wk.com
Topic: 29269 Message: 29271

Jon,
Check the 1.8 Coil for the Antenna coils on the RF board.
It is usually the first thing that goes due to Static buildup or a close by TX
I have replaced or re-wound many of them.
I think it is L-41 on the 530, same as the 830

73,
Gordon

On 1/11/2011 2:01 PM, jon_g4fut wrote:
>
> I am trying to repair my faithful TS530sp which has stopped receiving,
> possibly due to being on receive when too near another of my
> transmitters. I am looking for a source to buy things or their
> equivalents such as 3sk71,2sk125 etc.
> Also what wattage soldering iron would be best for this rigs repair?
> Th one I have at the moment is 30 watts but the tip might be too thick.
> Regards Jon
> G4FUT
>
>

29272. Re: Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 22:54:27 UTC
From: jon_g4fut
Topic: 29269 Message: 29272

Thanks Gordon, I was worried it may be that. Just about to get cataracts taken from my eyes, so I guess the operation is just in time. GRIN.
Regards
Jon

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Jon,
> Check the 1.8 Coil for the Antenna coils on the RF board.
> It is usually the first thing that goes due to Static buildup or a close
> by TX
> I have replaced or re-wound many of them.
> I think it is L-41 on the 530, same as the 830
>
> 73,
> Gordon
>
> On 1/11/2011 2:01 PM, jon_g4fut wrote:
> >
> > I am trying to repair my faithful TS530sp which has stopped receiving,
> > possibly due to being on receive when too near another of my
> > transmitters. I am looking for a source to buy things or their
> > equivalents such as 3sk71,2sk125 etc.
> > Also what wattage soldering iron would be best for this rigs repair?
> > Th one I have at the moment is 30 watts but the tip might be too thick.
> > Regards Jon
> > G4FUT
> >
> >
>

29273. Re: [TS-520_820_530_830] Re: Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 23:11:37 UTC
From: n6wk@n6wk.com
Topic: 29269 Message: 29273

Keep us updated Jon,
It isn't always L-41 but thought I better mention it.
Does it hear really strong stations still? just low in signal level?
does the CAL work?
Gordon

On 1/11/2011 2:54 PM, jon_g4fut wrote:
>
> Thanks Gordon, I was worried it may be that. Just about to get
> cataracts taken from my eyes, so I guess the operation is just in
> time. GRIN.
> Regards
> Jon
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Jon,
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> close
> > by TX
> > I have replaced or re-wound many of them.
> > I think it is L-41 on the 530, same as the 830
> >
> > 73,
> > Gordon
> >
> > On 1/11/2011 2:01 PM, jon_g4fut wrote:
> > >
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> receiving,
> > > possibly due to being on receive when too near another of my
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> > > Th one I have at the moment is 30 watts but the tip might be too
> thick.
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> > > G4FUT
> > >
> > >
> >
>
>

29274. Re: Source of TS530 semi-conductors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-11 23:18:03 UTC
From: jon_g4fut
Topic: 29269 Message: 29274

Hi Gordon, The calibrator works fine, but not even loud stations. last week the fixed attenuator stopped working but the variable was OK. Then the RX just went to sleep. I'll keep you up to date when I start fixing it with my new eyes. GRIN
Jon

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Keep us updated Jon,
> It isn't always L-41 but thought I better mention it.
> Does it hear really strong stations still? just low in signal level?
> does the CAL work?
> Gordon
>
> On 1/11/2011 2:54 PM, jon_g4fut wrote:
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> > time. GRIN.
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> >
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Jon,
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> > > It is usually the first thing that goes due to Static buildup or a
> > close
> > > by TX
> > > I have replaced or re-wound many of them.
> > > I think it is L-41 on the 530, same as the 830
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> > > 73,
> > > Gordon
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> > > On 1/11/2011 2:01 PM, jon_g4fut wrote:
> > > >
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> > > > Regards Jon
> > > > G4FUT
> > > >
> > > >
> > >
> >
> >
>

29275. Re: TS-520SE reducing output power setting question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 00:18:30 UTC
From: Charles
Topic: 29258 Message: 29275

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Charlie,
>
> You didn't say what Mode you intend on using and for what purpose, such as PSK-31, RTTY, SSTV, or normal sideband or CW operation. Knowing which mode will help use help you and your desire to operate

Okay,I didn't realize that there were that many variations. Interesting. I work SSB and hope to get back into CW after I pass my Extra exam in March. I don't use any other modes. It seems that I've managed to forget most, if not all, of my characters over the years and will pretty much have to start from scratch. Oh, well...

73
Charlie Shaw
KB3BTO

29276. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 00:25:19 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29276

Mike:

I tried out the 6146B's and things look less dire.

The lowest Ip current I can get, with the mode switch in "Tune" and working into the dummy load, is 70ma. That is with the Ip bias control on the back turned as low as it will go and the Mike and CAR controls all the way to the left.

Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for both USB/LSB and CW. Indicated max power for SSB is 75W with the mike unplugged and about 108W for CW. All this is into the dummy load in the MFJ tuner or switched into my Heathkit Cantenna.

The 6146's are different from the 6146B's, I know, but I would not have expected higher power out from the 6146's. Then again maybe the 6146 I have are much fresher unusued tubes that are the 6146B's. People say not to use 6146B's in older rigs and even in TS-520's but I understand they are preferred for the TS-820.

I have not run the neutralization procedure yet. That is next, since the rig does not appear to be in danger of melting from too much Ip and RF output.

By the way, the alternate transmit alignment procedure I used says to adjust T1 on the RF board for max ALC reading and also to adjust T5 (not T10) on the IF board for max ALC. In my case T1 on the RF board helped a lot but adjusting T5 on the IF for ALC peak also made a big difference - really pegged the meter.

As for the INRAD alignment procedure, they say to inject a 1K audio signal into the mike input, adjust the mike gain to get 50W, and then switch the audio signal generator to inject first a 350 HZ and then a 2.5 KHZ signal into the mike input and make sure that the power output levels are the same at 350 and 2500, by adjusting the carrier freq. They say do this for both USB and LSB. In my case I found that aligning the coil pack beforehand took care of any difference I had found so I did not have to mess with the carrier board freqs. I suspect that with a tighter SSB filter than the stock one you might have to do that.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Mike:
> >
> > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the

Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!
>
>
>
> Yes, I agree, especially the CW IP current being much higher.
>
>
>
> > I plan to do two things:
> >
> > 1. The alternate alignment instructions I used had you adjust not
> > only the Drive coil on the RF board but also a coil on the IF board
> > (I'm at work now and dfo not have my manuals so I do not know what
> > teh designation of that coil is). As a result in CW and Tune modes
> > on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > but the coil on the IF board really maxed it out. I plan to back
> > off on that coil on the IF board a bit.
>
>
>
>
> The first step in transmitter alignment is on page 49 of the 820 service manual titled
>
> "4. Adjustment of Transmitter Section".
>
> This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB without applying audio to the speech amplifier. The step does not state whether to have a CW key plugged into the CW socket or not. I recommend removing any CW key from the CW socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in the CW socket during this transmitter alignment step.
>
> The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.
>
> The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil pack adjustment serves 2 purposes
>

> 1. Tunes the driver tube's plate circuit for the band selected
> 2. Acts as a tuned input to the final amplifier
>
>
>
>
> > 2. I am going to neutralize the tubes as I did the last time, by
> > turning the SG Switch Off, running the output to my oscilloscope,
> > and Teeing off from that to a dummy load, key up, then tune for
> > minimum voltage. Before, given the sensitivity of the scope, I
> > found that I could neutalize the rig right down to nothing, with no
> > output with the SG switch back on. We will see this time.
>
>
>
> Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
>
>
> >
> > True, I do need to check idling current with these new tubes.
>
>
> This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
>
>
> > Also, I would like to see how the 6146B's I have perform. I do not
> > have any known good 6146B's but have a number of mainly used
> > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > may be good.
>
>
>
> One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
>
> > And I guess I could run the INRAD alignment procedure again as
> > well. Would be interesting to see how with the new tubes output
> > power varies with the freqs applied to the mike input and the Mike
> > level.
>

>
> I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
>
>
> >
> > Thanks again!
> >
> > Robert
>
>
> I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.
>
>
> 73s
> Mike
> W5RKL
>
>
>
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Robert,
> > >
> > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > >
> > > 750 x .225 = 187.5 watts DC input
> > >
> > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > >
> > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > >
> > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > >
> > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > >
> > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.

> > >
> > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > >
> > > > Mike:
> > > >
> > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.
> > > >
> > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > >
> > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > >
> > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > >
> > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how the B models will do in the 820S.
> > > >
> > > > Thanks!

> > > >
> > > > Robert
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
wrote:
> > > > > >
> > > > > > Mike:
> > > > > >
> > > > > > Ran some more transmit tests and here is what I found.
> > > > > >
> > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > less than before but still pretty good.
> > > > > >
> > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > pretty good.
> > > > > >
> > > > > > --
> > > > > >
> > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The only
way the HV meter switch setting with display HV is in transmit. In receive the Relay Unit
relay terminals disables all meter switch settings and the meter displays receive signal
strength, S Units, ONLY.
> > > > > >
> > > > > > A more accurate method of measuring the 820's HV is to measure the HV at the
Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very careful
when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this is where
the final amplifier HV supply output feeds the final amplifier tubes! Do not attempt to do
this if you are tired, being disrupted or distracted, as you can easily receive a severe
electrical shock which can easily kill you!!! If you use a DVM to measure the HV at the 800
terminal on the Rectifier Unit, make sure the meter is capacitor of measuring at least
1,000 volts DC and the meter's voltage level switch is set to 1000VDC or higher otherwise
you can easily burn out your meter!!!
> > > > > >
> > > > > > --
> > > > > >
> > > > > >
> > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > noticeably down from before.
> > > > > >
> > > > > > And after letting it run for a couple of hours or more with
> > > > > > occasional short transmits the power output got worse. HV under
> > > > > > load deteriorated down to maybe 780V.
> > > > > >
> > > > > > The funny thing was that on 20M as you let it transit the Ip would

> > > > > > go up with time and stay up.
> > > > > >
> > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > >
> > > > > >
> > > > > > ---
> > > > > >
> > > > > > It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.
> > > > > >
> > > > > > Electrolytic capacitors do age which can lead to higher internal leakage current. When this happens the HV power supply output suffers as the output voltage sages lower than normal during normal operation. The only fix is to replace both HV filter capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and ordering.
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > time sounds like the HV caps are getting old.
> > > > > >
> > > > > >
> > > > > > ---
> > > > > >
> > > > > > See my response above.
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > > > Thanks!
> > > > > > >
> > > > > > > Robert
> > > > > >
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL

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> > > > >
> > > > >
> > > > >
> > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > > Afternoon Robert,
> > > > > > >
> > > > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
> > > > > > >
> > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > >
> > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > >
> > > > > > > I doubt the problem is the HV supply.
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > >
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> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > >
> > > > > > > > Good afternoon, Mike:
> > > > > > > >
> > > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > >

> > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > >
> > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > >
> > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > > > >
> > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > >
> > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > >
> > > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > > >
> > > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > >
> > > > > > > > I would appreciate any thoughts!
> > > > > > > >
> > > > > > > > Best regards,
> > > > > > > >
> > > > > > > > Robert
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
>

29277. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 03:44:07 UTC
From: w5rkl
Topic: 29230 Message: 29277

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Mike:
>
> I tried out the 6146B's and things look less dire.
>
> The lowest Ip current I can get, with the mode switch in "Tune" and
> working into the dummy load, is 70ma. That is with the Ip bias
> control on the back turned as low as it will go and the Mike and
> CAR controls all the way to the left.

From your statements above, it appears you are attempting to adjust the bias pot for an IP meter indication of 60ma in TUNE mode. If that's true, you are doing it wrong. The bias pot is adjusted in USB or LSB ONLY, never in TUNE or CW mode.

Do it this way;

1. Set MIC gain completely CCW. Don't worry about the CAR control setting.
2. Connect 820 to dummy load
3. Place MODE switch to USB or LSB
4. Set meter switch to IP
5. Flip the SEND switch UP which will key the transmitter
6. Note the IP meter scale reading. If the meter points higher or lower than 60ma, adjust the bias pot on the rear for a 60ma meter indication
7. Flip the SEND switch DOWN, unkeys the transmitter

Note:

The IP meter scale is the top scale on the meter.

That's all there is to setting the 820 bias pot. The only time you should have to change the bias pot setting is if you change final tubes and you repeat step "6" above and notice the IP meter indicating higher or lower than 60ma. Otherwise you should not touch the bias pot. If you replace the driver tube only, you do not have to worry about changing the bias pot setting. You can also change just the driver tube without changing the final tubes. Quite often people are misled into believing if they change the driver tube they also have to change the final tubes which is not true.

> Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for
> both USB/LSB and CW. Indicated max power for SSB is 75W with the
> mike unplugged and about 108W for CW. All this is into the dummy
> load in the MFJ tuner or switched into my Heathkit Cantenna.

I don't know what you are trying to achieve or say by the statements above. The 820, like all other hybrids, will not produce RF output if there is no audio applied from the microphone and/or the MIC gain is set fully CCW. This is normal for all single sideband transmitters. You cannot tune the 820 up in USB or LSB mode. You must tune the transmitter

up in TUNE mode. While it's possible to tune the transmitter in CW mode, you must understand that in TUNE mode the final tube screen voltage is "lowered" in order to prevent damage to the final tubes by inexperienced operators that key the transmitter too long while adjusting the PLATE and LOAD controls. In CW mode the final amplifier screen voltage is switched back to normal which, if the transmitter is left keyed too long could lead to damage to the final tubes. This is discussed in the 820's operator's manual.

> The 6146's are different from the 6146B's, I know, but I would not
> have expected higher power out from the 6146's. Then again maybe
> the 6146 I have are much fresher unusued tubes that are the
> 6146B's. People say not to use 6146B's in older rigs and even in
> TS-520's but I understand they are preferred for the TS-820.

There are people who say a lot of things. The key is not to "mix" 6146 or 6146A with 6146B or vice verse. This means do not use one 6146 or 6146A and the other a 6146B.

The original 6146, what I call the "Plain Jane 6146", is very scarce and in most cases you will not find them. If you find them they are typically worn out, weak, and not usable. The 6146A on the other hand is quite available. You can purchase them from the following link for $22 each:

http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA

By the way I use this company for all my vacuum tube needs and have never had a problem or a bad tube from them.

You can use the 6146A or 6146B in the 820. You will have to neutralize the final amplifier regardless of the tube version you use. I have successfully used 6146As and 6146Bs in my 820 without any problems. This notion that the 520 hybrids require 6146A is unfounded. I have never read anything that specifically calls for 6146As in any of the hybrids. As I said above, do NOT, for any reason, mix a 6146A and a 6146B! Although the tubes appear to be the same except for maximum power output, they are different. I recommend you read Glen Zook, K9STH, "The 6146 Family of Tubes" document in the "files" section of this group.

Don't expect 120 watts from a pair of 6146As because they are not designed for that level of parallel RF output. The 6146Bs, on the other hand, are. But, you must understand that you can easily push the final tubes beyond their recommended "normal" power output by improperly adjusting the "LOAD" control! A number of operators tend to believe they can push their hybrids for 150 watts output. I can tell you those operators will be spending money for new finals quicker than they realize by pushing the final amplifier too hard. Not only will they be buying new finals but rebuilding the power supplies! Follow the operator's manual tune procedure and do not try to achieve a higher power output by improperly adjusting the LOAD control!

The Japanese Beam Power tube, S2001, is the same as a 6146A and the Japanese Beam Power tube, S2001A, is the same as a 6146B.

>
> I have not run the neutralization procedure yet. That is next,
> since the rig does not appear to be in danger of melting from too
> much Ip and RF output.

You should check and if necessary, neutralize the final amplifier. Since you have been swapping final tubes I recommend you neutralize the final amplifier.

> By the way, the alternate transmit alignment procedure I used says
> to adjust T1 on the RF board for max ALC reading and also to adjust
> T5 (not T10) on the IF board for max ALC. In my case T1 on the RF
> board helped a lot but adjusting T5 on the IF for ALC peak also
> made a big difference - really pegged the meter.

T5 on the IF Unit is an IF amplifier transformer, same as T6, except T5 has a secondary winding that T6 does not have, for the transmitter's 8mhz TIF signal.

>
> As for the INRAD alignment procedure, they say to inject a 1K audio
> signal into the mike input, adjust the mike gain to get 50W, and
> then switch the audio signal generator to inject first a 350 HZ and
> then a 2.5 KHZ signal into the mike input and make sure that the
> power output levels are the same at 350 and 2500, by adjusting the
> carrier freq. They say do this for both USB and LSB. In my case I
> found that aligning the coil pack beforehand took care of any
> difference I had found so I did not have to mess with the carrier
> board freqs. I suspect that with a tighter SSB filter than the
> stock one you might have to do that.

INRAD's adjustment appears to be adjusting the CAR Unit signal so the low and high end audio frequencies provide the same output by switching between USB and LSB, called "Sideband Balancing". The USB signal should have the same signal level as the LSB signal has to produce the same RF output regardless of the sideband setting, USB or LSB.

>
> Thanks!
>
> Robert

73s
Mike
W5RKL

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> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Mike:

> > >
> > > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!
> >
> >
> >
> > Yes, I agree, especially the CW IP current being much higher.
> >
> >
> >
> > > I plan to do two things:
> > >
> > > 1. The alternate alignment instructions I used had you adjust not
> > > only the Drive coil on the RF board but also a coil on the IF board
> > > (I'm at work now and dfo not have my manuals so I do not know what
> > > teh designation of that coil is). As a result in CW and Tune modes
> > > on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> > > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > > but the coil on the IF board really maxed it out. I plan to back
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> >
> >
> >
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> > The first step in transmitter alignment is on page 49 of the 820 service manual titled
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> >
> > The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.
> >
> > The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the

driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil pack adjustment serves 2 purposes
> >
> > 1. Tunes the driver tube's plate circuit for the band selected
> > 2. Acts as a tuned input to the final amplifier
> >
> >
> >
> >
> > > 2. I am going to neutralize the tubes as I did the last time, by
> > > turning the SG Switch Off, running the output to my oscilloscope,
> > > and Teeing off from that to a dummy load, key up, then tune for
> > > minimum voltage. Before, given the sensitivity of the scope, I
> > > found that I could neutalize the rig right down to nothing, with no
> > > output with the SG switch back on. We will see this time.
> >
> >
> >
> > Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
> >
> >
> > >
> > > True, I do need to check idling current with these new tubes.
> >
> >
> > This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
> >
> >
> > > Also, I would like to see how the 6146B's I have perform. I do not
> > > have any known good 6146B's but have a number of mainly used
> > > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > > may be good.
> >
> >
> >
> > One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
> >
> > > And I guess I could run the INRAD alignment procedure again as
> > > well. Would be interesting to see how with the new tubes output
> > > power varies with the freqs applied to the mike input and the Mike

> > > level.
> >
> >
> > I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
> >
> >
> > >
> > > Thanks again!
> > >
> > > Robert
> >
> >
> > I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Robert,
> > > >
> > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > > >
> > > > 750 x .225 = 187.5 watts DC input
> > > >
> > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > > >
> > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > > >
> > > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > >
> > > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > > >

> > > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.
> > > >
> > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > >
> > > > > Mike:
> > > > >
> > > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.
> > > > >
> > > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > > >
> > > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > > >
> > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > > >
> > > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how

the B models will do in the 820S.
> > > > >
> > > > > Thanks!
> > > > > >
> > > > > Robert
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
wrote:
> > > > > > > >
> > > > > > > > Mike:
> > > > > > > >
> > > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > > >
> > > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > > less than before but still pretty good.
> > > > > > > >
> > > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > > pretty good.
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The
only way the HV meter switch setting with display HV is in transmit. In receive the Relay
Unit relay terminals disables all meter switch settings and the meter displays receive
signal strength, S Units, ONLY.
> > > > > > >
> > > > > > > A more accurate method of measuring the 820's HV is to measure the HV at the
Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very careful
when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this is where
the final amplifier HV supply output feeds the final amplifier tubes! Do not attempt to do
this if you are tired, being disrupted or distracted, as you can easily receive a severe
electrical shock which can easily kill you!!! If you use a DVM to measure the HV at the 800
terminal on the Rectifier Unit, make sure the meter is capacitor of measuring at least
1,000 volts DC and the meter's voltage level switch is set to 1000VDC or higher otherwise
you can easily burn out your meter!!!
> > > > > >
> > > > > > ----------
> > > > > > >
> > > > > > >
> > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > > noticeably down from before.
> > > > > > > >
> > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > load deteriorated down to maybe 780V.

> > > > > > >
> > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > go up with time and stay up.
> > > > > > > >
> > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > >
> > > > > > >
> > > > > > > > ---
> > > > > > >
> > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.
> > > > > >
> > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage current. When this happens the HV power supply output suffers as the output voltage sages lower than normal during normal operation. The only fix is to replace both HV filter capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and ordering.
> > > > > >
> > > > > > > ---
> > > > > > >
> > > > > > >
> > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > time sounds like the HV caps are getting old.
> > > > > > > >
> > > > > > >
> > > > > > > > ---
> > > > > > >
> > > > > > > > See my response above.
> > > > > > >
> > > > > > > > ---
> > > > > > >
> > > > > > >
> > > > > > > > >
> > > > > > > > > Thanks!
> > > > > > > >
> > > > > > > > > Robert
> > > > > > >
> > > > > > >
> > > > > > > > ---
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> > > > > > >
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> > > > > > >
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> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
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> > > > > >
> > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > > Afternoon Robert,
> > > > > > > >
> > > > > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
> > > > > > > >
> > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > > >
> > > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > > >
> > > > > > > > I doubt the problem is the HV supply.
> > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >
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> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > >
> > > > > > > > > Good afternoon, Mike:
> > > > > > > > >

> > > > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > >
> > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > > > >
> > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > > > >
> > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > > > > > >
> > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > > > >
> > > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > > > >
> > > > > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > > > > >
> > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > > > >
> > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > > >
> > > > > > > > > > Best regards,
> > > > > > > > > >
> > > > > > > > > > Robert
> > > > > > > > > >
> > > > > > > > >
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> > > > > > > >
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29278. Re: [TS-520_820_530_830] Re: New to Ham radio. Is the TS-530S a good place to start?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 07:59:34 UTC
From: Leslie Smith
Topic: 29278 Message: 29278

"I recommend you spend a few dollars and buy an older ARRL handbook, a version in the mid 60s will do. Start at the beginning, learn about resistors, capacitors, inductors, how to computer resistance in series, parallel, series/parallel, and how current flows in a resistor. Learn basic ohms law, I = E/R, R = E/I, E = I x E, and Pin = I x E. You will use these basic ohms law formulas every time you troubleshoot simple or complex problems in any piece of electronic equipment. You can pick up the older ARRL handbooks on eBay."

Excellent advice. The ARRL handbooks from 1940's - 1960s set out the basic theory and practice of radio design, construction and operating very well. Ditto for the RSGB handbook. You may consider joining a QRP group, or the Yahoo group RegenRx. There are many experienced operators there.

Knowledge gained by doing is of a better quality than any other kind of knowledge.

Good success.

Les

--

_____
Surf the Web in a faster, safer and easier way:
Download Opera 9 at http://www.opera.com

[Non-text portions of this message have been removed]

29279. Re: TS-520SE IC part supplier?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 15:48:16 UTC
From: Charles
Topic: 29040 Message: 29279

-companies. The important thing is to ensure the chip is the same binary up counter with same or very similar voltage specifications and same pin designations. IC chips are almost all made in China, Taiwan, or other foreign countries and companies such as Toshiba and Texas Instruments simply have their name put on the chips. There are very few, if any, IC chips made in America.
>
> 73s
> Mike
> W5RKL
>
>
I did check the data sheets prior to making my selection but I never knew that they didn't make chips in the States any more. That's kind of sad, but certainly not a surprise.
I figured that the quality standards are higher at Texas Instruments and that was my rational for the purchase. If I'm wrong, then I'm only out a couple of bucks and I'll live with it... and learn from it.
Thanks again, Mike.

73
Charlie
KB3BTO

29280. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 16:12:32 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29280

Mike:

First, let me say that I did the neutralization procedure on the 820S last night and I got it down to about 40 MV in CW mode and about 25 MV in SSB mode.

Now, as to what the rig is doing,

1. I set the idle current in Tune mode because in SSB mode I cannot get it below about 120ma with the current finals installed.
2. My 820S does produce considerable RF output with the mike control turned all the way CCW, and the mike even disconnected.
3. When I ran the INRAD alignment procedure (with the S-2001A's still installed) I found that I could adjust the SSB output up and down with the mike control, but could not get it below about 30W or so. I tried turning off the audio signal generator and disconnecting it to make sure that the signal generator output was not driving it and that did no good.

Based on what you say, I can only conclude that the carrier suppression of the rig is at least set incorrectly or at worst there is some kind of component failure. The only explanation for what I am seeing, based on what you say should be happening, is that some carrier is still leaking through in SSB mode. I have not touched that part of the set and I will have to get out the manual and get familiar with it. Signal reports from stations I have talked to do not indicate that I am throwing a carrier, but as I am sure you know, even with full AM it is easily possible to tune out the carrier.

Once again, thanks for your help.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Mike:
> >
> > I tried out the 6146B's and things look less dire.
> >
> > The lowest Ip current I can get, with the mode switch in "Tune" and
> > working into the dummy load, is 70ma. That is with the Ip bias
> > control on the back turned as low as it will go and the Mike and
> > CAR controls all the way to the left.
>
>
>
> From your statements above, it appears you are attempting to adjust the bias pot for an IP meter indication of 60ma in TUNE mode. If that's true, you are doing it wrong. The bias

pot is adjusted in USB or LSB ONLY, never in TUNE or CW mode.
>
> Do it this way;
>
> 1. Set MIC gain completely CCW. Don't worry about the CAR control setting.
> 2. Connect 820 to dummy load
> 3. Place MODE switch to USB or LSB
> 4. Set meter switch to IP
> 5. Flip the SEND switch UP which will key the transmitter
> 6. Note the IP meter scale reading. If the meter points higher or lower than 60ma, adjust the bias pot on the rear for a 60ma meter indication
> 7. Flip the SEND switch DOWN, unkeys the transmitter
>
> Note:
>
> The IP meter scale is the top scale on the meter.
>
> That's all there is to setting the 820 bias pot. The only time you should have to change the bias pot setting is if you change final tubes and you repeat step "6" above and notice the IP meter indicating higher or lower than 60ma. Otherwise you should not touch the bias pot. If you replace the driver tube only, you do not have to worry about changing the bias pot setting. You can also change just the driver tube without changing the final tubes. Quite often people are misled into believing if they change the driver tube they also have to change the final tubes which is not true.
>
>
> > Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for
> > both USB/LSB and CW. Indicated max power for SSB is 75W with the
> > mike unplugged and about 108W for CW. All this is into the dummy
> > load in the MFJ tuner or switched into my Heathkit Cantenna.
>
>
> I don't know what you are trying to achieve or say by the statements above. The 820, like all other hybrids, will not produce RF output if there is no audio applied from the microphone and/or the MIC gain is set fully CCW. This is normal for all single sideband transmitters. You cannot tune the 820 up in USB or LSB mode. You must tune the transmitter up in TUNE mode. While it's possible to tune the transmitter in CW mode, you must understand that in TUNE mode the final tube screen voltage is "lowered" in order to prevent damage to the final tubes by inexperienced operators that key the transmitter too long while adjusting the PLATE and LOAD controls. In CW mode the final amplifier screen voltage is switched back to normal which, if the transmitter is left keyed too long could lead to damage to the final tubes. This is discussed in the 820's operator's manual.
>
>
>
> > The 6146's are different from the 6146B's, I know, but I would not
> > have expected higher power out from the 6146's. Then again maybe
> > the 6146 I have are much fresher unusued tubes that are the
> > 6146B's. People say not to use 6146B's in older rigs and even in
> > TS-520's but I understand they are preferred for the TS-820.
>

>
>
> There are people who say a lot of things. The key is not to "mix" 6146 or 6146A with 6146B or vice verse. This means do not use one 6146 or 6146A and the other a 6146B.
>
> The original 6146, what I call the "Plain Jane 6146", is very scarce and in most cases you will not find them. If you find them they are typically worn out, weak, and not usable. The 6146A on the other hand is quite available. You can purchase them from the following link for $22 each:
>
> http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA
>
> By the way I use this company for all my vacuum tube needs and have never had a problem or a bad tube from them.
>
> You can use the 6146A or 6146B in the 820. You will have to neutralize the final amplifier regardless of the tube version you use. I have successfully used 6146As and 6146Bs in my 820 without any problems. This notion that the 520 hybrids require 6146A is unfounded. I have never read anything that specifically calls for 6146As in any of the hybrids. As I said above, do NOT, for any reason, mix a 6146A and a 6146B! Although the tubes appear to be the same except for maximum power output, they are different. I recommend you read Glen Zook, K9STH, "The 6146 Family of Tubes" document in the "files" section of this group.
>
> Don't expect 120 watts from a pair of 6146As because they are not designed for that level of parallel RF output. The 6146Bs, on the other hand, are. But, you must understand that you can easily push the final tubes beyond their recommended "normal" power output by improperly adjusting the "LOAD" control! A number of operators tend to believe they can push their hybrids for 150 watts output. I can tell you those operators will be spending money for new finals quicker than they realize by pushing the final amplifier too hard. Not only will they be buying new finals but rebuilding the power supplies! Follow the operator's manual tune procedure and do not try to achieve a higher power output by improperly adjusting the LOAD control!
>
> The Japanese Beam Power tube, S2001, is the same as a 6146A and the Japanese Beam Power tube, S2001A, is the same as a 6146B.
>
>
>
> >
> > I have not run the neutralization procedure yet. That is next,
> > since the rig does not appear to be in danger of melting from too
> > much Ip and RF output.
>
>
> You should check and if necessary, neutralize the final amplifier. Since you have been swapping final tubes I recommend you neutralize the final amplifier.
>
>
>

> > By the way, the alternate transmit alignment procedure I used says
> > to adjust T1 on the RF board for max ALC reading and also to adjust
> > T5 (not T10) on the IF board for max ALC. In my case T1 on the RF
> > board helped a lot but adjusting T5 on the IF for ALC peak also
> > made a big difference - really pegged the meter.
>
>
> T5 on the IF Unit is an IF amplifier transformer, same as T6, except T5 has a secondary winding that T6 does not have, for the transmitter's 8mhz TIF signal.
>
>
>
> >
> > As for the INRAD alignment procedure, they say to inject a 1K audio
> > signal into the mike input, adjust the mike gain to get 50W, and
> > then switch the audio signal generator to inject first a 350 HZ and
> > then a 2.5 KHZ signal into the mike input and make sure that the
> > power output levels are the same at 350 and 2500, by adjusting the
> > carrier freq. They say do this for both USB and LSB. In my case I
> > found that aligning the coil pack beforehand took care of any
> > difference I had found so I did not have to mess with the carrier
> > board freqs. I suspect that with a tighter SSB filter than the
> > stock one you might have to do that.
>
>
>
> INRAD's adjustment appears to be adjusting the CAR Unit signal so the low and high end audio frequencies provide the same output by switching between USB and LSB, called "Sideband Balancing". The USB signal should have the same signal level as the LSB signal has to produce the same RF output regardless of the sideband setting, USB or LSB.
>
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> >
> > Thanks!
> >
> > Robert
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>
> 73s
> Mike
> W5RKL
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> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
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> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > >
> > > > Mike:
> > > >
> > > > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!
> > >
> > >
> > >
> > > Yes, I agree, especially the CW IP current being much higher.
> > >
> > >
> > >
> > > I plan to do two things:
> > > >
> > > > 1. The alternate alignment instructions I used had you adjust not
> > > > only the Drive coil on the RF board but also a coil on the IF board
> > > > (I'm at work now and dfo not have my manuals so I do not know what
> > > > teh designation of that coil is). As a result in CW and Tune modes
> > > > on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> > > > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > > > but the coil on the IF board really maxed it out. I plan to back
> > > > off on that coil on the IF board a bit.
> > >
> > >
> > >
> > >
> > > The first step in transmitter alignment is on page 49 of the 820 service manual titled
> > >
> > > "4. Adjustment of Transmitter Section".
> > >
> > > This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB without

applying audio to the speech amplifier. The step does not state whether to have a CW key plugged into the CW socket or not. I recommend removing any CW key from the CW socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in the CW socket during this transmitter alignment step.
> > >
> > > The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.
> > >
> > > The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil pack adjustment serves 2 purposes
> > >
> > > 1. Tunes the driver tube's plate circuit for the band selected
> > > 2. Acts as a tuned input to the final amplifier
> > >
> > >
> > >
> > >
> > > > 2. I am going to neutralize the tubes as I did the last time, by
> > > > turning the SG Switch Off, running the output to my oscilloscope,
> > > > and Teeing off from that to a dummy load, key up, then tune for
> > > > minimum voltage. Before, given the sensitivity of the scope, I
> > > > found that I could neutalize the rig right down to nothing, with no
> > > > output with the SG switch back on. We will see this time.
> > >
> > >
> > >
> > > Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
> > >
> > >
> > > > >
> > > > True, I do need to check idling current with these new tubes.
> > >
> > >
> > > This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
> > >
> > >

> > > > Also, I would like to see how the 6146B's I have perform. I do not
> > > > have any known good 6146B's but have a number of mainly used
> > > > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > > > may be good.
> > >
> > >
> > >
> > > One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
> > >
> > > > And I guess I could run the INRAD alignment procedure again as
> > > > well. Would be interesting to see how with the new tubes output
> > > > power varies with the freqs applied to the mike input and the Mike
> > > > level.
> > >
> > >
> > > I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
> > >
> > >
> > > >
> > > > Thanks again!
> > > >
> > > > Robert
> > >
> > >
> > > I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Robert,
> > > > >
> > > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > > > >

> > > > > 750 x .225 = 187.5 watts DC input
> > > > >
> > > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > > > >
> > > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > > > >
> > > > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > > >
> > > > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > > > >
> > > > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.
> > > > >
> > > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > >
> > > > > > Mike:
> > > > > >
> > > > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.

> > > > > >
> > > > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > > > >
> > > > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > > > >
> > > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > > > >
> > > > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how the B models will do in the 820S.
> > > > > >
> > > > > > Thanks!
> > > > > >
> > > > > > Robert
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > >
> > > > > > > Mike:
> > > > > > >
> > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > >
> > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > less than before but still pretty good.
> > > > > > >
> > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > pretty good.
> > > > > > >
> > > > > > > ---
> > > > > > >
> > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The only way the HV meter switch setting with display HV is in transmit. In receive the Relay Unit relay terminals disables all meter switch settings and the meter displays receive signal strength, S Units, ONLY.
> > > > > > >
> > > > > > > A more accurate method of measuring the 820's HV is to measure the HV at the

Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very careful when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this is where the final amplifier HV supply output feeds the final amplifier tubes! Do not attempt to do this if you are tired, being disrupted or distracted, as you can easily receive a severe electrical shock which can easily kill you!!! If you use a DVM to measure the HV at the 800 terminal on the Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000 volts DC and the meter's voltage level switch is set to 1000VDC or higher otherwise you can easily burn out your meter!!!
> > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > >
> > > > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > > > > noticeably down from before.
> > > > > > > > >
> > > > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > > > load deteriorated down to maybe 780V.
> > > > > > > > >
> > > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > > go up with time and stay up.
> > > > > > > > >
> > > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > ----------
> > > > > > > >
> > > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.
> > > > > > >
> > > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage current. When this happens the HV power supply output suffers as the output voltage sages lower than normal during normal operation. The only fix is to replace both HV filter capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and ordering.
> > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > >
> > > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > > time sounds like the HV caps are getting old.
> > > > > > > > >
> > > > > > > > >

> > > > > > > ----------
> > > > > > > >
> > > > > > > > See my response above.
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > >
> > > > > > > > >
> > > > > > > > > Thanks!
> > > > > > > > >
> > > > > > > > > Robert
> > > > > > > >
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >
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> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > >
> > > > > > > > > Afternoon Robert,
> > > > > > > > >
> > > > > > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
> > > > > > > > >
> > > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > > > >
> > > > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > > > >

> > > > > > > > > I doubt the problem is the HV supply.
> > > > > > > > > >
> > > > > > > > > > 73s
> > > > > > > > > > Mike
> > > > > > > > > > W5RKL
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
<roberteleazer@> wrote:
> > > > > > > > > >
> > > > > > > > > > > Good afternoon, Mike:
> > > > > > > > > > >
> > > > > > > > > > > The HV indication is about 840V but I think that after a while,
following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > >
> > > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning
the plate. My first thought was that the short somehow took out one S-2001A. I have a spare
but need to figure out which one might be bad before doing any swapping.
> > > > > > > > > >
> > > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at
peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB
modes there is much less ALC indication, but there is some there. There is no decay in ALC
as transmit goes on, so I assume the driver tube is good.
> > > > > > > > > >
> > > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and
voltage indications. I think the HV is lower than it used to be. I believe it was formerly
up around 900 where it should be.
> > > > > > > > > >
> > > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it
did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is
not quite doing the job. A total loss of HV due to that short would be believeable but a
fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > > > >
> > > > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but
why that would be apparantly associated with that loose connector and the short I have no
idea.
> > > > > > > > > >
> > > > > > > > > > > I am going to go look at the manual and see what the HV should be at
various points and maybe take some measurements.
> > > > > > > > > >
> > > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working on
an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > > > >
> > > > > > > > > > > I would appreciate any thoughts!

> > > > > > > > > >
> > > > > > > > > > Best regards,
> > > > > > > > > >
> > > > > > > > > > Robert
> > > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
> >
>

29281. ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 16:13:46 UTC
From: DarxMind
Topic: 29281 Message: 29281

Mike and group;

I didn't reply to the other thread because it was too long already;
so I post a new msg about the ts820's output.
I use 6146w tubes in both of my kenwoods and so far not a problem.
6146w's will give you just a lower output, but the small amt doesn't
make a difference at the recv end.
Mike you have always given good advice and instructions on the forumn.
Over the years, I have learned a lot about Hybrids from this forumn and I have managed to repair a few of them(not for profit) and also restore
3 for myself(2 ts820s,1 ts520).
I repaired a ts820s that the previous owner changed the finals out because of low output. The radio had original s2001a's in it, so on the advice of someone he put a 6146 and a 6146b in and still had the same problem and more. I repaired the components that were burned out and he had the set of original S2001a's, I installed them to check and lo and behold they tested good, neutralized and some alignment and to this day he is using it every day.
Just thought I would share this story with the forumn.
don/w5dja

29282. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-12 17:21:43 UTC
From: w5rkl
Topic: 29230 Message: 29282

Robert.

From you response it appears the 820's carrier balance is out of alignment. This must be fixed first in order to set the final amplifier's no signal idling current.

When performing any test and/or adjustments in the 820 always connect the 820 to a dummy load. If you use an antenna to make the adjustments or perform test you will cause interference to other stations on the bands.

First, do not adjust the bias pot in TUNE or CW mode, regardless of the reason.

Second, turn to Page 49, paragraph 4.3 "Adjustment of carrier suppression". This step, when properly adjusted, will reduce the carrier which will allow you to set the final amplifier's no-signal bias pot adjust for 60ma.

Set the Mode switch to USB, turn the MIC gain completely CCW, set the meter switch to RF, and key the 820. Adjust VR5 on the IF Unit for a minimum indication on the meter. Adjust variable capacitor TC2 on the IF Unit board also for a minimum indication on the meter. Alternate between VR5 and TC2 for the lowest meter indication. Refer to figure 24 in the service manual on page 46 when performing the carrier suppression adjustments.

The above adjustments is simply to null the carrier in USB and LSB modes. This may not be the only problem your 820 has. As I stated above, the importance of the carrier suppression adjustment is to null the carrier so you can set the normal final amplifier idling current, in USB or LSB mode, to 60ma.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Mike:
>
> First, let me say that I did the neutralization procedure on the 820S last night and I got it down to about 40 MV in CW mode and about 25 MV in SSB mode.
>
> Now, as to what the rig is doing,
>
> 1. I set the idle current in Tune mode because in SSB mode I cannot get it below about 120ma with the current finals installed.
> 2. My 820S does produce considerable RF output with the mike control turned all the way CCW, and the mike even disconnected.
> 3. When I ran the INRAD alignment procedure (with the S-2001A's still installed) I found that I could adjust the SSB output up and down with the mike control, but could not get it below about 30W or so. I tried turning off the audio signal generator and disconnecting it to make sure that the signal generator output was not driving it and that did no good.

>
> Based on what you say, I can only conclude that the carrier suppression of the rig is at least set incorrectly or at worst there is some kind of component failure. The only explanation for what I am seeing, based on what you say should be happening, is that some carrier is still leaking through in SSB mode. I have not touched that part of the set and I will have to get out the manual and get familiar with it. Signal reports from stations I have talked to do not indicate that I am throwing a carrier, but as I am sure you know, even with full AM it is easily possible to tune out the carrier.
>
> Once again, thanks for your help.
>
> Robert
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Mike:
> > >
> > > I tried out the 6146B's and things look less dire.
> > >
> > > The lowest Ip current I can get, with the mode switch in "Tune" and
> > > working into the dummy load, is 70ma. That is with the Ip bias
> > > control on the back turned as low as it will go and the Mike and
> > > CAR controls all the way to the left.
> >
> >
> >
> > From your statements above, it appears you are attempting to adjust the bias pot for an IP meter indication of 60ma in TUNE mode. If that's true, you are doing it wrong. The bias pot is adjusted in USB or LSB ONLY, never in TUNE or CW mode.
> >
> > Do it this way;
> >
> > 1. Set MIC gain completely CCW. Don't worry about the CAR control setting.
> > 2. Connect 820 to dummy load
> > 3. Place MODE switch to USB or LSB
> > 4. Set meter switch to IP
> > 5. Flip the SEND switch UP which will key the transmitter
> > 6. Note the IP meter scale reading. If the meter points higher or lower than 60ma, adjust the bias pot on the rear for a 60ma meter indication
> > 7. Flip the SEND switch DOWN, unkeys the transmitter
> >
> > Note:
> >
> > The IP meter scale is the top scale on the meter.
> >

> > That's all there is to setting the 820 bias pot. The only time you should have to change the bias pot setting is if you change final tubes and you repeat step "6" above and notice the IP meter indicating higher or lower than 60ma. Otherwise you should not touch the bias pot. If you replace the driver tube only, you do not have to worry about changing the bias pot setting. You can also change just the driver tube without changing the final tubes. Quite often people are misled into believing if they change the driver tube they also have to change the final tubes which is not true.
> >
> >
> > > Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for
> > > both USB/LSB and CW. Indicated max power for SSB is 75W with the
> > > mike unplugged and about 108W for CW. All this is into the dummy
> > > load in the MFJ tuner or switched into my Heathkit Cantenna.
> >
> >
> > I don't know what you are trying to achieve or say by the statements above. The 820, like all other hybrids, will not produce RF output if there is no audio applied from the microphone and/or the MIC gain is set fully CCW. This is normal for all single sideband transmitters. You cannot tune the 820 up in USB or LSB mode. You must tune the transmitter up in TUNE mode. While it's possible to tune the transmitter in CW mode, you must understand that in TUNE mode the final tube screen voltage is "lowered" in order to prevent damage to the final tubes by inexperienced operators that key the transmitter too long while adjusting the PLATE and LOAD controls. In CW mode the final amplifier screen voltage is switched back to normal which, if the transmitter is left keyed too long could lead to damage to the final tubes. This is discussed in the 820's operator's manual.
> >
> >
> >
> > > The 6146's are different from the 6146B's, I know, but I would not
> > > have expected higher power out from the 6146's. Then again maybe
> > > the 6146 I have are much fresher unusued tubes that are the
> > > 6146B's. People say not to use 6146B's in older rigs and even in
> > > TS-520's but I understand they are preferred for the TS-820.
> >
> >
> >
> > There are people who say a lot of things. The key is not to "mix" 6146 or 6146A with 6146B or vice verse. This means do not use one 6146 or 6146A and the other a 6146B.
> >
> > The original 6146, what I call the "Plain Jane 6146", is very scarce and in most cases you will not find them. If you find them they are typically worn out, weak, and not usable. The 6146A on the other hand is quite available. You can purchase them from the following link for $22 each:
> >
> > http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA
> >
> > By the way I use this company for all my vacuum tube needs and have never had a problem or a bad tube from them.
> >
> > You can use the 6146A or 6146B in the 820. You will have to neutralize the final

amplifier regardless of the tube version you use. I have successfully used 6146As and 6146Bs in my 820 without any problems. This notion that the 520 hybrids require 6146A is unfounded. I have never read anything that specifically calls for 6146As in any of the hybrids. As I said above, do NOT, for any reason, mix a 6146A and a 6146B! Although the tubes appear to be the same except for maximum power output, they are different. I recommend you read Glen Zook, K9STH, "The 6146 Family of Tubes" document in the "files" section of this group.
> >
> > Don't expect 120 watts from a pair of 6146As because they are not designed for that level of parallel RF output. The 6146Bs, on the other hand, are. But, you must understand that you can easily push the final tubes beyond their recommended "normal" power output by improperly adjusting the "LOAD" control! A number of operators tend to believe they can push their hybrids for 150 watts output. I can tell you those operators will be spending money for new finals quicker than they realize by pushing the final amplifier too hard. Not only will they be buying new finals but rebuilding the power supplies! Follow the operator's manual tune procedure and do not try to achieve a higher power output by improperly adjusting the LOAD control!
> >
> > The Japanese Beam Power tube, S2001, is the same as a 6146A and the Japanese Beam Power tube, S2001A, is the same as a 6146B.
> >
> >
> >
> > >
> > > I have not run the neutralization procedure yet. That is next,
> > > since the rig does not appear to be in danger of melting from too
> > > much Ip and RF output.
> >
> >
> > You should check and if necessary, neutralize the final amplifier. Since you have been swapping final tubes I recommend you neutralize the final amplifier.
> >
> >
> >
> > > By the way, the alternate transmit alignment procedure I used says
> > > to adjust T1 on the RF board for max ALC reading and also to adjust
> > > T5 (not T10) on the IF board for max ALC. In my case T1 on the RF
> > > board helped a lot but adjusting T5 on the IF for ALC peak also
> > > made a big difference - really pegged the meter.
> >
> >
> > T5 on the IF Unit is an IF amplifier transformer, same as T6, except T5 has a secondary winding that T6 does not have, for the transmitter's 8mhz TIF signal.
> >
> >
> >
> > >
> > > As for the INRAD alignment procedure, they say to inject a 1K audio
> > > signal into the mike input, adjust the mike gain to get 50W, and
> > > then switch the audio signal generator to inject first a 350 HZ and
> > > then a 2.5 KHZ signal into the mike input and make sure that the

> > > power output levels are the same at 350 and 2500, by adjusting the
> > > carrier freq. They say do this for both USB and LSB. In my case I
> > > found that aligning the coil pack beforehand took care of any
> > > difference I had found so I did not have to mess with the carrier
> > > board freqs. I suspect that with a tighter SSB filter than the
> > > stock one you might have to do that.
> >
> >
> >
> > INRAD's adjustment appears to be adjusting the CAR Unit signal so the low and high end audio frequencies provide the same output by switching between USB and LSB, called "Sideband Balancing". The USB signal should have the same signal level as the LSB signal has to produce the same RF output regardless of the sideband setting, USB or LSB.
> >
> >
> >
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> >
> > >
> > > Thanks!
> > >
> > > Robert
> >
> >
> >
> > 73s
> > Mike
> > W5RKL
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > >

> > > > > Mike:
> > > > >
> > > > > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!
> > > >
> > > >
> > > >
> > > > Yes, I agree, especially the CW IP current being much higher.
> > > >
> > > >
> > > >
> > > > > I plan to do two things:
> > > > >
> > > > > 1. The alternate alignment instructions I used had you adjust not
> > > > > only the Drive coil on the RF board but also a coil on the IF board
> > > > > (I'm at work now and dfo not have my manuals so I do not know what
> > > > > teh designation of that coil is). As a result in CW and Tune modes
> > > > > on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> > > > > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > > > > but the coil on the IF board really maxed it out. I plan to back
> > > > > off on that coil on the IF board a bit.
> > > >
> > > >
> > > >
> > > >
> > > > The first step in transmitter alignment is on page 49 of the 820 service manual titled
> > > >
> > > > "4. Adjustment of Transmitter Section".
> > > >
> > > > This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB without applying audio to the speech amplifier. The step does not state whether to have a CW key plugged into the CW socket or not. I recommend removing any CW key from the CW socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in the CW socket during this transmitter alignment step.
> > > >
> > > > The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.
> > > >
> > > > The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a

specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil pack adjustment serves 2 purposes
> > > >
> > > > 1. Tunes the driver tube's plate circuit for the band selected
> > > > 2. Acts as a tuned input to the final amplifier
> > > >
> > > >
> > > >
> > > >
> > > > > 2. I am going to neutralize the tubes as I did the last time, by
> > > > > turning the SG Switch Off, running the output to my oscilloscope,
> > > > > and Teeing off from that to a dummy load, key up, then tune for
> > > > > minimum voltage. Before, given the sensitivity of the scope, I
> > > > > found that I could neutalize the rig right down to nothing, with no
> > > > > output with the SG switch back on. We will see this time.
> > > >
> > > >
> > > >
> > > > Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
> > > >
> > > >
> > > > > True, I do need to check idling current with these new tubes.
> > > >
> > > >
> > > > This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
> > > >
> > > >
> > > > > Also, I would like to see how the 6146B's I have perform. I do not
> > > > > have any known good 6146B's but have a number of mainly used
> > > > > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > > > > may be good.
> > > >
> > > >
> > > >
> > > > One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
> > > >
> > > > > And I guess I could run the INRAD alignment procedure again as

> > > > > well. Would be interesting to see how with the new tubes output
> > > > > power varies with the freqs applied to the mike input and the Mike
> > > > > level.
> > > > >
> > > > >
> > > > > I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
> > > > >
> > > > >
> > > > > >
> > > > > Thanks again!
> > > > > >
> > > > > Robert
> > > > >
> > > > >
> > > > > I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > Robert,
> > > > > > >
> > > > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > > > > > >
> > > > > > 750 x .225 = 187.5 watts DC input
> > > > > > >
> > > > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > > > > > >
> > > > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > > > > > >
> > > > > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > > > > >

> > > > > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > > > > >
> > > > > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.
> > > > > >
> > > > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > > > > >
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > >
> > > > > > > > Mike:
> > > > > > > >
> > > > > > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.
> > > > > > > >
> > > > > > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > > > > > >
> > > > > > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > > > > > >
> > > > > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > > > > > >

> > > > > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how the B models will do in the 820S.
> > > > > > >
> > > > > > > Thanks!
> > > > > > > >
> > > > > > > Robert
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
<roberteleazer@> wrote:
> > > > > > > > >
> > > > > > > > Mike:
> > > > > > > > >
> > > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > > > >
> > > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > > less than before but still pretty good.
> > > > > > > > >
> > > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > > pretty good.
> > > > > > > > >
> > > > > > > > ---
> > > > > > > >
> > > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The only way the HV meter switch setting with display HV is in transmit. In receive the Relay Unit relay terminals disables all meter switch settings and the meter displays receive signal strength, S Units, ONLY.
> > > > > > > >
> > > > > > > > A more accurate method of measuring the 820's HV is to measure the HV at the Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very careful when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this is where the final amplifier HV supply output feeds the final amplifier tubes! Do not attempt to do this if you are tired, being disrupted or distracted, as you can easily receive a severe electrical shock which can easily kill you!!! If you use a DVM to measure the HV at the 800 terminal on the Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000 volts DC and the meter's voltage level switch is set to 1000VDC or higher otherwise you can easily burn out your meter!!!
> > > > > > >
> > > > > > > ---
> > > > > > > >
> > > > > > > >
> > > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > > good on output on the other bands as it was on 20M, but 80M was

> > > > > > > > > noticeably down from before.
> > > > > > > > > >
> > > > > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > > > > load deteriorated down to maybe 780V.
> > > > > > > > > >
> > > > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > > > go up with time and stay up.
> > > > > > > > > >
> > > > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ---
> > > > > > > > > >
> > > > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and
previous usage. If a previous operator abuses the 820 but running it at above normal power
output levels through improper LOAD control adjustments or other abusive behavior due to
inexperience, it's not uncommon for this to happen, this could result in higher current
demands being placed on the HV supply causing early failure in the power supply components.
> > > > > > > > >
> > > > > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage
current. When this happens the HV power supply output suffers as the output voltage sages
lower than normal during normal operation. The only fix is to replace both HV filter
capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging
filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing
resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals.
Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on
pricing and ordering.
> > > > > > > >
> > > > > > > > > ---
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > > > time sounds like the HV caps are getting old.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > ---
> > > > > > > > >
> > > > > > > > > > See my response above.
> > > > > > > > >
> > > > > > > > > > ---
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Thanks!
> > > > > > > > > >
> > > > > > > > > > Robert
> > > > > > > > >
> > > > > > > > >

> > > > > > > > --
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > > 73s
> > > > > > > > > Mike
> > > > > > > > > W5RKL
> > > > > > > > >
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > > >
> > > > > > > > > > Afternoon Robert,
> > > > > > > > > >
> > > > > > > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
> > > > > > > > > >
> > > > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > > > > >
> > > > > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > > > > >
> > > > > > > > > > I doubt the problem is the HV supply.
> > > > > > > > > >
> > > > > > > > > > 73s
> > > > > > > > > > Mike
> > > > > > > > > > W5RKL
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> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > Good afternoon, Mike:
> > > > > > > > > > > >
> > > > > > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > > > >
> > > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > > > > > >
> > > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > > > > > >
> > > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > > > > > > > >
> > > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > > > > > >
> > > > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > > > > > >
> > > > > > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > > > > > > >
> > > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > > > > > >
> > > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > > > > >
> > > > > > > > > > > Best regards,
> > > > > > > > > > > >
> > > > > > > > > > > Robert
> > > > > > > > > > > >
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29283. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 00:23:46 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29283

Mike:

Not that the "meter" they show in Fig 24 to read is an RF voltmeter hooked through a directional coupler.

While I have some of the makings of that setup, and figure I could use the take-off on my Heathkit Cantenna and my scope to read minimum RF voltage, I decided to just read the wattmettr in USB mode and see if that worked to measure the carrier in SSB. And it did. after adjusting VR5 and TC2 on the IF board I got output in USB and LSB with no audio input down as shown on the wattmeter down to almost nothing.

One of the other features of this fix is that not only does the MIC control work all the way up and down but the CAR control does too.

I will go ahead and run the INRAD procedure again to see what results I get. I'm curious, but I expect no real changes.

Now as for 6146 vs. 6146B's vs. S-2001A's, I am curious about other people's recommendations and experiences. NOS and what appear to be good used 6146 and 6146A are very available; I just bought four tested good 6146 for less than $20.00. And you will recall that the two 6146 I tried out in the 820S were real screamers when it came to RF output. There are some definite opinions out there in the Internet and I do not know who to believe but I will do a separate post on that.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Robert.
>
> From you response it appears the 820's carrier balance is out of alignment. This must be fixed first in order to set the final amplifier's no signal idling current.
>
> When performing any test and/or adjustments in the 820 always connect the 820 to a dummy load. If you use an antenna to make the adjustments or perform test you will cause interference to other stations on the bands.
>
> First, do not adjust the bias pot in TUNE or CW mode, regardless of the reason.
>
> Second, turn to Page 49, paragraph 4.3 "Adjustment of carrier suppression". This step, when properly adjusted, will reduce the carrier which will allow you to set the final amplifier's no-signal bias pot adjust for 60ma.
>
> Set the Mode switch to USB, turn the MIC gain completely CCW, set the meter switch to RF, and key the 820. Adjust VR5 on the IF Unit for a minimum indication on the meter. Adjust

variable capacitor TC2 on the IF Unit board also for a minimum indication on the meter. Alternate between VR5 and TC2 for the lowest meter indication. Refer to figure 24 in the service manual on page 46 when performing the carrier suppression adjustments.
>
> The above adjustments is simply to null the carrier in USB and LSB modes. This may not be the only problem your 820 has. As I stated above, the importance of the carrier suppression adjustment is to null the carrier so you can set the normal final amplifier idling current, in USB or LSB mode, to 60ma.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Mike:
> >
> > First, let me say that I did the neutralization procedure on the 820S last night and I got it down to about 40 MV in CW mode and about 25 MV in SSB mode.
> >
> > Now, as to what the rig is doing,
> >
> > 1. I set the idle current in Tune mode because in SSB mode I cannot get it below about 120ma with the current finals installed.
> > 2. My 820S does produce considerable RF output with the mike control turned all the way CCW, and the mike even disconnected.
> > 3. When I ran the INRAD alignment procedure (with the S-2001A's still installed) I found that I could adjust the SSB output up and down with the mike control, but could not get it below about 30W or so. I tried turning off the audio signal generator and disconnecting it to make sure that the signal generator output was not driving it and that did no good.
> >
> > Based on what you say, I can only conclude that the carrier suppression of the rig is at least set incorrectly or at worst there is some kind of component failure. The only explanation for what I am seeing, based on what you say should be happening, is that some carrier is still leaking through in SSB mode. I have not touched that part of the set and I will have to get out the manual and get familiar with it. Signal reports from stations I have talked to do not indicate that I am throwing a carrier, but as I am sure you know, even with full AM it is easily possible to tune out the carrier.
> >
> > Once again, thanks for your help.
> >
> > Robert
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:

> > > >
> > > > Mike:
> > > >
> > > > I tried out the 6146B's and things look less dire.
> > > >
> > > > The lowest Ip current I can get, with the mode switch in "Tune" and
> > > > working into the dummy load, is 70ma. That is with the Ip bias
> > > > control on the back turned as low as it will go and the Mike and
> > > > CAR controls all the way to the left.
> > >
> > >
> > >
> > > From your statements above, it appears you are attempting to adjust the bias pot for an IP meter indication of 60ma in TUNE mode. If that's true, you are doing it wrong. The bias pot is adjusted in USB or LSB ONLY, never in TUNE or CW mode.
> > >
> > > Do it this way;
> > >
> > > 1. Set MIC gain completely CCW. Don't worry about the CAR control setting.
> > > 2. Connect 820 to dummy load
> > > 3. Place MODE switch to USB or LSB
> > > 4. Set meter switch to IP
> > > 5. Flip the SEND switch UP which will key the transmitter
> > > 6. Note the IP meter scale reading. If the meter points higher or lower than 60ma, adjust the bias pot on the rear for a 60ma meter indication
> > > 7. Flip the SEND switch DOWN, unkeys the transmitter
> > >
> > > Note:
> > >
> > > The IP meter scale is the top scale on the meter.
> > >
> > > That's all there is to setting the 820 bias pot. The only time you should have to change the bias pot setting is if you change final tubes and you repeat step "6" above and notice the IP meter indicating higher or lower than 60ma. Otherwise you should not touch the bias pot. If you replace the driver tube only, you do not have to worry about changing the bias pot setting. You can also change just the driver tube without changing the final tubes. Quite often people are misled into believing if they change the driver tube they also have to change the final tubes which is not true.
> > >
> > >
> > > > Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for
> > > > both USB/LSB and CW. Indicated max power for SSB is 75W with the
> > > > mike unplugged and about 108W for CW. All this is into the dummy
> > > > load in the MFJ tuner or switched into my Heathkit Cantenna.
> > >
> > >
> > >
> > > I don't know what you are trying to achieve or say by the statements above. The 820, like all other hybrids, will not produce RF output if there is no audio applied from the microphone and/or the MIC gain is set fully CCW. This is normal for all single sideband transmitters. You cannot tune the 820 up in USB or LSB mode. You must tune the transmitter

up in TUNE mode. While it's possible to tune the transmitter in CW mode, you must understand that in TUNE mode the final tube screen voltage is "lowered" in order to prevent damage to the final tubes by inexperienced operators that key the transmitter too long while adjusting the PLATE and LOAD controls. In CW mode the final amplifier screen voltage is switched back to normal which, if the transmitter is left keyed too long could lead to damage to the final tubes. This is discussed in the 820's operator's manual.
> > >
> > >
> > >
> > > > The 6146's are different from the 6146B's, I know, but I would not
> > > > have expected higher power out from the 6146's. Then again maybe
> > > > the 6146 I have are much fresher unusued tubes that are the
> > > > 6146B's. People say not to use 6146B's in older rigs and even in
> > > > TS-520's but I understand they are preferred for the TS-820.
> > >
> > >
> > >
> > > There are people who say a lot of things. The key is not to "mix" 6146 or 6146A with 6146B or vice verse. This means do not use one 6146 or 6146A and the other a 6146B.
> > >
> > > The original 6146, what I call the "Plain Jane 6146", is very scarce and in most cases you will not find them. If you find them they are typically worn out, weak, and not usable. The 6146A on the other hand is quite available. You can purchase them from the following link for $22 each:
> > >
> > > http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA
> > >
> > > By the way I use this company for all my vacuum tube needs and have never had a problem or a bad tube from them.
> > >
> > > You can use the 6146A or 6146B in the 820. You will have to neutralize the final amplifier regardless of the tube version you use. I have successfully used 6146As and 6146Bs in my 820 without any problems. This notion that the 520 hybrids require 6146A is unfounded. I have never read anything that specifically calls for 6146As in any of the hybrids. As I said above, do NOT, for any reason, mix a 6146A and a 6146B! Although the tubes appear to be the same except for maximum power output, they are different. I recommend you read Glen Zook, K9STH, "The 6146 Family of Tubes" document in the "files" section of this group.
> > >
> > > Don't expect 120 watts from a pair of 6146As because they are not designed for that level of parallel RF output. The 6146Bs, on the other hand, are. But, you must understand that you can easily push the final tubes beyond their recommended "normal" power output by improperly adjusting the "LOAD" control! A number of operators tend to believe they can push their hybrids for 150 watts output. I can tell you those operators will be spending money for new finals quicker than they realize by pushing the final amplifier too hard. Not only will they be buying new finals but rebuilding the power supplies! Follow the operator's manual tune procedure and do not try to achieve a higher power output by improperly adjusting the LOAD control!
> > >
> > > The Japanese Beam Power tube, S2001, is the same as a 6146A and the Japanese Beam Power tube, S2001A, is the same as a 6146B.

> > >
> > >
> > >
> > > >
> > > > I have not run the neutralization procedure yet. That is next,
> > > > since the rig does not appear to be in danger of melting from too
> > > > much Ip and RF output.
> > >
> > >
> > > You should check and if necessary, neutralize the final amplifier. Since you have been swapping final tubes I recommend you neutralize the final amplifier.
> > >
> > >
> > >
> > > > By the way, the alternate transmit alignment procedure I used says
> > > > to adjust T1 on the RF board for max ALC reading and also to adjust
> > > > T5 (not T10) on the IF board for max ALC. In my case T1 on the RF
> > > > board helped a lot but adjusting T5 on the IF for ALC peak also
> > > > made a big difference - really pegged the meter.
> > >
> > >
> > > T5 on the IF Unit is an IF amplifier transformer, same as T6, except T5 has a secondary winding that T6 does not have, for the transmitter's 8mhz TIF signal.
> > >
> > >
> > >
> > > >
> > > > As for the INRAD alignment procedure, they say to inject a 1K audio
> > > > signal into the mike input, adjust the mike gain to get 50W, and
> > > > then switch the audio signal generator to inject first a 350 HZ and
> > > > then a 2.5 KHZ signal into the mike input and make sure that the
> > > > power output levels are the same at 350 and 2500, by adjusting the
> > > > carrier freq. They say do this for both USB and LSB. In my case I
> > > > found that aligning the coil pack beforehand took care of any
> > > > difference I had found so I did not have to mess with the carrier
> > > > board freqs. I suspect that with a tighter SSB filter than the
> > > > stock one you might have to do that.
> > >
> > >
> > >
> > > INRAD's adjustment appears to be adjusting the CAR Unit signal so the low and high end audio frequencies provide the same output by switching between USB and LSB, called "Sideband Balancing". The USB signal should have the same signal level as the LSB signal has to produce the same RF output regardless of the sideband setting, USB or LSB.
> > >
> > >
> > >
> > >
> > >
> > > >

> > > > Thanks!
> > > >
> > > > Robert
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
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> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
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> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
wrote:
> > > > > >
> > > > > > Mike:
> > > > > >
> > > > > > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For
CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V =
200W. Impressive but kinda scary!
> > > > >
> > > > >
> > > > >
> > > > > Yes, I agree, especially the CW IP current being much higher.
> > > > >
> > > > >
> > > > >
> > > > > I plan to do two things:
> > > > >
> > > > > 1. The alternate alignment instructions I used had you adjust not
> > > > > only the Drive coil on the RF board but also a coil on the IF board
> > > > > (I'm at work now and dfo not have my manuals so I do not know what
> > > > > teh designation of that coil is). As a result in CW and Tune modes
> > > > > on 80-40-20 in Tune or CW the ALC indication pegs the needle with

> > > > > > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > > > > > but the coil on the IF board really maxed it out. I plan to back
> > > > > > off on that coil on the IF board a bit.
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > The first step in transmitter alignment is on page 49 of the 820 service manual titled
> > > > > >
> > > > > > "4. Adjustment of Transmitter Section".
> > > > > >
> > > > > > This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB without applying audio to the speech amplifier. The step does not state whether to have a CW key plugged into the CW socket or not. I recommend removing any CW key from the CW socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in the CW socket during this transmitter alignment step.
> > > > > >
> > > > > > The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is for, maximum TIF signal transfer to the transmit mixer.
> > > > > >
> > > > > > The step further states to adjust the "DRIVER" coil for maximum "ALC" indication. This is done for each band but the adjustment for each band driver coil is performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV" terminal. The DRIVER coil pack adjustment serves 2 purposes
> > > > > >
> > > > > > 1. Tunes the driver tube's plate circuit for the band selected
> > > > > > 2. Acts as a tuned input to the final amplifier
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > > 2. I am going to neutralize the tubes as I did the last time, by
> > > > > > > turning the SG Switch Off, running the output to my oscilloscope,
> > > > > > > and Teeing off from that to a dummy load, key up, then tune for
> > > > > > > minimum voltage. Before, given the sensitivity of the scope, I
> > > > > > > found that I could neutalize the rig right down to nothing, with no
> > > > > > > output with the SG switch back on. We will see this time.
> > > > > > >
> > > > > > >

> > > > >
> > > > > Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
> > > > >
> > > > >
> > > > > >
> > > > > > True, I do need to check idling current with these new tubes.
> > > > > >
> > > > > >
> > > > > > This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
> > > > > >
> > > > > >
> > > > > > > Also, I would like to see how the 6146B's I have perform. I do not
> > > > > > > have any known good 6146B's but have a number of mainly used
> > > > > > > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > > > > > > may be good.
> > > > > >
> > > > > >
> > > > > >
> > > > > > One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
> > > > >
> > > > > > And I guess I could run the INRAD alignment procedure again as
> > > > > > well. Would be interesting to see how with the new tubes output
> > > > > > power varies with the freqs applied to the mike input and the Mike
> > > > > > level.
> > > > > >
> > > > > >
> > > > > > I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
> > > > > >
> > > > > >
> > > > > > >
> > > > > > > Thanks again!
> > > > > > >
> > > > > > > Robert
> > > > > >
> > > > > >
> > > > > > I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not

meant to be disrespectful but rather to help one to understand what the adjustment does and why.
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > > Robert,
> > > > > > > > >
> > > > > > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > > > > > > > >
> > > > > > > > 750 x .225 = 187.5 watts DC input
> > > > > > > > >
> > > > > > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > > > > > > > >
> > > > > > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > > > > > > > >
> > > > > > > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > > > > > > >
> > > > > > > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > > > > > > > >
> > > > > > > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.
> > > > > > > > >
> > > > > > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL

> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > >
> > > > > > > > Mike:
> > > > > > > >
> > > > > > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.
> > > > > > > >
> > > > > > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > > > > > >
> > > > > > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > > > > > >
> > > > > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > > > > > >
> > > > > > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to see how the B models will do in the 820S.
> > > > > > > >
> > > > > > > > Thanks!
> > > > > > > >
> > > > > > > > Robert
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > > >
> > > > > > > > > > Mike:

> > > > > > > > > >
> > > > > > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > > > > > >
> > > > > > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > > > > > less than before but still pretty good.
> > > > > > > > > > >
> > > > > > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > > > > > pretty good.
> > > > > > > > > > >
> > > > > > > > > > > ----------
> > > > > > > > > > >
> > > > > > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The only way the HV meter switch setting with display HV is in transmit. In receive the Relay Unit relay terminals disables all meter switch settings and the meter displays receive signal strength, S Units, ONLY.
> > > > > > > > > >
> > > > > > > > > > > A more accurate method of measuring the 820's HV is to measure the HV at the Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very careful when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this is where the final amplifier HV supply output feeds the final amplifier tubes! Do not attempt to do this if you are tired, being disrupted or distracted, as you can easily receive a severe electrical shock which can easily kill you!!! If you use a DVM to measure the HV at the 800 terminal on the Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000 volts DC and the meter's voltage level switch is set to 1000VDC or higher otherwise you can easily burn out your meter!!!
> > > > > > > > > >
> > > > > > > > > > > ----------
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > > > > > > > noticeably down from before.
> > > > > > > > > > > >
> > > > > > > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > > > > > > load deteriorated down to maybe 780V.
> > > > > > > > > > > >
> > > > > > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > > > > > go up with time and stay up.
> > > > > > > > > > > >
> > > > > > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > ----------
> > > > > > > > > > >
> > > > > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.

> > > > > > > > >
> > > > > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage current. When this happens the HV power supply output suffers as the output voltage sages lower than normal during normal operation. The only fix is to replace both HV filter capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and ordering.
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > > > > time sounds like the HV caps are getting old.
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > > See my response above.
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Thanks!
> > > > > > > > > > >
> > > > > > > > > > > Robert
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> > > > > > > > > > ----------
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> > > > > > > > > > 73s
> > > > > > > > > > Mike
> > > > > > > > > > W5RKL
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> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > Afternoon Robert,
> > > > > > > > > > >
> > > > > > > > > > > The only plug on the RF UNIT, the board you are referring to as the

driver board, that can cause the fuse to blow is RF2.
> > > > > > > > > > >
> > > > > > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > > > > > >
> > > > > > > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > > > > > >
> > > > > > > > > > > > I doubt the problem is the HV supply.
> > > > > > > > > > > >
> > > > > > > > > > > > > 73s
> > > > > > > > > > > > > Mike
> > > > > > > > > > > > > W5RKL
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> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Good afternoon, Mike:
> > > > > > > > > > > >
> > > > > > > > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > > > >
> > > > > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > > > > > >
> > > > > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > > > > > >
> > > > > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Best regards,
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Robert
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
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29284. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 00:32:50 UTC
From: roberteleazer@rocketmail.com
Topic: 29281 Message: 29284

Don:

Thank you this info.

I have read on the Internet that you should never ever use 6146B's in a TS-520. I have also read that you should not use 6146 or 6146A's. I got a set of 6146B's in the TS-820S that I have been working on for over a year, yanked them and put in some used S-2001A's. When I finally got the rig working I found that basic model 6146's worked great in terms of power output but that the original 6146B's that came with the rig work great too.

I understand about not mixing tubes; that makes sense, but I wonder what other people really are experiencing with the other models of the tube.

Regards,

Robert
--- In TS-520_820_530_830@yahoogroups.com, "DarxMind" <w5dja@...> wrote:
>
> Mike and group;
>
> I didn't reply to the other thread because it was too long already;
> so I post a new msg about the ts820's output.
> I use 6146w tubes in both of my kenwoods and so far not a problem.
> 6146w's will give you just a lower output, but the small amt doesn't
> make a difference at the recv end.
> Mike you have always given good advice and instructions on the forumn.
> Over the years, I have learned a lot about Hybrids from this forumn and I have managed to repair a few of them(not for profit) and also restore
> 3 for myself(2 ts820s,1 ts520).
> I repaired a ts820s that the previous owner changed the finals out because of low output. The radio had original s2001a's in it, so on the advice of someone he put a 6146 and a 6146b in and still had the same problem and more. I repaired the components that were burned out and he had the set of original S2001a's, I installed them to check and lo and behold they tested good, neutralized and some alignment and to this day he is using it every day.
> Just thought I would share this story with the forumn.
> don/w5dja
>

29285. RE: [TS-520_820_530_830] Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 00:37:14 UTC
From: Greg Anders
Topic: 29281 Message: 29285

There are major inter-electrode capacitance differences between the 6146/6146A and the 6146B. The B model has 10 watts more plate dissipation which makes the plate much larger hence the different capacitance. Don't know what restriction if any exists for the Kenwood hybrids using various flavors of the 6146 tube though. Collins had issues in their S-line and KWM2 when the 6146B came out, so they redesigned the neutralizing circuit and issued a service bulletin.

FWIW,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Wednesday, January 12, 2011 4:33 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: ts820 output

Don:

Thank you this info.

I have read on the Internet that you should never ever use 6146B's in a TS-520. I have also read that you should not use 6146 or 6146A's. I got a set of 6146B's in the TS-820S that I have been working on for over a year, yanked them and put in some used S-2001A's. When I finally got the rig working I found that basic model 6146's worked great in terms of power output but that the original 6146B's that came with the rig work great too.

I understand about not mixing tubes; that makes sense, but I wonder what other people really are experiencing with the other models of the tube.

Regards,

Robert
--- In TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>, "DarxMind" <w5dja@...> wrote:
>
> Mike and group;
>
> I didn't reply to the other thread because it was too long already;
> so I post a new msg about the ts820's output.
> I use 6146w tubes in both of my kenwoods and so far not a problem.
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> Mike you have always given good advice and instructions on the forumn.
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> I repaired a ts820s that the previous owner changed the finals out because of low output. The radio had original s2001a's in it, so on the advice of someone he put a 6146 and a 6146b in and still had the same problem and more. I repaired the components that were burned out and he had the set of original S2001a's, I installed them to check and lo and behold they tested good, neutralized and some alignment and to this day he is using it every day.
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> don/w5dja
>

[Non-text portions of this message have been removed]

29286. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 13:54:39 UTC
From: roberteleazer@rocketmail.com
Topic: 29281 Message: 29286

Greg:

Yes, I have read that. The famous Ken of Kenwood hybrids repair fame says you may have trouble neutralizing tubes other than the 6146B in the Kenwoods. One thing I did notice is that when I originally installed some 6146's in my TS-820 I was able to "neutralize" the finals right down to the point there was no output at all, even with the SG Switch on. With the 6146B's that was not a problem; I was able to get it down to only maybe 40MV in CW mode before turning the cap any more made it go back up again. So perhaps the earlier tubes are subject to "over-neutalization"?

In my TS-520 I have the S-2001A's that came installed and I have not even checked neutarlization with those. Probably would be interesting to do.

But in any case, my short period of trying out 6146's in my newly repaired and realigned TS-820S did not reveal any huge problems and provided plenty of RF output, although I never got to the neutralization step before swapping them out for 6146B's.

Thanks!

Robet

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> There are major inter-electrode capacitance differences between the 6146/6146A and the 6146B. The B model has 10 watts more plate dissipation which makes the plate much larger hence the different capacitance. Don't know what restriction if any exists for the Kenwood hybrids using various flavors of the 6146 tube though. Collins had issues in their S-line and KWM2 when the 6146B came out, so they redesigned the neutralizing circuit and issued a service bulletin.
>
> FWIW,
>
> Greg
> KG6YV
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
> Sent: Wednesday, January 12, 2011 4:33 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts820 output
>
>
>
> Don:
>
> Thank you this info.

>
> I have read on the Internet that you should never ever use 6146B's in a TS-520. I have also read that you should not use 6146 or 6146A's. I got a set of 6146B's in the TS-820S that I have been working on for over a year, yanked them and put in some used S-2001A's. When I finally got the rig working I found that basic model 6146's worked great in terms of power output but that the original 6146B's that came with the rig work great too.
>
> I understand about not mixing tubes; that makes sense, but I wonder what other people really are experiencing with the other models of the tube.
>
> Regards,
>
> Robert
> --- In TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>, "DarxMind" <w5dja@> wrote:
> >
> > Mike and group;
> >
> > I didn't reply to the other thread because it was too long already;
> > so I post a new msg about the ts820's output.
> > I use 6146w tubes in both of my kenwoods and so far not a problem.
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> > Just thought I would share this story with the forumn.
> > don/w5dja
> >
>
>
>
> [Non-text portions of this message have been removed]
>

29287. Re: [TS-520_820_530_830] Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 14:43:15 UTC
From: Bill Harris
Topic: 29281 Message: 29287

According to past experiences, the S2001's can be replaced with an 8298A, 6146B, and 6146W made after 1974 (any earlier 6146W tubes will be based on the 6146A tubes), the 8298A tube is a commercial release of the 6146B. The 6146B and it's variants lend themselves nicely to HF/VHF communications, while the 6146 and the 6146A were only useful as an HF tube since they would oscillate uncontrollably in VHF applications above 40mhz.

Much of this info was gleaned from the intraweb, but I have tested all of these tubes in both VHF and HF applications and verified that this information, in particular, is true.

I have also learned that a 6146B may not be replaced with an "A", 6146, or early "W" suffixed tube due to capacitance and oscillation issues, but any of the aforementioned could be replaced by thier successor with a slightly reduced power output.

As always, make sure the tubes are neutralized, and I personally like to keep a wattmeter inline to see if the tubes are doing what they should, and maintain thier output over time, also, when replacing tubes, especially during substitution, monitor plate current to make sure that the tubes aren't going into harmonic/parasitic oscillation, which could also be evidenced by looking at the tubes while keyed, they will glow orange almost immediately after keying the transmitter, and the plate current will go off the charts...

Happy hamming, this is what it's all about guys.

73, ke7szc, Bill.

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, January 13, 2011 5:54:39 AM
Subject: [TS-520_820_530_830] Re: ts820 output

Greg:

Yes, I have read that. The famous Ken of Kenwood hybrids repair fame says you may have trouble neutralizing tubes other than the 6146B in the Kenwoods. One thing I did notice is that when I originally installed some 6146's in my TS-820 I was able to "neutralize" the finals right down to the point there was no output at all, even with the SG Switch on. With the 6146B's that was not a problem; I was able to get it down to only maybe 40MV in CW mode before turning the cap any more made it go back up again. So perhaps the earlier tubes are subject to "over-neutalization"?

In my TS-520 I have the S-2001A's that came installed and I have not even checked neutarlization with those. Probably would be interesting to do.

But in any case, my short period of trying out 6146's in my newly repaired and realigned TS-820S did not reveal any huge problems and provided plenty of RF output, although I never got to the neutralization step before swapping them out for 6146B's.

Thanks!

Robet

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> There are major inter-electrode capacitance differences between the 6146/6146A
>and the 6146B. The B model has 10 watts more plate dissipation which makes the
>plate much larger hence the different capacitance. Don't know what restriction
>if any exists for the Kenwood hybrids using various flavors of the 6146 tube
>though. Collins had issues in their S-line and KWM2 when the 6146B came out, so
>they redesigned the neutralizing circuit and issued a service bulletin.
>
> FWIW,
>
> Greg
> KG6YV
>
> From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
> Sent: Wednesday, January 12, 2011 4:33 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: ts820 output
>
>
>
> Don:
>
> Thank you this info.
>
> I have read on the Internet that you should never ever use 6146B's in a TS-520.
>I have also read that you should not use 6146 or 6146A's. I got a set of 6146B's
>in the TS-820S that I have been working on for over a year, yanked them and put
>in some used S-2001A's. When I finally got the rig working I found that basic
>model 6146's worked great in terms of power output but that the original 6146B's
>that came with the rig work great too.
>
> I understand about not mixing tubes; that makes sense, but I wonder what other
>people really are experiencing with the other models of the tube.
>
> Regards,
>
> Robert
> --- In
>TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>,
>"DarxMind" <w5dja@> wrote:
> >

> > Mike and group;
> >
> > I didn't reply to the other thread because it was too long already;
> > so I post a new msg about the ts820's output.
> > I use 6146w tubes in both of my kenwoods and so far not a problem.
> > 6146w's will give you just a lower output, but the small amt doesn't
> > make a difference at the recv end.
> > Mike you have always given good advice and instructions on the forumn.
> > Over the years, I have learned a lot about Hybrids from this forumn and I
>have managed to repair a few of them(not for profit) and also restore
> > 3 for myself(2 ts820s,1 ts520).
> > I repaired a ts820s that the previous owner changed the finals out because of
>low output. The radio had original s2001a's in it, so on the advice of someone
>he put a 6146 and a 6146b in and still had the same problem and more. I repaired
>the components that were burned out and he had the set of original S2001a's, I
>installed them to check and lo and behold they tested good, neutralized and some
>alignment and to this day he is using it every day.
> > Just thought I would share this story with the forumn.
> > don/w5dja
> >
>
>
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> [Non-text portions of this message have been removed]
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Yahoo! Groups Links

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29288. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 16:52:23 UTC
From: w5rkl
Topic: 29230 Message: 29288

Robert,

While some of the following technical data refers to the Heathkit HW-101 5 band transceiver, the information provided is relative to this discussion.

Heathkit's HW-101 service bulletin, HW-101-18 dated Jan 20 1978, regarding failure of the final amplifier's RF choke due to overheating, clearly stated that using 6146Bs "may" be the reason for the HW-101's final amplifier RF choke failure on 10 and 15 meters. Heathkit stated in that service bulletin to use only 6146As.

Heathkit HW-101 service bulletin, HW-101-39 dated Nov 20 1978, stated that there were some 6146 tubes incorrectly marked with both 6146A and 6146B labels. Again, Heathkit stated to always use 6146A in the final amplifier.

However, Heathkit's HW-101 service bulletin, HW-101-49 dated May 15, 1979, stated that 6146As, at the time, were no longer available and that 6146B would be used as replacements. Furthermore, Heathkit clearly stated that "GE" brand 6146Bs had been tested and no difficulties were encountered neutralizing the final amplifier and no further failures in the final amplifier's RF choke were noted/found.

Does this mean that not all brands of 6146 tubes are the same? Honestly, I cannot answer that question with a definitive answer since I have not conducted a thorough test using all brands of 6146 tubes nor do I intend on doing so now or in the future. I can only provide you with the above factual information pertaining to the use of different versions of 6146s in the Heathkit HW-101.

There are more and more Chinese manufactured tubes being sold on the market today. I have read statements from owners and operators who have used Chinese manufactured tubes such as low power 6146 and high power 811A, 572B, and 3-500Z tubes where early tube failures have occurred. Reasons for failure have been stated to be the "quality" of the tubes as compared to the British Taylor and American Eimac brand of tubes. There are Russian manufactured tubes that appear to be of much higher quality. However, the only Russian tube I have ever used is a pair of El-34 Pentode tubes used in an AM modulator and they appeared to work rather well in the circuit they were used in, an AM transmitter's modulator. Does this means Russian tubes are better? No it does not. It simply means the EL-34 tubes I used which was Russian made "appeared" to work well, nothing more. Assuming the Russian made EL-34 tube didn't fail without thorough testing, which I did not do, is just that, an assumption, nothing more.

There have been statements made that the differences in inter-electrode capacitance between the 6146A and 6146B is because of the difference in anode density. I mean on disrespect but I have not read nor am I convinced that the difference in anode density between the 6146A and 6146B is what causes the differences in inter-electrode capacitance between the 6146A and 6146B. We can assume it is but without thorough test results, it is just that, an assumption.

I have also read where operators have installed 6146A or 6146Bs, depending on the final amplifier in question, and tune up on 80 or 40 meters achieving full output, therefore the specific version of tube they used is safe to use. That type of testing is inconclusive since the test was not conducted on 15 and 10 meters which is where most, if not all, instability relating to 6146A and 6146B versions of tubes occurs.

If you are unsure which version to use, as your "I do not know who to believe" statement says, then may I recommend you perform you own thorough tests using both versions of 6146 tubes to see for yourself which version of 6146 tubes is more or less stable in your 820. As Glen (K0STH) stated, and I agree, monitoring of the final amplifier neutralization over a period of hours and/or days is essential.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Mike:
>
> Not that the "meter" they show in Fig 24 to read is an RF voltmeter hooked through a directional coupler.
>
> While I have some of the makings of that setup, and figure I could use the take-off on my Heathkit Cantenna and my scope to read minimum RF voltage, I decided to just read the wattmettr in USB mode and see if that worked to measure the carrier in SSB. And it did. after adjusting VR5 and TC2 on the IF board I got output in USB and LSB with no audio input down as shown on the wattmeter down to almost nothing.
>
> One of the other features of this fix is that not only does the MIC control work all the way up and down but the CAR control does too.
>
> I will go ahead and run the INRAD procedure again to see what results I get. I'm curious, but I expect no real changes.
>
> Now as for 6146 vs. 6146B's vs. S-2001A's, I am curious about other people's recommendations and experiences. NOS and what appear to be good used 6146 and 6146A are very available; I just bought four tested good 6146 for less than $20.00. And you will recall that the two 6146 I tried out in the 820S were real screamers when it came to RF output. There are some definite opinions out there in the Internet and I do not know who to believe but I will do a separate post on that.
>
> Thanks!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Robert.
> >
> > From you response it appears the 820's carrier balance is out of alignment. This must be fixed first in order to set the final amplifier's no signal idling current.

> >
> > When performing any test and/or adjustments in the 820 always connect the 820 to a dummy load. If you use an antenna to make the adjustments or perform test you will cause interference to other stations on the bands.
> >
> > First, do not adjust the bias pot in TUNE or CW mode, regardless of the reason.
> >
> > Second, turn to Page 49, paragraph 4.3 "Adjustment of carrier suppression". This step, when properly adjusted, will reduce the carrier which will allow you to set the final amplifier's no-signal bias pot adjust for 60ma.
> >
> > Set the Mode switch to USB, turn the MIC gain completely CCW, set the meter switch to RF, and key the 820. Adjust VR5 on the IF Unit for a minimum indication on the meter. Adjust variable capacitor TC2 on the IF Unit board also for a minimum indication on the meter. Alternate between VR5 and TC2 for the lowest meter indication. Refer to figure 24 in the service manual on page 46 when performing the carrier suppression adjustments.
> >
> > The above adjustments is simply to null the carrier in USB and LSB modes. This may not be the only problem your 820 has. As I stated above, the importance of the carrier suppression adjustment is to null the carrier so you can set the normal final amplifier idling current, in USB or LSB mode, to 60ma.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Mike:
> > >
> > > First, let me say that I did the neutralization procedure on the 820S last night and I got it down to about 40 MV in CW mode and about 25 MV in SSB mode.
> > >
> > > Now, as to what the rig is doing,
> > >
> > > 1. I set the idle current in Tune mode because in SSB mode I cannot get it below about 120ma with the current finals installed.
> > > 2. My 820S does produce considerable RF output with the mike control turned all the way CCW, and the mike even disconnected.
> > > 3. When I ran the INRAD alignment procedure (with the S-2001A's still installed) I found that I could adjust the SSB output up and down with the mike control, but could not get it below about 30W or so. I tried turning off the audio signal generator and disconnecting it to make sure that the signal generator output was not driving it and that did no good.
> > >
> > > Based on what you say, I can only conclude that the carrier suppression of the rig is at least set incorrectly or at worst there is some kind of component failure. The only explanation for what I am seeing, based on what you say should be happening, is that some carrier is still leaking through in SSB mode. I have not touched that part of the set and I

will have to get out the manual and get familiar with it. Signal reports from stations I have talked to do not indicate that I am throwing a carrier, but as I am sure you know, even with full AM it is easily possible to tune out the carrier.
> > >
> > > Once again, thanks for your help.
> > >
> > > Robert
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
wrote:
> > > > >
> > > > > Mike:
> > > > >
> > > > > I tried out the 6146B's and things look less dire.
> > > > >
> > > > > The lowest Ip current I can get, with the mode switch in "Tune" and
> > > > > working into the dummy load, is 70ma. That is with the Ip bias
> > > > > control on the back turned as low as it will go and the Mike and
> > > > > CAR controls all the way to the left.
> > > >
> > > >
> > > >
> > > > From your statements above, it appears you are attempting to adjust the bias pot for an IP meter indication of 60ma in TUNE mode. If that's true, you are doing it wrong. The bias pot is adjusted in USB or LSB ONLY, never in TUNE or CW mode.
> > > >
> > > > Do it this way;
> > > >
> > > > 1. Set MIC gain completely CCW. Don't worry about the CAR control setting.
> > > > 2. Connect 820 to dummy load
> > > > 3. Place MODE switch to USB or LSB
> > > > 4. Set meter switch to IP
> > > > 5. Flip the SEND switch UP which will key the transmitter
> > > > 6. Note the IP meter scale reading. If the meter points higher or lower than 60ma, adjust the bias pot on the rear for a 60ma meter indication
> > > > 7. Flip the SEND switch DOWN, unkeys the transmitter
> > > >
> > > > Note:
> > > >
> > > > The IP meter scale is the top scale on the meter.
> > > >
> > > > That's all there is to setting the 820 bias pot. The only time you should have to change the bias pot setting is if you change final tubes and you repeat step "6" above and notice the IP meter indicating higher or lower than 60ma. Otherwise you should not touch the bias pot. If you replace the driver tube only, you do not have to worry about changing the bias pot setting. You can also change just the driver tube without changing the final

tubes. Quite often people are misled into believing if they change the driver tube they also have to change the final tubes which is not true.
> > > >
> > > >
> > > > > Undipped max Ip in transmit is 230 ma. Dipped, it is 210 ma for
> > > > > both USB/LSB and CW. Indicated max power for SSB is 75W with the
> > > > > mike unplugged and about 108W for CW. All this is into the dummy
> > > > > load in the MFJ tuner or switched into my Heathkit Cantenna.
> > > > >
> > > > >
> > > > > I don't know what you are trying to achieve or say by the statements above. The 820, like all other hybrids, will not produce RF output if there is no audio applied from the microphone and/or the MIC gain is set fully CCW. This is normal for all single sideband transmitters. You cannot tune the 820 up in USB or LSB mode. You must tune the transmitter up in TUNE mode. While it's possible to tune the transmitter in CW mode, you must understand that in TUNE mode the final tube screen voltage is "lowered" in order to prevent damage to the final tubes by inexperienced operators that key the transmitter too long while adjusting the PLATE and LOAD controls. In CW mode the final amplifier screen voltage is switched back to normal which, if the transmitter is left keyed too long could lead to damage to the final tubes. This is discussed in the 820's operator's manual.
> > > >
> > > >
> > > >
> > > > > The 6146's are different from the 6146B's, I know, but I would not
> > > > > have expected higher power out from the 6146's. Then again maybe
> > > > > the 6146 I have are much fresher unusued tubes that are the
> > > > > 6146B's. People say not to use 6146B's in older rigs and even in
> > > > > TS-520's but I understand they are preferred for the TS-820.
> > > > >
> > > > >
> > > > >
> > > > > There are people who say a lot of things. The key is not to "mix" 6146 or 6146A with 6146B or vice verse. This means do not use one 6146 or 6146A and the other a 6146B.
> > > > >
> > > > > The original 6146, what I call the "Plain Jane 6146", is very scarce and in most cases you will not find them. If you find them they are typically worn out, weak, and not usable. The 6146A on the other hand is quite available. You can purchase them from the following link for $22 each:
> > > > >
> > > > > http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA
> > > > >
> > > > > By the way I use this company for all my vacuum tube needs and have never had a problem or a bad tube from them.
> > > > >
> > > > > You can use the 6146A or 6146B in the 820. You will have to neutralize the final amplifier regardless of the tube version you use. I have successfully used 6146As and 6146Bs in my 820 without any problems. This notion that the 520 hybrids require 6146A is unfounded. I have never read anything that specifically calls for 6146As in any of the hybrids. As I said above, do NOT, for any reason, mix a 6146A and a 6146B! Although the tubes appear to be the same except for maximum power output, they are different. I recommend you read Glen Zook, K9STH, "The 6146 Family of Tubes" document in the "files"

section of this group.
> > > >
> > > > Don't expect 120 watts from a pair of 6146As because they are not designed for that level of parallel RF output. The 6146Bs, on the other hand, are. But, you must understand that you can easily push the final tubes beyond their recommended "normal" power output by improperly adjusting the "LOAD" control! A number of operators tend to believe they can push their hybrids for 150 watts output. I can tell you those operators will be spending money for new finals quicker than they realize by pushing the final amplifier too hard. Not only will they be buying new finals but rebuilding the power supplies! Follow the operator's manual tune procedure and do not try to achieve a higher power output by improperly adjusting the LOAD control!
> > > >
> > > > The Japanese Beam Power tube, S2001, is the same as a 6146A and the Japanese Beam Power tube, S2001A, is the same as a 6146B.
> > > >
> > > >
> > > >
> > > > >
> > > > > I have not run the neutralization procedure yet. That is next,
> > > > > since the rig does not appear to be in danger of melting from too
> > > > > much Ip and RF output.
> > > >
> > > >
> > > > You should check and if necessary, neutralize the final amplifier. Since you have been swapping final tubes I recommend you neutralize the final amplifier.
> > > >
> > > >
> > > >
> > > > > By the way, the alternate transmit alignment procedure I used says
> > > > > to adjust T1 on the RF board for max ALC reading and also to adjust
> > > > > T5 (not T10) on the IF board for max ALC. In my case T1 on the RF
> > > > > board helped a lot but adjusting T5 on the IF for ALC peak also
> > > > > made a big difference - really pegged the meter.
> > > >
> > > >
> > > > T5 on the IF Unit is an IF amplifier transformer, same as T6, except T5 has a secondary winding that T6 does not have, for the transmitter's 8mhz TIF signal.
> > > >
> > > >
> > > >
> > > > >
> > > > > As for the INRAD alignment procedure, they say to inject a 1K audio
> > > > > signal into the mike input, adjust the mike gain to get 50W, and
> > > > > then switch the audio signal generator to inject first a 350 HZ and
> > > > > then a 2.5 KHZ signal into the mike input and make sure that the
> > > > > power output levels are the same at 350 and 2500, by adjusting the
> > > > > carrier freq. They say do this for both USB and LSB. In my case I
> > > > > found that aligning the coil pack beforehand took care of any
> > > > > difference I had found so I did not have to mess with the carrier
> > > > > board freqs. I suspect that with a tighter SSB filter than the
> > > > > stock one you might have to do that.

> > > >
> > > >
> > > >
> > > > INRAD's adjustment appears to be adjusting the CAR Unit signal so the low and high end audio frequencies provide the same output by switching between USB and LSB, called "Sideband Balancing". The USB signal should have the same signal level as the LSB signal has to produce the same RF output regardless of the sideband setting, USB or LSB.
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > >
> > > > > Thanks!
> > > > >
> > > > > Robert
> > > >
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
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> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > >
> > > > > > > Mike:
> > > > > > >
> > > > > > > No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For CW the Ip is even higher with indicated output over 100W. For USB that is .250 X 800V = 200W. Impressive but kinda scary!
> > > > > > >

> > > > > >
> > > > > >
> > > > > > Yes, I agree, especially the CW IP current being much higher.
> > > > > >
> > > > > >
> > > > > >
> > > > > > I plan to do two things:
> > > > > > >
> > > > > > 1. The alternate alignment instructions I used had you adjust not
> > > > > > only the Drive coil on the RF board but also a coil on the IF board
> > > > > > (I'm at work now and dfo not have my manuals so I do not know what
> > > > > > teh designation of that coil is). As a result in CW and Tune modes
> > > > > > on 80-40-20 in Tune or CW the ALC indication pegs the needle with
> > > > > > the Drive control peaked. Setting the Drive coil helped ALC a lot
> > > > > > but the coil on the IF board really maxed it out. I plan to back
> > > > > > off on that coil on the IF board a bit.
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > The first step in transmitter alignment is on page 49 of the 820 service manual
titled
> > > > > >
> > > > > > "4. Adjustment of Transmitter Section".
> > > > > >
> > > > > > This step states to adjust "T10" on the IF Unit board. T10 on the IF Unit board
is the "balance modulator" transformer. The Mode switch is set to "CW" and the CAR control
set to 12 o'clock in order to provide an RF carrier which is not possible in USB or LSB
without applying audio to the speech amplifier. The step does not state whether to have a
CW key plugged into the CW socket or not. I recommend removing any CW key from the CW
socket as this will allow the SEND switch, when flipped "UP" to key the transmitter and
produce output. The CW socket is a "Normally Closed" socket so a CW key is not required in
the CW socket during this transmitter alignment step.
> > > > > >
> > > > > > The 820 is keyed and T10 is adjusted for maximum 8Mhz "TIF" signal appearing at
the IF Unit's plug IF3 pin 2 "TIF" terminal. This alignment step does not mention this but
that's is what the adjustment of T10 on the IF Unit is for. The "TIF" signal is then
applied to the RF Unit plug RF1 pin 1 where the "TIF" signal is applied to RF Unit transmit
mixer transformer T1. T1 is adjusted for maximum IF Unit TIF signal transfer to the
transmit mixer. The step also does not mention this but that is what T1 on the RF Unit is
for, maximum TIF signal transfer to the transmit mixer.
> > > > > >
> > > > > > The step further states to adjust the "DRIVER" coil for maximum "ALC"
indication. This is done for each band but the adjustment for each band driver coil is
performed in a specific sequence (Fig 2.3 COIL PACK adjustments). This adjustment provides
for maximum signal transfer (resonates the driver tube's PLATE circuit on the specific
band) from the driver tube through the COIL PACK "DRV" terminal to the FINAL UNIT "DRV"
terminal. The DRIVER coil pack adjustment serves 2 purposes
> > > > > >
> > > > > > 1. Tunes the driver tube's plate circuit for the band selected

> > > > > > 2. Acts as a tuned input to the final amplifier
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > > 2. I am going to neutralize the tubes as I did the last time, by
> > > > > > > turning the SG Switch Off, running the output to my oscilloscope,
> > > > > > > and Teeing off from that to a dummy load, key up, then tune for
> > > > > > > minimum voltage. Before, given the sensitivity of the scope, I
> > > > > > > found that I could neutalize the rig right down to nothing, with no
> > > > > > > output with the SG switch back on. We will see this time.
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > Yes, I agree, checking and if necessary, perform the neutralization steps. This will stabilize the final amplifier plus allow the plate DIP and max power OUTPUT to occur at the same time, resulting in a more accurate HV and IP tune up indication which is what the transmitter tune up should be.
> > > > > >
> > > > > >
> > > > > > > True, I do need to check idling current with these new tubes.
> > > > > >
> > > > > >
> > > > > > > This should be done first before performing any transmitter alignment steps. The final amplifier bias must be set to it's normal Class AB1 no signal idling current first, regardless of out much, if any, the transmitter alignment adjustments are out of alignment.
> > > > > >
> > > > > >
> > > > > > > Also, I would like to see how the 6146B's I have perform. I do not
> > > > > > > have any known good 6146B's but have a number of mainly used
> > > > > > > 6146's, one probably good S-2001A and I think a set of 6146A's that
> > > > > > > may be good.
> > > > > >
> > > > > >
> > > > > > > One weak final tube out of two can easily exhibit a hotter glass envelope than the other, especially in your case. There is no way to determine which one is weaker by simply monitoring the IP meter display in transmit. The final amplifier operates in parallel and the IP meter current level is a combination of final tube screen and plate currents. The IP meter indication is displaying the final tubes "cathode current" which is the "safer" method to display plate current. In the old days a meter was connected in "series" with the final amplifier's HV supply.
> > > > > >
> > > > > > > And I guess I could run the INRAD alignment procedure again as
> > > > > > > well. Would be interesting to see how with the new tubes output
> > > > > > > power varies with the freqs applied to the mike input and the Mike
> > > > > > > level.
> > > > > >

> > > > > >
> > > > > > I'm not familiar with INRADS alignment procedures. Therefore I can't comment on them.
> > > > > >
> > > > > >
> > > > > > >
> > > > > > > Thanks again!
> > > > > > >
> > > > > > > Robert
> > > > > > >
> > > > > >
> > > > > > I provided additional technical information so one understands "why" the adjustments are performed. The alignment steps do not mention this. It's better to know why one does something than rather to simply "do it and look for this..". My comments are not meant to be disrespectful but rather to help one to understand what the adjustment does and why.
> > > > > >
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > > Robert,
> > > > > > >
> > > > > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well over 100 watts output. If that's true then power input would be
> > > > > > >
> > > > > > > 750 x .225 = 187.5 watts DC input
> > > > > > >
> > > > > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power rating. Based on 55% efficiency input to output of the Class AB1 final amplifier that would equate to approximately 142.5 watts output.
> > > > > > >
> > > > > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no signal idling current in USB or LSB mode, it doesn't matter what band has been selected, then retune the 820 into a dummy load.
> > > > > > >
> > > > > > > A known good 12BY7 driver tube can produce more than enough drive to the final tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > > > > >
> > > > > > > Power input tuning should be smooth and full output should occur at the same point as maximum IP dip. If these 2 things do not occur at the same point then the final amplifier needs to be neutralized.
> > > > > > >

> > > > > > > > I would not operate the 820 with an RF output of more than 110 watts as that can easily over stress the power supplies and shorten the life of the final tubes.
> > > > > > > >
> > > > > > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby (receive) and approximately 745VDC at full output in CW mode. Some hybrid owners use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV filter capacitors, same as the designed HV filter supply. The "80/20" rules applies when working with capacitors, no more than 80% higher than the original value and no lower than 20% of the original value. I decided to stick with the original values, 100ufd at 500VDC capacitors.
> > > > > > > >
> > > > > > > > >
> > > > > > > > > 73s
> > > > > > > > > Mike
> > > > > > > > > W5RKL
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > >
> > > > > > > > > Mike:
> > > > > > > > >
> > > > > > > > > First, with the SG switch off and with the key down I get 900V on the HV meter setting and with the SG switch on I get 850V to 750V, depending on output, band and which finals I have installed.
> > > > > > > > >
> > > > > > > > > I took out the S-2001A's and put in two 6146's ï¿½ basic models, no A or B. The difference is dramatic. With a few short transmits into the dummy load I get about 250 ma of Ip current with the plate dipped and 90W indicated on the power meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV at that point. Obviously the high voltage power supply is putting out well. I have never seen RF output like this with this radio. It's too high!
> > > > > > > > >
> > > > > > > > > I have not yet run the neutralization procedure on these tubes. I guess I will do that next.
> > > > > > > > >
> > > > > > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how to do that.
> > > > > > > > >
> > > > > > > > > I think that I also will try the 6146B's that originally came with the rig. I assumed they were not working properly at that time, but given the condition of the radio at that point it is not surprising. In my HW-100 they were a bit low on output but worked; of couwse that rig needs some work too so it is not a good example. I am curious to

see how the B models will do in the 820S.
> > > > > > > > > >
> > > > > > > > > > > Thanks!
> > > > > > > > > > >
> > > > > > > > > > > Robert
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
<roberteleazer@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > Mike:
> > > > > > > > > > >
> > > > > > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > > > > > >
> > > > > > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > > > > > less than before but still pretty good.
> > > > > > > > > > >
> > > > > > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > > > > > pretty good.
> > > > > > > > > > >
> > > > > > > > > > > ----------
> > > > > > > > > > >
> > > > > > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF?
The only way the HV meter switch setting with display HV is in transmit. In receive the
Relay Unit relay terminals disables all meter switch settings and the meter displays
receive signal strength, S Units, ONLY.
> > > > > > > > > >
> > > > > > > > > > > A more accurate method of measuring the 820's HV is to measure the HV
at the Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit. Be very
careful when measuring the voltage at the Rectifier Unit's 800 terminal with a DVM as this
is where the final amplifier HV supply output feeds the final amplifier tubes! Do not
attempt to do this if you are tired, being disrupted or distracted, as you can easily
receive a severe electrical shock which can easily kill you!!! If you use a DVM to measure
the HV at the 800 terminal on the Rectifier Unit, make sure the meter is capacitor of
measuring at least 1,000 volts DC and the meter's voltage level switch is set to 1000VDC or
higher otherwise you can easily burn out your meter!!!
> > > > > > > > > >
> > > > > > > > > > > ----------
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > > > > > > > noticeably down from before.
> > > > > > > > > > >
> > > > > > > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > > > > > > load deteriorated down to maybe 780V.

> > > > > > > > > > >
> > > > > > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > > > > > go up with time and stay up.
> > > > > > > > > > > >
> > > > > > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ----------
> > > > > > > > > > > >
> > > > > > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and previous usage. If a previous operator abuses the 820 but running it at above normal power output levels through improper LOAD control adjustments or other abusive behavior due to inexperience, it's not uncommon for this to happen, this could result in higher current demands being placed on the HV supply causing early failure in the power supply components.
> > > > > > > > > > >
> > > > > > > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage current. When this happens the HV power supply output suffers as the output voltage sages lower than normal during normal operation. The only fix is to replace both HV filter capacitors. Do not attempt to "reform" the capacitors, that simply will not fix an aging filter capacitor. I also recommend replacing the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and ordering.
> > > > > > > > > > >
> > > > > > > > > > > > ----------
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > > > > > > time sounds like the HV caps are getting old.
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ----------
> > > > > > > > > > > >
> > > > > > > > > > > > See my response above.
> > > > > > > > > > > >
> > > > > > > > > > > > ----------
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > Thanks!
> > > > > > > > > > > > >
> > > > > > > > > > > > > Robert
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ----------
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> > > > > > > > > > 73s
> > > > > > > > > > Mike
> > > > > > > > > > W5RKL
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> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > > > > >
> > > > > > > > > > Afternoon Robert,
> > > > > > > > > > >
> > > > > > > > > > The only plug on the RF UNIT, the board you are referring to as the driver board, that can cause the fuse to blow is RF2.
> > > > > > > > > >
> > > > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not making contact with pins 7 thru 10 then the driver and both final tube's bias voltage will be "disconnected". This will result in the driver and both final tubes to conduct to "saturation" current levels which can easily lead to the fuse blowing. Depending on the condition of the driver and/or final tubes, this can lead to problems with the tubes which could easily lead to lower RF output power. In addition, this could lead to damage to the cathode resistors which also can lead to lower RF output. By the way, if the bias voltage is "disconnected" to the final tubes and the fuse does NOT blow, the plates of the final tubes will start turning "RED", even in "receive"!
> > > > > > > > > > >
> > > > > > > > > > > If you have a set of known good driver and final tubes then I recommend using them then test for power output. I also recommend checking and, if necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If these increase in resistance, for example, the current flow through the final tubes will be "less".
> > > > > > > > > > >
> > > > > > > > > > > I doubt the problem is the HV supply.
> > > > > > > > > > >
> > > > > > > > > > > 73s
> > > > > > > > > > > Mike
> > > > > > > > > > > W5RKL
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> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > > > > > > > > > > >
> > > > > > > > > > > Good afternoon, Mike:
> > > > > > > > > > > >

> > > > > > > > > > > > > The HV indication is about 840V but I think that after a while, following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > > > > >
> > > > > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when tuning the plate. My first thought was that the short somehow took out one S-2001A. I have a spare but need to figure out which one might be bad before doing any swapping.
> > > > > > > > > > > > >
> > > > > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong at peak, pegging the needle to the right when the Drive control is properly adjusted. On SSB modes there is much less ALC indication, but there is some there. There is no decay in ALC as transmit goes on, so I assume the driver tube is good.
> > > > > > > > > > > > >
> > > > > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and voltage indications. I think the HV is lower than it used to be. I believe it was formerly up around 900 where it should be.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But it did not damage it too much, which sounds odd. I guess it could be a rectifier diode that is not quite doing the job. A total loss of HV due to that short would be believeable but a fairly small partial loss is not a failure mode I can explain right now.
> > > > > > > > > > > > >
> > > > > > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV but why that would be apparantly associated with that loose connector and the short I have no idea.
> > > > > > > > > > > > >
> > > > > > > > > > > > > I am going to go look at the manual and see what the HV should be at various points and maybe take some measurements.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > > > > > > > > > > >
> > > > > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > > > > > >
> > > > > > > > > > > > > Best regards,
> > > > > > > > > > > > >
> > > > > > > > > > > > > Robert
> > > > > > > > > > > >
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29289. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 20:53:22 UTC
From: roberteleazer@rocketmail.com
Topic: 29281 Message: 29289

Bill:

Well, that is all very interesting. The only reply I cna give is to quote Glen Zook, K9STH, who has a great deal of professional experience in the area:

"Replacing the 6146 / 6146A tubes with 6146B types often results in spurious emissions, parasitic oscillations, etc. This is due to the fact that there are different bias requirements, different inter-electrode capacitances, etc. of the 6146B versus the other two. It is often difficult to neutralize 6146B tubes when used in place of the 6146 / 6146A. If neutralization can be achieved, often it lasts for just a few minutes before the tube(s) goes into oscillation."

"If one insists on trying the 6146B tubes in place of the 6146 / 6146A types, the very first thing to do is to neutralize the final amplifier. If it will not neutralize, then the 6146B tubes should immediately be replaced with the older type tubes. If it does neutralize, then the neutralization should be "watched" for several hours (even days) of operation. If the neutralization changes, then the 6146B tubes again should be replaced with the 6146 / 6146A series. If the neutralization remains constant after several days, then use of the 6146B is fine in that particular transmitter."

- So I guess that both you and he say swapping 6146B's for the earlier versions is fine if it turns out fine. But it appears that he doubts very much that it will be fine.

Thanks!!

Robert

--- In TS-520_820_530_830@yahoogroups.com, Bill Harris <ke7szc@...> wrote:
>
> According to past experiences, the S2001's can be replaced with an 8298A, 6146B,
> and 6146W made after 1974 (any earlier 6146W tubes will be based on the 6146A
> tubes), the 8298A tube is a commercial release of the 6146B. The 6146B and it's
> variants lend themselves nicely to HF/VHF communications, while the 6146 and the
> 6146A were only useful as an HF tube since they would oscillate uncontrollably
> in VHF applications above 40mhz.
>
> Much of this info was gleaned from the intraweb, but I have tested all of these
> tubes in both VHF and HF applications and verified that this information, in
> particular, is true.
>
> I have also learned that a 6146B may not be replaced with an "A", 6146, or
> early "W" suffixed tube due to capacitance and oscillation issues, but any of
> the aforementioned could be replaced by thier successor with a slightly reduced
> power output.
>
>
> As always, make sure the tubes are neutralized, and I personally like to keep a

> wattmeter inline to see if the tubes are doing what they should, and maintain
> thier output over time, also, when replacing tubes, especially during
> substitution, monitor plate current to make sure that the tubes aren't going
> into harmonic/parasitic oscillation, which could also be evidenced by looking at
> the tubes while keyed, they will glow orange almost immediately after keying the
> transmitter, and the plate current will go off the charts...
>
> Happy hamming, this is what it's all about guys.
>
> 73, ke7szc, Bill.
>
>
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, January 13, 2011 5:54:39 AM
> Subject: [TS-520_820_530_830] Re: ts820 output
>
> Greg:
>
> Yes, I have read that. The famous Ken of Kenwood hybrids repair fame says you
> may have trouble neutralizing tubes other than the 6146B in the Kenwoods. One
> thing I did notice is that when I originally installed some 6146's in my TS-820
> I was able to "neutralize" the finals right down to the point there was no
> output at all, even with the SG Switch on. With the 6146B's that was not a
> problem; I was able to get it down to only maybe 40MV in CW mode before turning
> the cap any more made it go back up again. So perhaps the earlier tubes are
> subject to "over-neutalization"?
>
> In my TS-520 I have the S-2001A's that came installed and I have not even
> checked neutarlization with those. Probably would be interesting to do.
>
> But in any case, my short period of trying out 6146's in my newly repaired and
> realigned TS-820S did not reveal any huge problems and provided plenty of RF
> output, although I never got to the neutralization step before swapping them out
> for 6146B's.
>
> Thanks!
>
> Robet
>
> --- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@> wrote:
> >
> > There are major inter-electrode capacitance differences between the 6146/6146A
> >and the 6146B. The B model has 10 watts more plate dissipation which makes the
> >plate much larger hence the different capacitance. Don't know what restriction
> >if any exists for the Kenwood hybrids using various flavors of the 6146 tube
> >though. Collins had issues in their S-line and KWM2 when the 6146B came out, so

> >they redesigned the neutralizing circuit and issued a service bulletin.
> >
> > FWIW,
> >
> > Greg
> > KG6YV
> >
> > From: TS-520_820_530_830@yahoogroups.com
> >[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@
> > Sent: Wednesday, January 12, 2011 4:33 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: ts820 output
> >
> >
> >
> > Don:
> >
> > Thank you this info.
> >
> > I have read on the Internet that you should never ever use 6146B's in a TS-520.
> >I have also read that you should not use 6146 or 6146A's. I got a set of 6146B's
> >in the TS-820S that I have been working on for over a year, yanked them and put
> >in some used S-2001A's. When I finally got the rig working I found that basic
> >model 6146's worked great in terms of power output but that the original 6146B's
> >that came with the rig work great too.
> >
> > I understand about not mixing tubes; that makes sense, but I wonder what other
> >people really are experiencing with the other models of the tube.
> >
> > Regards,
> >
> > Robert
> > --- In
> >TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>,
> >"DarxMind" <w5dja@> wrote:
> > >
> > > Mike and group;
> > >
> > > I didn't reply to the other thread because it was too long already;
> > > so I post a new msg about the ts820's output.
> > > I use 6146w tubes in both of my kenwoods and so far not a problem.
> > > 6146w's will give you just a lower output, but the small amt doesn't
> > > make a difference at the recv end.
> > > Mike you have always given good advice and instructions on the forumn.
> > > Over the years, I have learned a lot about Hybrids from this forumn and I
> >have managed to repair a few of them(not for profit) and also restore
> > > 3 for myself(2 ts820s,1 ts520).
> > > I repaired a ts820s that the previous owner changed the finals out because of
> >low output. The radio had original s2001a's in it, so on the advice of someone
> >he put a 6146 and a 6146b in and still had the same problem and more. I repaired

> >the components that were burned out and he had the set of original S2001a's, I
> >installed them to check and lo and behold they tested good, neutralized and some
> >alignment and to this day he is using it every day.
> > > Just thought I would share this story with the forumn.
> > > don/w5dja
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

29290. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 21:02:56 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29290

John:

I don't know where it was set then. That was with 6146's installed. I have since put in the 6146B's that came with the rig, set the carrier suppression, and neutalized the finals and all now seems to be the best it ever has been with this particular rig.

I can now go over 100W in CW with the CAR control and all the way up and down in power with the MIC control.

One thing I have noticed is that with the MFJ-949E antenna tuner there is a huge interaction between the loading control and the antenna tuner. It is possible to tune the rig up with the Load control in the one place, set for what looks like Max output on the 820S meter, and then get everything looking good and have very little RF output. Then you move the load cotrol to another spot and tune up and things are much better. I never noticed that with the MFJ-941D or the Cubic antennna tuner.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> where is your loading capacitor set>?
> On 80 MÂ my 520 loading capacitor is set nearly all the way CCW to get 200 mA Ip
> dip at 100 W output.
> I'm sure it is farther clockwise on the higher bands but it has been a few years
> since I went off 80M
>
> Â
>
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, January 11, 2011 8:33:50 AM
> Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Â
> Mike:
>
> No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For
> CW the Ip is even higher with indicated output over 100W. For USB that is .250 X
> 800V = 200W. Impressive but kinda scary!
>
> I plan to do two things:

>
> 1. The alternate alignment instructions I used had you adjust not only the Drive
> coil on the RF board but also a coil on the IF board (I'm at work now and dfo
> not have my manuals so I do not know what teh designation of that coil is). As a
> result in CW and Tune modes on 80-40-20 in Tune or CW the ALC indication pegs
> the needle with the Drive control peaked. Setting the Drive coil helped ALC a
> lot but the coil on the IF board really maxed it out. I plan to back off on that
> coil on the IF board a bit.
> 2. I am going to neutralize the tubes as I did the last time, by turning the SG
> Switch Off, running the output to my oscilloscope, and Teeing off from that to a
> dummy load, key up, then tune for minimum voltage. Before, given the sensitivity
> of the scope, I found that I could neutalize the rig right down to nothing, with
> no output with the SG switch back on. We will see this time.
>
> True, I do need to check idling current with these new tubes.
>
> Also, I would like to see how the 6146B's I have perform. I do not have any
> known good 6146B's but have a number of mainly used 6146's, one probably good
> S-2001A and I think a set of 6146A's that may be good.
>
>
> And I guess I could run the INRAD alignment procedure again as well. Would be
> interesting to see how with the new tubes output power varies with the freqs
> applied to the mike input and the Mike level.
>
>
> Thanks again!
>
> Robert
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Robert,
> >
> > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well
> >over 100 watts output. If that's true then power input would be
> >
> > 750 x .225 = 187.5 watts DC input
> >
> > That's 27 watts higher than the 820's designed CW mode 160 watts DC input power
> >rating. Based on 55% efficiency input to output of the Class AB1 final amplifier
> >that would equate to approximately 142.5 watts output.
> >
> > If you have a known good pair of 6146Bs, install them, check for 60ma of no
> >signal idling current in USB or LSB mode, it doesn't matter what band has been
> >selected, then retune the 820 into a dummy load.
> >
> >

> > A known good 12BY7 driver tube can produce more than enough drive to the final
> >tubes for a full scale ALC indication when adjusting the DRIVE control. The ALC
> >peak in TUNE mode should be stable, not drop back toward zero on it's own.
> >
> > Power input tuning should be smooth and full output should occur at the same
> >point as maximum IP dip. If these 2 things do not occur at the same point then
> >the final amplifier needs to be neutralized.
> >
> > I would not operate the 820 with an RF output of more than 110 watts as that
> >can easily over stress the power supplies and shorten the life of the final
> >tubes.
> >
> > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is
> >not uncommon in a properly operating 820. The HV in my 820 is 825VDC in standby
> >(receive) and approximately 745VDC at full output in CW mode. Some hybrid owners
> >use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV
> >filter capacitors, same as the designed HV filter supply. The "80/20" rules
> >applies when working with capacitors, no more than 80% higher than the original
> >value and no lower than 20% of the original value. I decided to stick with the
> >original values, 100ufd at 500VDC capacitors.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
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> >
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> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
> >wrote:
> > >
> > > Mike:
> > >
> > > First, with the SG switch off and with the key down I get 900V on the HV
> >meter setting and with the SG switch on I get 850V to 750V, depending on output,
> >band and which finals I have installed.
> > >
> > > I took out the S-2001A's and put in two 6146's â□" basic models, no A or B. The
> >difference is dramatic. With a few short transmits into the dummy load I get
> >about 250 ma of Ip current with the plate dipped and 90W indicated on the power
> >meter in USB on 20M. On CW I get well over 100W indicated with about 750V on HV
> >at that point. Obviously the high voltage power supply is putting out well. I
> >have never seen RF output like this with this radio. It's too high!

> > >
> > > I have not yet run the neutralization procedure on these tubes. I guess I
> >will do that next.
> >
> > >
> > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how
> >to do that.
> >
> > >
> > > I think that I also will try the 6146B's that originally came with the rig. I
> >assumed they were not working properly at that time, but given the condition of
> >the radio at that point it is not surprising. In my HW-100 they were a bit low
> >on output but worked; of couwse that rig needs some work too so it is not a good
> >example. I am curious to see how the B models will do in the 820S.
> > >
> > > Thanks!
> > >
> > > Robert
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> ><roberteleazer@> wrote:
> > > > >
> > > > > Mike:
> > > > >
> > > > > Ran some more transmit tests and here is what I found.
> > > > >
> > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > less than before but still pretty good.
> > > > >
> > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > pretty good.
> > > >
> > > > ----------
> > > >
> > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF? The
> >only way the HV meter switch setting with display HV is in transmit. In receive
> >the Relay Unit relay terminals disables all meter switch settings and the meter
> >displays receive signal strength, S Units, ONLY.
> > > >
> > > > A more accurate method of measuring the 820's HV is to measure the HV at
> >the Rectifier Unit's "800" terminal with a DVM, whether in receive or transmit.
> >Be very careful when measuring the voltage at the Rectifier Unit's 800 terminal
> >with a DVM as this is where the final amplifier HV supply output feeds the final
> >amplifier tubes! Do not attempt to do this if you are tired, being disrupted or

> >distracted, as you can easily receive a severe electrical shock which can easily
> >kill you!!! If you use a DVM to measure the HV at the 800 terminal on the
> >Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000
> >volts DC and the meter's voltage level switch is set to 1000VDC or higher
> >otherwise you can easily burn out your meter!!!
> > > >
> > > > ----------
> > > >
> > > >
> > > > > But as I let the set run it deteriorated. It was never been as
> > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > noticeably down from before.
> > > > >
> > > > > And after letting it run for a couple of hours or more with
> > > > > occasional short transmits the power output got worse. HV under
> > > > > load deteriorated down to maybe 780V.
> > > > >
> > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > go up with time and stay up.
> > > > >
> > > > > I will let it cool down and try it again to see if power is back up.
> > > > >
> > > >
> > > > ----------
> > > >
> > > > It is possible the HV filter capacitors are quite leaky due to age and
> >previous usage. If a previous operator abuses the 820 but running it at above
> >normal power output levels through improper LOAD control adjustments or other
> >abusive behavior due to inexperience, it's not uncommon for this to happen, this
> >could result in higher current demands being placed on the HV supply causing
> >early failure in the power supply components.
> >
> > > > >
> > > > Electrolytic capacitors do age which can lead to higher internal leakage
> >current. When this happens the HV power supply output suffers as the output
> >voltage sages lower than normal during normal operation. The only fix is to
> >replace both HV filter capacitors. Do not attempt to "reform" the capacitors,
> >that simply will not fix an aging filter capacitor. I also recommend replacing
> >the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc
> >capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV
> >rebuild kit. Go to his website, www.k4eaa.com for further details on pricing and
> >ordering.
> > > > >
> > > > ----------
> > > > >
> > > > >
> > > > > And I will check to see about those resistors you mentioned and
> > > > > plan to put another set of finals in. The HV deterioration with
> > > > > time sounds like the HV caps are getting old.

> > > >
> > > >
> > > > ---
> > > >
> > > > See my response above.
> > > >
> > > > ---
> > > >
> > > >
> > > > >
> > > > > Thanks!
> > > > >
> > > > > Robert
> > > >
> > > >
> > > > ---
> > > >
> > > >
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
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> > > >
> > > >
> > > >
> > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Afternoon Robert,
> > > > >
> > > > > The only plug on the RF UNIT, the board you are referring to as the
> > driver board, that can cause the fuse to blow is RF2.
> > > > >
> > > > > RF2 has 4 pins that can affect the driver and both final tube's bias
> > voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not
> > making contact with pins 7 thru 10 then the driver and both final tube's bias
> > voltage will be "disconnected". This will result in the driver and both final
> > tubes to conduct to "saturation" current levels which can easily lead to the
> > fuse blowing. Depending on the condition of the driver and/or final tubes, this
> > can lead to problems with the tubes which could easily lead to lower RF output
> > power. In addition, this could lead to damage to the cathode resistors which
> > also can lead to lower RF output. By the way, if the bias voltage is
> > "disconnected" to the final tubes and the fuse does NOT blow, the plates of the
> > final tubes will start turning "RED", even in "receive"!
> > > > >
> > > > > If you have a set of known good driver and final tubes then I recommend

> >using them then test for power output. I also recommend checking and, if
> >necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If
> >these increase in resistance, for example, the current flow through the final
> >tubes will be "less".
> > > > > >
> > > > > > > I doubt the problem is the HV supply.
> > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >
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> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> ><roberteleazer@> wrote:
> > > > > > > >
> > > > > > > > > Good afternoon, Mike:
> > > > > > > >
> > > > > > > > > The HV indication is about 840V but I think that after a while,
> >following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > >
> > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when
> >tuning the plate. My first thought was that the short somehow took out one
> >S-2001A. I have a spare but need to figure out which one might be bad before
> >doing any swapping.
> > >
> > > > > > > >
> > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong
> >at peak, pegging the needle to the right when the Drive control is properly
> >adjusted. On SSB modes there is much less ALC indication, but there is some
> >there. There is no decay in ALC as transmit goes on, so I assume the driver tube
> >is good.
> > > > > > > >
> > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip and
> >voltage indications. I think the HV is lower than it used to be. I believe it
> >was formerly up around 900 where it should be.
> > >
> > > > > > > >
> > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But
> >it did not damage it too much, which sounds odd. I guess it could be a rectifier
> >diode that is not quite doing the job. A total loss of HV due to that short
> >would be believeable but a fairly small partial loss is not a failure mode I can
> >explain right now.
> > >

> > > > > > >
> > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV
> >but why that would be apparantly associated with that loose connector and the
> >short I have no idea.
> > > > > > > >
> > > > > > > > > I am going to go look at the manual and see what the HV should be at
> >various points and maybe take some measurements.
> > > > > > > >
> > > > > > > > > Shucks! I was looking forward to setting this rig aside and working
> >on an NC-155 where I need to rebuild the 2nd local oscillator.
> >
> > > > > > > > >
> > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > >
> > > > > > > > > > Best regards,
> > > > > > > > >
> > > > > > > > > > Robert
> > > > > > > >
> > > > > > >
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> [Non-text portions of this message have been removed]
>

29291. Re: TRADE Completed !

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 21:35:16 UTC
From: Ken
Topic: 29165 Message: 29291

Installed the CW Filter and had NO ALC indication initally. A quick tweak of the CW Carrier crystal moved the OSC output into the center of the filter passband and all is well.

Rewired the unused FIX Channel switch to allow selecting either the original SSB or the new CW filter (Wide/Narrow) when in the CW Mode. Wonderful upgrade to this old workhorse.

Ken - KB7H

29292. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 22:42:13 UTC
From: w5rkl
Topic: 29230 Message: 29292

Robert,

If the SWR between the 820 and the tuner is very low, as seen on the tuner's SWR meter, but very little power, if any, appears at the tuner's antenna connector then the tuner is absorbing the power.

A quick method to determine of the power is being absorbed in the tuner is to tune the tuners for minimum SWR between the radio and the tuner. Note the SWR reading. Unkey the transmitter then remove the antenna from the tuner. Key the radio and quickly note the SWR reading on the tuner's SWR meter. If the SWR remains low, with the antenna disconnected from the tuner, then the tuner is absorbing the power. This, of course, is assuming the tuner's band setting is set to the appropriate band.

I have only experienced this once or maybe twice in my 40 years as a ham using a tuner. This does not happen very often but when it does the above test method is a quick way to determine whether the tuner is absorbing the power or not. The above test, keying the transmitter with the antenna disconnected from the tuners output.

The above test does not include any wiring or component failures. Therefore, before you perform the above test I recommend you open up the tuner and check for broken wires, bad components, or shorted variable capacitors and/or damaged roller inductors. Some tuners have a roller inductor that causes a disk to move from one end of the inductor to the other by rotating the inductor from the front panel control.

Remember, a tuner simply changes the antenna load to a value suitable for the transmitter to work into. The SWR displayed on the tuners SWR meter is the SWR between the transceiver and the tuner's input. The SWR and/or impedance to the actual antenna does not change by the use of a tuner. The tuner's output adjustments simply provides as close of a match to the load the antenna is presenting to the tuner's output, nothing more.

73s
Mike
W5RKL

29293. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-13 23:05:34 UTC
From: John Davidson
Topic: 29230 Message: 29293

Loading the rig into a tuner that has not been adjusted properly can never work well.
 Tuning up with A random point on the loading control is NOT The way to do it. You should always start with a minimum (CCW) position on the loading control, dip the plate and advance the loading slowly while resetting the plate for minimum current unltil you reach your proper Ip reading.
 If I was using a tuner I would get it set up before running any power, as in tuning the PA for full power.
 Just a few watts out will be enough to pre-tune your random frequency
 antennas.
Since I grew up with tube rigs (several home made) I just am amazed very few newer hams get the art of load and dip ! :D

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, January 13, 2011 4:02:56 PM
Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

John:

I don't know where it was set then. That was with 6146's installed. I have since put in the 6146B's that came with the rig, set the carrier suppression, and neutalized the finals and all now seems to be the best it ever has been with this particular rig.

I can now go over 100W in CW with the CAR control and all the way up and down in power with the MIC control.

One thing I have noticed is that with the MFJ-949E antenna tuner there is a huge interaction between the loading control and the antenna tuner. It is possible to tune the rig up with the Load control in the one place, set for what looks like Max output on the 820S meter, and then get everything looking good and have very little RF output. Then you move the load cotrol to another spot and tune up and things are much better. I never noticed that with the MFJ-941D or the Cubic antennna tuner.

Thanks!

> Â
> Mike:
>
> No, the 0.25 amps is in USB mode with 90W indicated on the MFJ tuner meter. For
>
> CW the Ip is even higher with indicated output over 100W. For USB that is .250
>X
>

> 800V = 200W. Impressive but kinda scary!
>
> I plan to do two things:
>
> 1. The alternate alignment instructions I used had you adjust not only the
>Drive
>
> coil on the RF board but also a coil on the IF board (I'm at work now and dfo
> not have my manuals so I do not know what teh designation of that coil is). As
>a
>
> result in CW and Tune modes on 80-40-20 in Tune or CW the ALC indication pegs
> the needle with the Drive control peaked. Setting the Drive coil helped ALC a
> lot but the coil on the IF board really maxed it out. I plan to back off on
>that
>
> coil on the IF board a bit.
> 2. I am going to neutralize the tubes as I did the last time, by turning the SG
>
> Switch Off, running the output to my oscilloscope, and Teeing off from that to
>a
>
> dummy load, key up, then tune for minimum voltage. Before, given the
>sensitivity
>
> of the scope, I found that I could neutalize the rig right down to nothing,
>with
>
> no output with the SG switch back on. We will see this time.
>
> True, I do need to check idling current with these new tubes.
>
> Also, I would like to see how the 6146B's I have perform. I do not have any
> known good 6146B's but have a number of mainly used 6146's, one probably good
> S-2001A and I think a set of 6146A's that may be good.
>
>
> And I guess I could run the INRAD alignment procedure again as well. Would be
> interesting to see how with the new tubes output power varies with the freqs
> applied to the mike input and the Mike level.
>
>
> Thanks again!
>
> Robert
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Robert,

> >
> > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well
>
> >over 100 watts output. If that's true then power input would be
> >
> > 750 x .225 = 187.5 watts DC input
> >
> > That's 27 watts higher than the 820's designed CW mode 160 watts DC input
>power
>
> >rating. Based on 55% efficiency input to output of the Class AB1 final
>amplifier
>
> >that would equate to approximately 142.5 watts output.
> >
> > If you have a known good pair of 6146Bs, install them, check for 60ma of no
> >signal idling current in USB or LSB mode, it doesn't matter what band has been
>
> >selected, then retune the 820 into a dummy load.
> >
> >
> > A known good 12BY7 driver tube can produce more than enough drive to the
>final
>
> >tubes for a full scale ALC indication when adjusting the DRIVE control. The
>ALC
>
> >peak in TUNE mode should be stable, not drop back toward zero on it's own.
> >
> > Power input tuning should be smooth and full output should occur at the same

> >point as maximum IP dip. If these 2 things do not occur at the same point then
>
> >the final amplifier needs to be neutralized.
> >
> > I would not operate the 820 with an RF output of more than 110 watts as that

> >can easily over stress the power supplies and shorten the life of the final
> >tubes.
> >
> > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is
>
> >not uncommon in a properly operating 820. The HV in my 820 is 825VDC in
>standby
>
> >(receive) and approximately 745VDC at full output in CW mode. Some hybrid
>owners
>
> >use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV
>
> >filter capacitors, same as the designed HV filter supply. The "80/20" rules

> >applies when working with capacitors, no more than 80% higher than the
>original
>
> >value and no lower than 20% of the original value. I decided to stick with the
>
> >original values, 100ufd at 500VDC capacitors.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>

> >wrote:
> > >
> > > Mike:
> > >
> > > First, with the SG switch off and with the key down I get 900V on the HV
> >meter setting and with the SG switch on I get 850V to 750V, depending on
>output,
>
> >band and which finals I have installed.
> > >
> > > I took out the S-2001A's and put in two 6146's â€" basic models, no A or B.
>The
>
> >difference is dramatic. With a few short transmits into the dummy load I get
> >about 250 ma of Ip current with the plate dipped and 90W indicated on the
>power
>
> >meter in USB on 20M. On CW I get well over 100W indicated with about 750V on
>HV
>
> >at that point. Obviously the high voltage power supply is putting out well. I

> >have never seen RF output like this with this radio. It's too high!
> > >
> > > I have not yet run the neutralization procedure on these tubes. I guess I
> >will do that next.
> >
> > >
> > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how

>
> >to do that.
> >
> > >
> > > I think that I also will try the 6146B's that originally came with the rig.
>I
>
> >assumed they were not working properly at that time, but given the condition
>of
>
> >the radio at that point it is not surprising. In my HW-100 they were a bit low
>
> >on output but worked; of couwse that rig needs some work too so it is not a
>good
>
> >example. I am curious to see how the B models will do in the 820S.
> > >
> > > Thanks!
> > >
> > > Robert
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> ><roberteleazer@> wrote:
> > > > >
> > > > > Mike:
> > > > >
> > > > > Ran some more transmit tests and here is what I found.
> > > > >
> > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > less than before but still pretty good.
> > > > >
> > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > pretty good.
> > > > >
> > > > > ----------
> > > > >
> > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF?
>The
>
> >only way the HV meter switch setting with display HV is in transmit. In
>receive
>
> >the Relay Unit relay terminals disables all meter switch settings and the
>meter
>

> >displays receive signal strength, S Units, ONLY.
> > > >
> > > > A more accurate method of measuring the 820's HV is to measure the HV at

> >the Rectifier Unit's "800" terminal with a DVM, whether in receive or
>transmit.
>
> >Be very careful when measuring the voltage at the Rectifier Unit's 800
>terminal
>
> >with a DVM as this is where the final amplifier HV supply output feeds the
>final
>
> >amplifier tubes! Do not attempt to do this if you are tired, being disrupted
>or
>
> >distracted, as you can easily receive a severe electrical shock which can
>easily
>
> >kill you!!! If you use a DVM to measure the HV at the 800 terminal on the
> >Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000
> >volts DC and the meter's voltage level switch is set to 1000VDC or higher
> >otherwise you can easily burn out your meter!!!
> > > >
> > > > ----------
> > > >
> > > >
> > > > > But as I let the set run it deteriorated. It was never been as
> > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > noticeably down from before.
> > > > >
> > > > > And after letting it run for a couple of hours or more with
> > > > > occasional short transmits the power output got worse. HV under
> > > > > load deteriorated down to maybe 780V.
> > > > >
> > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > go up with time and stay up.
> > > > >
> > > > > I will let it cool down and try it again to see if power is back up.
> > > > >
> > > >
> > > > ----------
> > > >
> > > > It is possible the HV filter capacitors are quite leaky due to age and
> >previous usage. If a previous operator abuses the 820 but running it at above

> >normal power output levels through improper LOAD control adjustments or other

> >abusive behavior due to inexperience, it's not uncommon for this to happen,
>this
>

> >could result in higher current demands being placed on the HV supply causing
> >early failure in the power supply components.
> >
> > > >
> > > > Electrolytic capacitors do age which can lead to higher internal leakage

> >current. When this happens the HV power supply output suffers as the output
> >voltage sages lower than normal during normal operation. The only fix is to
> >replace both HV filter capacitors. Do not attempt to "reform" the capacitors,

> >that simply will not fix an aging filter capacitor. I also recommend replacing
>
> >the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc
>
> >capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV
> >rebuild kit. Go to his website, www.k4eaa.com for further details on pricing
>and
>
> >ordering.
> > > > >
> > > > > ----------
> > > > >
> > > > >
> > > > > > And I will check to see about those resistors you mentioned and
> > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > time sounds like the HV caps are getting old.
> > > > >
> > > > >
> > > > > ----------
> > > > >
> > > > > See my response above.
> > > > >
> > > > > ----------
> > > > >
> > > > >
> > > > > > >
> > > > > > Thanks!
> > > > > > >
> > > > > > Robert
> > > > >
> > > > >
> > > > > ----------
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >

> > > >
> > > >
> > > >
> > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > > Afternoon Robert,
> > > > > >
> > > > > > The only plug on the RF UNIT, the board you are referring to as the
> >driver board, that can cause the fuse to blow is RF2.
> > > > > >
> > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias

> >voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not
> >making contact with pins 7 thru 10 then the driver and both final tube's bias

> >voltage will be "disconnected". This will result in the driver and both final

> >tubes to conduct to "saturation" current levels which can easily lead to the
> >fuse blowing. Depending on the condition of the driver and/or final tubes,
>this
>
> >can lead to problems with the tubes which could easily lead to lower RF output
>
> >power. In addition, this could lead to damage to the cathode resistors which
> >also can lead to lower RF output. By the way, if the bias voltage is
> >"disconnected" to the final tubes and the fuse does NOT blow, the plates of
>the
>
> >final tubes will start turning "RED", even in "receive"!
> > > > > >
> > > > > > If you have a set of known good driver and final tubes then I
>recommend
>
> >using them then test for power output. I also recommend checking and, if
> >necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If
> >these increase in resistance, for example, the current flow through the final

> >tubes will be "less".
> > > > > > >
> > > > > > > I doubt the problem is the HV supply.
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >

> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> ><roberteleazer@> wrote:
> > > > > > >
> > > > > > > Good afternoon, Mike:
> > > > > > >
> > > > > > > The HV indication is about 840V but I think that after a while,
> >following repeated short transmissions, it may go down to perhaps 820.
> > > > > > >
> > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when
> >tuning the plate. My first thought was that the short somehow took out one
> >S-2001A. I have a spare but need to figure out which one might be bad before
> >doing any swapping.
> >
> > > > > > >
> > > > > > > The ALC indication on transmit for Tune and CW modes is very strong
>
> >at peak, pegging the needle to the right when the Drive control is properly
> >adjusted. On SSB modes there is much less ALC indication, but there is some
> >there. There is no decay in ALC as transmit goes on, so I assume the driver
>tube
>
> >is good.
> > > > > > >
> > > > > > > And yes, it sure sounds like power output is commensurate with Ip
>and
>
> >voltage indications. I think the HV is lower than it used to be. I believe it

> >was formerly up around 900 where it should be.
> >
> > > > > > >
> > > > > > > Perhaps that short that blew the fuse damaged the power supply. But
>
> >it did not damage it too much, which sounds odd. I guess it could be a
>rectifier
>
> >diode that is not quite doing the job. A total loss of HV due to that short
> >would be believeable but a fairly small partial loss is not a failure mode I
>can
>
> >explain right now.
> >
> > > > > > >
> > > > > > > I suppose that the HV caps getting old could cause a decrease in HV
>
> >but why that would be apparantly associated with that loose connector and the

> >short I have no idea.
> > > > > > >

> > > > > > > I am going to go look at the manual and see what the HV should be
>at
>
> >various points and maybe take some measurements.
> > > > > > >
> > > > > > > Shucks! I was looking forward to setting this rig aside and working
>
> >on an NC-155 where I need to rebuild the 2nd local oscillator.
> >
> > > > > > > >
> > > > > > > > I would appreciate any thoughts!
> > > > > > > > >
> > > > > > > > Best regards,
> > > > > > > > > >
> > > > > > > > Robert
> > > > > > > > >
> > > > > > > >
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> [Non-text portions of this message have been removed]
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29294. value of a thread (was sudden decrease in output)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 00:43:15 UTC
From: Leslie Smith
Topic: 29294 Message: 29294

Dear Group,

I followed the various postings in this thread with interest - from the effect of various types of closely related output valves (the 6146 vs 6146-A vs 6146-B ...) and the ability of any tube to operate correctly, including the ability to neutralize the different types. Then there was the inference of Heathkit's experience with these variants. Finally the thread moved to the effect of the load, and the proper procedure used to tune the final into a reactive load.

Together the various postings are quite informative. Every contribution was appreciated.

73 de Les Smith

--

_____
Surf the Web in a faster, safer and easier way:
Download Opera 9 at http://www.opera.com

[Non-text portions of this message have been removed]

29295. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 02:33:33 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29295

John and Mike:

What I was trying to describe is this:

I will switch the antenna tuner into the dummy load, put the rig in "Tune" mode and adjust for max power and minimum Ip on the radio's meter and the antenna tuner's wattmeter.

Then I switch over to mode that will put out some power CW or SSB - still into the dummy load - and discover that my Load setting is not correct any more. In fact, I can find 820S load setting and an antenna tuner setting that look good in Tune but is exactly wrong in terms of real RF power output.

Then if I change the Load setting everything changes. I can end up chasing the settings on the radio and the anenna tuner around. Tweak the Load control and it will make big changes in the required Antenna Tuner settings. At that point it is best to start over at Tune mode.

It seems that with the MFJ-949E, unlike the other two antenna tuners I have tried, there are often two settings that will look good in Tune mode but will give radically different results in terms of power delivered to the dummy load. MFJ even says this is possible but with the other two tuners it did not seem to happen nearly as readily.

Thanks!

Robert

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Loading the rig into a tuner that has not been adjusted properly can never work
> well.
> Â Tuning up with A random point on the loading control is NOT The way to do it.
> You should always start with a minimum (CCW) position on the loading control,
> dip the plate and advance the loading slowly while resetting the plate for
> minimum current unltil you reach your proper Ip reading.Â
> Â If I was using a tuner I would get it set up before running any power, as in
> tuning the PA for full power.
> Â Just a few watts out will be enough to pre-tune your random frequency
> Â antennas.
> Since I grew up with tube rigs (several home made) I just am amazed very few
> newer hams get the art of load and dip ! :D
>
>
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, January 13, 2011 4:02:56 PM
> Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Â
> John:
>
> I don't know where it was set then. That was with 6146's installed. I have since
> put in the 6146B's that came with the rig, set the carrier suppression, and
> neutalized the finals and all now seems to be the best it ever has been with
> this particular rig.
>
> I can now go over 100W in CW with the CAR control and all the way up and down in
> power with the MIC control.
>
> One thing I have noticed is that with the MFJ-949E antenna tuner there is a huge
> interaction between the loading control and the antenna tuner. It is possible to
> tune the rig up with the Load control in the one place, set for what looks like
> Max output on the 820S meter, and then get everything looking good and have very
> little RF output. Then you move the load cotrol to another spot and tune up and
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> antennna tuner.
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> Thanks!
>
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> >
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> >
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> > 1. The alternate alignment instructions I used had you adjust not only the
> >Drive
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> > coil on the RF board but also a coil on the IF board (I'm at work now and dfo
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> >a
> >
> > result in CW and Tune modes on 80-40-20 in Tune or CW the ALC indication pegs
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> >
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> > known good 6146B's but have a number of mainly used 6146's, one probably good
> > S-2001A and I think a set of 6146A's that may be good.
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> > interesting to see how with the new tubes output power varies with the freqs
> > applied to the mike input and the Mike level.
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> >
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> >
> > Robert
> >
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> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Robert,
> > >
> > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well
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> > >
> > > 750 x .225 = 187.5 watts DC input
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> > >
> > >rating. Based on 55% efficiency input to output of the Class AB1 final
> >amplifier
> > >
> > >that would equate to approximately 142.5 watts output.
> > >

> > > If you have a known good pair of 6146Bs, install them, check for 60ma of no
> > >signal idling current in USB or LSB mode, it doesn't matter what band has been
> >
> > >selected, then retune the 820 into a dummy load.
> > >
> > >
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> >
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> >
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> > > Power input tuning should be smooth and full output should occur at the same
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> >standby
> >
> > >(receive) and approximately 745VDC at full output in CW mode. Some hybrid
> >owners
> >
> > >use higher value capacitors which can raise the HV. I use new 100ufd 500VDC HV
> >
> > >filter capacitors, same as the designed HV filter supply. The "80/20" rules
> > >applies when working with capacitors, no more than 80% higher than the
> >original
> >
> > >value and no lower than 20% of the original value. I decided to stick with the
> >
> > >original values, 100ufd at 500VDC capacitors.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >

> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
>
> > >wrote:
> > > >
> > > > Mike:
> > > >
> > > > First, with the SG switch off and with the key down I get 900V on the HV
> > >meter setting and with the SG switch on I get 850V to 750V, depending on
> >output,
> >
> > >band and which finals I have installed.
> > > >
> > > > I took out the S-2001A's and put in two 6146's Ã¢â□¬" basic models, no A or B.
> >The
> >
> > >difference is dramatic. With a few short transmits into the dummy load I get
> > >about 250 ma of Ip current with the plate dipped and 90W indicated on the
> >power
> >
> > >meter in USB on 20M. On CW I get well over 100W indicated with about 750V on
> >HV
> >
> > >at that point. Obviously the high voltage power supply is putting out well. I
>
> > >have never seen RF output like this with this radio. It's too high!
> > > >
> > > > I have not yet run the neutralization procedure on these tubes. I guess I
> > >will do that next.
> > >
> > > >
> > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how
> > >
> > >to do that.
> > >
> > > >
> > > > I think that I also will try the 6146B's that originally came with the rig.
> >I
> >
> > >assumed they were not working properly at that time, but given the condition
> >of
> >
> > >the radio at that point it is not surprising. In my HW-100 they were a bit low

> >
> > >on output but worked; of couwse that rig needs some work too so it is not a
> >good
> >
> > >example. I am curious to see how the B models will do in the 820S.
> > > >
> > > > Thanks!
> > > >
> > > > Robert
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> > ><roberteleazer@> wrote:
> > > > > >
> > > > > > Mike:
> > > > > >
> > > > > > Ran some more transmit tests and here is what I found.
> > > > > >
> > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > less than before but still pretty good.
> > > > > >
> > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > pretty good.
> > > > > >
> > > > > > ----------
> > > > > >
> > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF?
> > >The
> > >
> > > >only way the HV meter switch setting with display HV is in transmit. In
> > >receive
> > >
> > > >the Relay Unit relay terminals disables all meter switch settings and the
> > >meter
> > >
> > > >displays receive signal strength, S Units, ONLY.
> > > > >
> > > > > A more accurate method of measuring the 820's HV is to measure the HV at
> > >
> > > >the Rectifier Unit's "800" terminal with a DVM, whether in receive or
> > >transmit.
> > >
> > > >Be very careful when measuring the voltage at the Rectifier Unit's 800
> > >terminal
> > >

> > >with a DVM as this is where the final amplifier HV supply output feeds the
> >final
> >
> > >amplifier tubes! Do not attempt to do this if you are tired, being disrupted
> >or
> >
> > >distracted, as you can easily receive a severe electrical shock which can
> >easily
> >
> > >kill you!!! If you use a DVM to measure the HV at the 800 terminal on the
> > >Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000
> > >volts DC and the meter's voltage level switch is set to 1000VDC or higher
> > >otherwise you can easily burn out your meter!!!
> > > > >
> > > > > ----------
> > > > >
> > > > >
> > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > noticeably down from before.
> > > > > >
> > > > > > And after letting it run for a couple of hours or more with
> > > > > > occasional short transmits the power output got worse. HV under
> > > > > > load deteriorated down to maybe 780V.
> > > > > >
> > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > go up with time and stay up.
> > > > > >
> > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > >
> > > > > >
> > > > > > ----------
> > > > > >
> > > > > > It is possible the HV filter capacitors are quite leaky due to age and
> > > >previous usage. If a previous operator abuses the 820 but running it at above
> >
> > >normal power output levels through improper LOAD control adjustments or other
> >
> > >abusive behavior due to inexperience, it's not uncommon for this to happen,
> >this
> >
> > >could result in higher current demands being placed on the HV supply causing
> > >early failure in the power supply components.
> > >
> > > > > >
> > > > > > Electrolytic capacitors do age which can lead to higher internal leakage
> >
> > >current. When this happens the HV power supply output suffers as the output
> > >voltage sages lower than normal during normal operation. The only fix is to

> > >replace both HV filter capacitors. Do not attempt to "reform" the capacitors,
>
> > >that simply will not fix an aging filter capacitor. I also recommend replacing
> >
> > >the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc
> >
> > >capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV
> > >rebuild kit. Go to his website, www.k4eaa.com for further details on pricing
> >and
> >
> > >ordering.
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > time sounds like the HV caps are getting old.
> > > > > >
> > > > > >
> > > > > > ---
> > > > > >
> > > > > > See my response above.
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > > > >
> > > > > > > Thanks!
> > > > > > >
> > > > > > > Robert
> > > > > >
> > > > > >
> > > > > > ---
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >

> > > > > > > Afternoon Robert,
> > > > > > > >
> > > > > > > > The only plug on the RF UNIT, the board you are referring to as the
> > > >driver board, that can cause the fuse to blow is RF2.
> > > > > > > >
> > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias
>
> > > >voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not
> > > >making contact with pins 7 thru 10 then the driver and both final tube's bias
>
> > > >voltage will be "disconnected". This will result in the driver and both final
>
> > > >tubes to conduct to "saturation" current levels which can easily lead to the
> > > >fuse blowing. Depending on the condition of the driver and/or final tubes,
> >this
> > >
> > > >can lead to problems with the tubes which could easily lead to lower RF output
> > >
> > > >power. In addition, this could lead to damage to the cathode resistors which
> > > >also can lead to lower RF output. By the way, if the bias voltage is
> > > >"disconnected" to the final tubes and the fuse does NOT blow, the plates of
> >the
> > >
> > > >final tubes will start turning "RED", even in "receive"!
> > > > > > > >
> > > > > > > > If you have a set of known good driver and final tubes then I
> >recommend
> > >
> > > >using them then test for power output. I also recommend checking and, if
> > > >necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If
> > > >these increase in resistance, for example, the current flow through the final
>
> > > >tubes will be "less".
> > > > > > > > >
> > > > > > > > I doubt the problem is the HV supply.
> > > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> > > ><roberteleazer@> wrote:

> > > > > > > >
> > > > > > > > > Good afternoon, Mike:
> > > > > > > > >
> > > > > > > > > The HV indication is about 840V but I think that after a while,
> > > >following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > >
> > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when
> > > >tuning the plate. My first thought was that the short somehow took out one
> > > >S-2001A. I have a spare but need to figure out which one might be bad before
> > > >doing any swapping.
> > > >
> > > > > > > > > >
> > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong
> > >
> > > >at peak, pegging the needle to the right when the Drive control is properly
> > > >adjusted. On SSB modes there is much less ALC indication, but there is some
> > > >there. There is no decay in ALC as transmit goes on, so I assume the driver
> >tube
> > >
> > > >is good.
> > > > > > > > > >
> > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip
> >and
> > >
> > > >voltage indications. I think the HV is lower than it used to be. I believe it
> >
> > > >was formerly up around 900 where it should be.
> > > >
> > > > > > > > > >
> > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But
> > >
> > > >it did not damage it too much, which sounds odd. I guess it could be a
> >rectifier
> > >
> > > >diode that is not quite doing the job. A total loss of HV due to that short
> > > >would be believeable but a fairly small partial loss is not a failure mode I
> >can
> > >
> > > >explain right now.
> > > >
> > > > > > > > > >
> > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV
> > >
> > > >but why that would be apparantly associated with that loose connector and the
> >
> > > >short I have no idea.
> > > > > > > > > >
> > > > > > > > > I am going to go look at the manual and see what the HV should be
> >at

> >
> > >various points and maybe take some measurements.
> > > > > > > > >
> > > > > > > > > > Shucks! I was looking forward to setting this rig aside and working
> >
> > >on an NC-155 where I need to rebuild the 2nd local oscillator.
> > >
> > > > > > > > > > >
> > > > > > > > > > > I would appreciate any thoughts!
> > > > > > > > > > >
> > > > > > > > > > > Best regards,
> > > > > > > > > > >
> > > > > > > > > > > Robert
> > > > > > > > > >
> > > > > > > > >
> > > > > > > >
> > > > > > >
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> > >
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> > >
> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29296. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 02:45:07 UTC
From: Ken
Topic: 29230 Message: 29296

It's apparent that some folks do not realize the Pi-Net output circuitry is in fact a "tuner" that matches the final tubes Plate impedance to the Load impedance and that adding another "tuner" after the Pi-Net only complicates things.

The external "tuner" is not needed in most cases. If the Pi-Network can't tune it, fix it.

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> John and Mike:
>
> What I was trying to describe is this:
>
> I will switch the antenna tuner into the dummy load, put the rig in "Tune" mode and adjust for max power and minimum Ip on the radio's meter and the antenna tuner's wattmeter.
>
> Then I switch over to mode that will put out some power CW or SSB - still into the dummy load - and discover that my Load setting is not correct any more. In fact, I can find 820S load setting and an antenna tuner setting that look good in Tune but is exactly wrong in terms of real RF power output.
>
> Then if I change the Load setting everything changes. I can end up chasing the settings on the radio and the anenna tuner around. Tweak the Load control and it will make big changes in the required Antenna Tuner settings. At that point it is best to start over at Tune mode.
>
> It seems that with the MFJ-949E, unlike the other two antenna tuners I have tried, there are often two settings that will look good in Tune mode but will give radically different results in terms of power delivered to the dummy load. MFJ even says this is possible but with the other two tuners it did not seem to happen nearly as readily.
>
> Thanks!
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > Loading the rig into a tuner that has not been adjusted properly can never work
> > well.
> > Â Tuning up with A random point on the loading control is NOT The way to do it.
> > You should always start with a minimum (CCW) position on the loading control,
> > dip the plate and advance the loading slowly while resetting the plate for
> > minimum current unltil you reach your proper Ip reading.Â
> > Â If I was using a tuner I would get it set up before running any power, as in
> > tuning the PA for full power.
> > Â Just a few watts out will be enough to pre-tune your random frequency
> > Â antennas.

> > Since I grew up with tube rigs (several home made) I just am amazed very few
> > newer hams get the art of load and dip ! :D
> >
> >
> >
> >
> > _____
> > From: "roberteleazer@" <roberteleazer@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, January 13, 2011 4:02:56 PM
> > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
> >
> > Â
> > John:
> >
> > I don't know where it was set then. That was with 6146's installed. I have since
> > put in the 6146B's that came with the rig, set the carrier suppression, and
> > neutalized the finals and all now seems to be the best it ever has been with
> > this particular rig.
> >
> > I can now go over 100W in CW with the CAR control and all the way up and down in
> > power with the MIC control.
> >
> > One thing I have noticed is that with the MFJ-949E antenna tuner there is a huge
> > interaction between the loading control and the antenna tuner. It is possible to
> > tune the rig up with the Load control in the one place, set for what looks like
> > Max output on the 820S meter, and then get everything looking good and have very
> > little RF output. Then you move the load cotrol to another spot and tune up and
> > things are much better. I never noticed that with the MFJ-941D or the Cubic
> > antennna tuner.
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> > Thanks!
> >
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> > > Mike:
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> > > 800V = 200W. Impressive but kinda scary!
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> > > I plan to do two things:
> > >
> > > 1. The alternate alignment instructions I used had you adjust not only the
> > > >Drive
> > >
> > > coil on the RF board but also a coil on the IF board (I'm at work now and dfo

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> > >
> > > result in CW and Tune modes on 80-40-20 in Tune or CW the ALC indication pegs
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> > > Switch Off, running the output to my oscilloscope, and Teeing off from that to
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> > >
> > > dummy load, key up, then tune for minimum voltage. Before, given the
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> > >
> > > of the scope, I found that I could neutalize the rig right down to nothing,
> > >with
> > >
> > > no output with the SG switch back on. We will see this time.
> > >
> > > True, I do need to check idling current with these new tubes.
> > >
> > > Also, I would like to see how the 6146B's I have perform. I do not have any
> > > known good 6146B's but have a number of mainly used 6146's, one probably good
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> > >
> > > And I guess I could run the INRAD alignment procedure again as well. Would be
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> > >
> > >
> > > Thanks again!
> > >
> > > Robert
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Robert,
> > > >
> > > > I assume the 250ma is in CW mode with 750VDC showing on the HV meter and well
> > >
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> > > >
> > > > 750 x .225 = 187.5 watts DC input
> > > >

> > > > That's 27 watts higher than the 820's designed CW mode 160 watts DC input
> > >power
> > >
> > > >rating. Based on 55% efficiency input to output of the Class AB1 final
> > >amplifier
> > >
> > > >that would equate to approximately 142.5 watts output.
> > > >
> > > > If you have a known good pair of 6146Bs, install them, check for 60ma of no
> > > >signal idling current in USB or LSB mode, it doesn't matter what band has been
> > >
> > > >selected, then retune the 820 into a dummy load.
> > > >
> > > >
> > > > A known good 12BY7 driver tube can produce more than enough drive to the
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> > >
> > > >tubes for a full scale ALC indication when adjusting the DRIVE control. The
> > >ALC
> > >
> > > >peak in TUNE mode should be stable, not drop back toward zero on it's own.
> > > >
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> > > > I would not operate the 820 with an RF output of more than 110 watts as that
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> > > >can easily over stress the power supplies and shorten the life of the final
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> > > >
> > > > The HV at maximum output will sag but not excessively. A HV drop of 100VDC is
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> > > >not uncommon in a properly operating 820. The HV in my 820 is 825VDC in
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> > >
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> > >
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> > >
> > > >filter capacitors, same as the designed HV filter supply. The "80/20" rules
> > > >applies when working with capacitors, no more than 80% higher than the
> > >original
> > >
> > > >value and no lower than 20% of the original value. I decided to stick with the
> > >

> > > >original values, 100ufd at 500VDC capacitors.
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
> >
> > > >wrote:
> > > > >
> > > > > Mike:
> > > > >
> > > > > First, with the SG switch off and with the key down I get 900V on the HV
> > > >meter setting and with the SG switch on I get 850V to 750V, depending on
> > >output,
> > > >
> > > >band and which finals I have installed.
> > > > >
> > > > > I took out the S-2001A's and put in two 6146's Ã¢â□¬" basic models, no A or B.
> > >The
> > > >
> > > >difference is dramatic. With a few short transmits into the dummy load I get
> > > >about 250 ma of Ip current with the plate dipped and 90W indicated on the
> > >power
> > > >
> > > >meter in USB on 20M. On CW I get well over 100W indicated with about 750V on
> > >HV
> > > >
> > > >at that point. Obviously the high voltage power supply is putting out well. I
> > >
> > > >have never seen RF output like this with this radio. It's too high!
> > > > >
> > > > > I have not yet run the neutralization procedure on these tubes. I guess I
> > > >will do that next.
> > > > >
> > > > >
> > > > > I have checked the HV before on the 820S using a PSM-45 DVOM, so i know how
> > > >
> > > >to do that.
> > > > >

> > > > >
> > > > > I think that I also will try the 6146B's that originally came with the rig.
> > >I
> > >
> > > >assumed they were not working properly at that time, but given the condition
> > >of
> > >
> > > >the radio at that point it is not surprising. In my HW-100 they were a bit low
> > >
> > > >on output but worked; of couwse that rig needs some work too so it is not a
> > >good
> > >
> > > >example. I am curious to see how the B models will do in the 820S.
> > > > > >
> > > > > > Thanks!
> > > > > >
> > > > > > Robert
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> > > ><roberteleazer@> wrote:
> > > > > > > >
> > > > > > > > Mike:
> > > > > > > >
> > > > > > > > Ran some more transmit tests and here is what I found.
> > > > > > > >
> > > > > > > > When I fired it up this time on 20M I could get about 80W on CW,
> > > > > > > > less than before but still pretty good.
> > > > > > > >
> > > > > > > > With SG 0ff the HV was 900V. With SG on it was about 800V. Sounds
> > > > > > > > pretty good.
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > > When you measure the HV is the 820 keyed with the SG switch ON and OFF?
> > > >The
> > > >
> > > > >only way the HV meter switch setting with display HV is in transmit. In
> > > >receive
> > > >
> > > > >the Relay Unit relay terminals disables all meter switch settings and the
> > > >meter
> > > >
> > > > >displays receive signal strength, S Units, ONLY.
> > > > > > > >

> > > > > > A more accurate method of measuring the 820's HV is to measure the HV at
> >
> > > >the Rectifier Unit's "800" terminal with a DVM, whether in receive or
> > >transmit.
> > >
> > > >Be very careful when measuring the voltage at the Rectifier Unit's 800
> > >terminal
> > >
> > > >with a DVM as this is where the final amplifier HV supply output feeds the
> > >final
> > >
> > > >amplifier tubes! Do not attempt to do this if you are tired, being disrupted
> > >or
> > >
> > > >distracted, as you can easily receive a severe electrical shock which can
> > >easily
> > >
> > > >kill you!!! If you use a DVM to measure the HV at the 800 terminal on the
> > > >Rectifier Unit, make sure the meter is capacitor of measuring at least 1,000
> > > >volts DC and the meter's voltage level switch is set to 1000VDC or higher
> > > >otherwise you can easily burn out your meter!!!
> > > > > >
> > > > > > ----------
> > > > > >
> > > > > >
> > > > > > > > But as I let the set run it deteriorated. It was never been as
> > > > > > > > good on output on the other bands as it was on 20M, but 80M was
> > > > > > > > noticeably down from before.
> > > > > > > >
> > > > > > > > And after letting it run for a couple of hours or more with
> > > > > > > > occasional short transmits the power output got worse. HV under
> > > > > > > > load deteriorated down to maybe 780V.
> > > > > > > >
> > > > > > > > The funny thing was that on 20M as you let it transit the Ip would
> > > > > > > > go up with time and stay up.
> > > > > > > >
> > > > > > > > I will let it cool down and try it again to see if power is back up.
> > > > > > > >
> > > > > > > >
> > > > > > > > ----------
> > > > > > >
> > > > > > > > It is possible the HV filter capacitors are quite leaky due to age and
> > > > > >previous usage. If a previous operator abuses the 820 but running it at above
> > > >
> > > > >normal power output levels through improper LOAD control adjustments or other
> > > >
> > > > >abusive behavior due to inexperience, it's not uncommon for this to happen,
> > > >this
> > > >

> > > >could result in higher current demands being placed on the HV supply causing
> > > >early failure in the power supply components.
> > > >
> > > > > > >
> > > > > > > Electrolytic capacitors do age which can lead to higher internal leakage
> >
> > > > >current. When this happens the HV power supply output suffers as the output
> > > > >voltage sages lower than normal during normal operation. The only fix is to
> > > > >replace both HV filter capacitors. Do not attempt to "reform" the capacitors,
> >
> > > > >that simply will not fix an aging filter capacitor. I also recommend replacing
> > > >
> > > > >the two 470K 1/2 watt voltage equalizing resistors and the two .01ufd 2KV disc
> > > >
> > > > >capacitors across the HV filter capacitor terminals. Ken, K4EAA, sells a HV
> > > > >rebuild kit. Go to his website, www.k4eaa.com for further details on pricing
> > > >and
> > > >
> > > > >ordering.
> > > > > > >
> > > > > > > ----------
> > > > > > >
> > > > > > >
> > > > > > > > > > And I will check to see about those resistors you mentioned and
> > > > > > > > > > plan to put another set of finals in. The HV deterioration with
> > > > > > > > > > time sounds like the HV caps are getting old.
> > > > > > >
> > > > > > >
> > > > > > > ----------
> > > > > > >
> > > > > > > > > > See my response above.
> > > > > > >
> > > > > > > ----------
> > > > > > >
> > > > > > >
> > > > > > > > > > > Thanks!
> > > > > > > >
> > > > > > > > > > > Robert
> > > > > > >
> > > > > > >
> > > > > > > ----------
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > > > > 73s
> > > > > > > > > > Mike
> > > > > > > > > > W5RKL

> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > > Afternoon Robert,
> > > > > > > >
> > > > > > > > The only plug on the RF UNIT, the board you are referring to as the
> > > > >driver board, that can cause the fuse to blow is RF2.
> > > > > > > >
> > > > > > > > RF2 has 4 pins that can affect the driver and both final tube's bias
> >
> > > > >voltage, pins 7 thru 10. If the plug is situated so pins 7 thru 10 are not
> > > > >making contact with pins 7 thru 10 then the driver and both final tube's bias
> >
> > > > >voltage will be "disconnected". This will result in the driver and both final
> >
> > > > >tubes to conduct to "saturation" current levels which can easily lead to the
> > > > >fuse blowing. Depending on the condition of the driver and/or final tubes,
> > > >this
> > >
> > > > >can lead to problems with the tubes which could easily lead to lower RF output
> > >
> > > > >power. In addition, this could lead to damage to the cathode resistors which
> > > > >also can lead to lower RF output. By the way, if the bias voltage is
> > > > >"disconnected" to the final tubes and the fuse does NOT blow, the plates of
> > > >the
> > >
> > > > >final tubes will start turning "RED", even in "receive"!
> > > > > > > >
> > > > > > > > If you have a set of known good driver and final tubes then I
> > > >recommend
> > >
> > > > >using them then test for power output. I also recommend checking and, if
> > > > >necessary, replace the 2 cathode resistors, R5 and R6 both 10 ohm 1 watt. If
> > > > >these increase in resistance, for example, the current flow through the final
> >
> > > > >tubes will be "less".
> > > > > > > >
> > > > > > > > I doubt the problem is the HV supply.
> > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >
> > > > > > > >

> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> > > > ><roberteleazer@> wrote:
> > > > > > > > > >
> > > > > > > > > > Good afternoon, Mike:
> > > > > > > > > >
> > > > > > > > > > The HV indication is about 840V but I think that after a while,
> > > > >following repeated short transmissions, it may go down to perhaps 820.
> > > > > > > > > >
> > > > > > > > > > IP at 60W CW is about 120MA. And there is very little "dip" when
> > > > >tuning the plate. My first thought was that the short somehow took out one
> > > > >S-2001A. I have a spare but need to figure out which one might be bad before
> > > > >doing any swapping.
> > > > >
> > > > > > > > > >
> > > > > > > > > > The ALC indication on transmit for Tune and CW modes is very strong
> > > >
> > > > >at peak, pegging the needle to the right when the Drive control is properly
> > > > >adjusted. On SSB modes there is much less ALC indication, but there is some
> > > > >there. There is no decay in ALC as transmit goes on, so I assume the driver
> > > >tube
> > > >
> > > > >is good.
> > > > > > > > > >
> > > > > > > > > > And yes, it sure sounds like power output is commensurate with Ip
> > > >and
> > > >
> > > > >voltage indications. I think the HV is lower than it used to be. I believe it
> > >
> > > > >was formerly up around 900 where it should be.
> > > > >
> > > > > > > > > >
> > > > > > > > > > Perhaps that short that blew the fuse damaged the power supply. But
> > > >
> > > > >it did not damage it too much, which sounds odd. I guess it could be a
> > > >rectifier
> > > >
> > > > >diode that is not quite doing the job. A total loss of HV due to that short
> > > > >would be believeable but a fairly small partial loss is not a failure mode I
> > > >can
> > > >
> > > > >explain right now.
> > > > >
> > > > > > > > > >

> > > > > > > > > I suppose that the HV caps getting old could cause a decrease in HV
> > >
> > > >but why that would be apparantly associated with that loose connector and the
> >
> > > >short I have no idea.
> > > > > > > > >
> > > > > > > > > I am going to go look at the manual and see what the HV should be
> > >at
> > >
> > > >various points and maybe take some measurements.
> > > > > > > > >
> > > > > > > > > Shucks! I was looking forward to setting this rig aside and working
> > >
> > > >on an NC-155 where I need to rebuild the 2nd local oscillator.
> > > >
> > > > > > > > >
> > > > > > > > > I would appreciate any thoughts!
> > > > > > > > >
> > > > > > > > > Best regards,
> > > > > > > > >
> > > > > > > > > Robert
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
> > >
> > >
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> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29297. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 13:16:17 UTC
From: John Davidson
Topic: 29230 Message: 29297

BRAVO ! well stated.

When I moved to my present QTH I built all my homerew antennas to match 50 ohm coax feed and eliminate the need to mess with a tuner.

From: Ken <atm_ken_hunter@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, January 13, 2011 9:45:07 PM
Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

It's apparent that some folks do not realize the Pi-Net output circuitry is in fact a "tuner" that matches the final tubes Plate impedance to the Load impedance and that adding another "tuner" after the Pi-Net only complicates things.

The external "tuner" is not needed in most cases. If the Pi-Network can't tune it, fix it.

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>

[Non-text portions of this message have been removed]

29298. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 14:43:40 UTC
From: w5rkl
Topic: 29230 Message: 29298

Good morning Robert,

Remove any CW key or CW keyer plug inserted in the 820s' rear CW socket.

Note the tuners has 3 knobs, one on the left, one in the middle, and one on the right. Since I don't recall what tuner you are using I will refer to the left knob as knob "A" and the right knob as knob "B". The center knob is typically the band switch knob which must be set to the appropriate band the 820 will be using.

Set knobs "A" and "B" so they point to 9 o'clock.

Set the center knob to the band the 820 will be operating on.

1. Connect the 820 to the dummy load. If the tuner has a built in dummy load set the tuners' switch to dummy load. Set tuners' SWR meter to read forward power, not SWR

2. Set Mode switch to TUNE

3. Set the 820 meter switch to ALC

4. Set the CAR control at 9 or 10 o'clock

5. Flip the SEND switch UP (keys the transmitter)

6. Adjust the DRIVE control for a peak meter indication. If the meter pegs full scale to the right, reduce the CAR control so the meter points at 12 o'clock.

7. Repeat step 6 for a peak meter indication

8. Set meter switch to IP

9. Adjust the PLATE control for maximum DIP in IP meter indication (reduction in IP current)

10. While watching the tuners' power output meter, adjust the LOAD control for a peak indication.

11. Return to the PLATE control and adjust for any further dip in IP current

12. Repeat steps 10 and 11 until there is no further dip in IP current and no further peak in RF output on the tuner's power output meter.

13. Flip the SEND switch DOWN (unkeys the transmitter). Let the 820 sit for a minute or two so the final amplifier tubes can cool down.

14. Set the Mode switch to CW

15. Flip the SEND switch UP (keys the transmitter)

16. Repeat steps 10 and 11. If no further dip in IP current and no further peak of RF output is noted flip the SEND switch down (unkeys the transmitter).

17. Set the tuners' front panel control from dummy load to the tuners' antenna setting. This connects the 820 to the tuners' input.

18. Set the 820's CAR control fully CCW

19. Set the tuners' meter switch to SWR

20. Flip the SEND switch UP (keys the transmitter)

21. Rotate the CAR control to the 820s' IP meter indicates approximately 150ma. This level keeps the final current lower than the normal 225ma at full output

22. Adjust knob "A" for a reduction in the tuners' SWR meter

23. Adjust knob "B" for a further reduction in the tuners' SWR meter

24. Alternate between steps 22 and 23 until you achieve the lowest SWR reading possible. This may not be a perfect 1:1 but it should be quite low.

25. Rotate the 820s' CAR control for an IP meter indication of 225ma, set the tuners' meter to display power output. The tuners' meter should display full output, approximately 100 to 110 watts.

26. Flip the SEND switch DOWN (unkeys the transmitter).

Perform the above steps "quickly". If necessary, unkey the transmitter between steps. The key is not to keep the 820 keyed at full output for more than a few seconds.

I agree, the PI Network does operate similar to a tuner. The transmitters' PI Networks' job is to transform the final amplifier's output high impedance down to a much lower impedance, typically 50 ohms. The impedance range of the 820s' PI Network has a limited impedance range, between approximately 30 ohms to 100 ohms or so.

An antenna tuner performs a similar function as the PI Network does. The tuner transformers a high antenna system impedance to a low impedance to match as closely as possible to the transmitters' output impedance.

Not all antennas require a tuner. If the feed line is coax, the antenna is built for a certain band, and the antenna is trimmed for the lowest SWR, an antenna tuner is not needed.

A G5RV antenna is considered to be an "all band" antenna. However, not all G5RV antennas will work on all HF ham bands without changing the feed line configuration. For example, a 102 foot long G5RV will not operate on 160 meters without changes made. Regardless of the length of the G5RV antenna used, a tuner is required for maximum efficiency and power transfer (lowest SWR) from the transmitter to the antenna.

The ARRL handbook and other documents discuss the various types of antenna and feed lines along with what tuners to use etc. I recommend reading them for a more detailed description on this subject.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> John and Mike:
>
> What I was trying to describe is this:
>
> I will switch the antenna tuner into the dummy load, put the rig in "Tune" mode and adjust for max power and minimum Ip on the radio's meter and the antenna tuner's wattmeter.
>
> Then I switch over to mode that will put out some power CW or SSB - still into the dummy load - and discover that my Load setting is not correct any more. In fact, I can find 820S load setting and an antenna tuner setting that look good in Tune but is exactly wrong in terms of real RF power output.
>
> Then if I change the Load setting everything changes. I can end up chasing the settings on the radio and the anenna tuner around. Tweak the Load control and it will make big changes in the required Antenna Tuner settings. At that point it is best to start over at Tune mode.
>
> It seems that with the MFJ-949E, unlike the other two antenna tuners I have tried, there are often two settings that will look good in Tune mode but will give radically different results in terms of power delivered to the dummy load. MFJ even says this is possible but with the other two tuners it did not seem to happen nearly as readily.
>
> Thanks!
>
> Robert

29299. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 15:52:13 UTC
From: w5rkl
Topic: 29230 Message: 29299

Ken and John,

While this is true for the most part, there are antennas and feed lines arrangements that do require a tuner.

An inverted L, a long wire, G5RV, or an open wire fed antennas require an antenna tuner.

Modern and most vintage transmitters and transceivers along with linear amplifiers have unbalanced coax outputs. Unbalanced coax outputs are not directly compatible with balanced or end fed antennas. Therefore some form of matching network, a tuner for example, is required for maximum power transfer from the transmitter to the antenna for maximum efficiency.

As I stated in my previous response, not all antennas require a tuner.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> BRAVO ! well stated.
>
> When I moved to my present QTH I built all my homerew antennas to match 50 ohm
> coax feed and eliminate the need to mess with a tuner.
>
>
> _____
> From: Ken <atm_ken_hunter@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, January 13, 2011 9:45:07 PM
> Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
>
> It's apparent that some folks do not realize the Pi-Net output circuitry is in
> fact a "tuner" that matches the final tubes Plate impedance to the Load
> impedance and that adding another "tuner" after the Pi-Net only complicates
> things.
>
> The external "tuner" is not needed in most cases. If the Pi-Network can't tune
> it, fix it.
>
> Ken - KB7H
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> <roberteleazer@> wrote:

> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

29300. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 15:59:33 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29300

Mike,
My SteppIR doesn't require a Tuner :-) It tunes itself Hi Hi...
But you are correct, My Verticals both do If I move too far from the
Band centers, especially on 80 and 160
Hope all is well.
73,
Gordon

On 1/14/2011 7:52 AM, w5rkl wrote:
>
> Ken and John,
>
> While this is true for the most part, there are antennas and feed
> lines arrangements that do require a tuner.
>
> An inverted L, a long wire, G5RV, or an open wire fed antennas require
> an antenna tuner.
>
> Modern and most vintage transmitters and transceivers along with
> linear amplifiers have unbalanced coax outputs. Unbalanced coax
> outputs are not directly compatible with balanced or end fed antennas.
> Therefore some form of matching network, a tuner for example, is
> required for maximum power transfer from the transmitter to the
> antenna for maximum efficiency.
>
> As I stated in my previous response, not all antennas require a tuner.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> <k8jd@...> wrote:
> >
> > BRAVO ! well stated.
> >
> > When I moved to my present QTH I built all my homerew antennas to
> match 50 ohm
> > coax feed and eliminate the need to mess with a tuner.
> >
> >
> > _____
> > From: Ken <atm_ken_hunter@...>
> > To: TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thu, January 13, 2011 9:45:07 PM
> > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
> >
> >
> > It's apparent that some folks do not realize the Pi-Net output
> circuitry is in
> > fact a "tuner" that matches the final tubes Plate impedance to the Load
> > impedance and that adding another "tuner" after the Pi-Net only
> complicates
> > things.
> >
> > The external "tuner" is not needed in most cases. If the Pi-Network
> can't tune
> > it, fix it.
> >
> > Ken - KB7H
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "roberteleazer@"
> > <roberteleazer@> wrote:
> > >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

29301. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 17:45:38 UTC
From: roberteleazer@rocketmail.com
Topic: 29230 Message: 29301

Mike:

The procedure you describe is just exactly what I do to tune up, with two exceptions:

1. Before switching to the dummy load I switch the tuner to the antenna, select the coil that provides the best received signal, and adjust the "Antenna" and "Transmitter" variable caps to get the best signal. Not only should this be closer to the settings required for transmit (similar to what it is for the Drive control on the TS-820S) but it would be pointless to tune up without good reception.

2. After I have switched to the dummy load, I adjust the Transmitter and Antenna caps on the tuner while transmitting as reqired to maximize indicated RF power and minimize SWR. But you should never, ever switch coils on the antenna tuner while transmitting. Of course I do not ever do this myself but somebody at my station must because I have a small collection of burned out antenna tuner rotary switches. I have yet to apprehend the miscreant responsible. A rotary coil tuner may be a required purchase in the future to foil this terrorist. In fact, I bought a rotary tuner a couple of months back but the guy stiffed me and I never got it.

Thanks again for your insights.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Robert,
>
> Remove any CW key or CW keyer plug inserted in the 820s' rear CW socket.
>
> Note the tuners has 3 knobs, one on the left, one in the middle, and one on the right. Since I don't recall what tuner you are using I will refer to the left knob as knob "A" and the right knob as knob "B". The center knob is typically the band switch knob which must be set to the appropriate band the 820 will be using.
>
> Set knobs "A" and "B" so they point to 9 o'clock.
>
> Set the center knob to the band the 820 will be operating on.
>
> 1. Connect the 820 to the dummy load. If the tuner has a built in dummy load set the tuners' switch to dummy load. Set tuners' SWR meter to read forward power, not SWR
>
> 2. Set Mode switch to TUNE
>
> 3. Set the 820 meter switch to ALC
>
> 4. Set the CAR control at 9 or 10 o'clock

>
> 5. Flip the SEND switch UP (keys the transmitter)
>
> 6. Adjust the DRIVE control for a peak meter indication. If the meter pegs full scale to the right, reduce the CAR control so the meter points at 12 o'clock.
>
> 7. Repeat step 6 for a peak meter indication
>
> 8. Set meter switch to IP
>
> 9. Adjust the PLATE control for maximum DIP in IP meter indication (reduction in IP current)
>
> 10. While watching the tuners' power output meter, adjust the LOAD control for a peak indication.
>
> 11. Return to the PLATE control and adjust for any further dip in IP current
>
> 12. Repeat steps 10 and 11 until there is no further dip in IP current and no further peak in RF output on the tuner's power output meter.
>
> 13. Flip the SEND switch DOWN (unkeys the transmitter). Let the 820 sit for a minute or two so the final amplifier tubes can cool down.
>
> 14. Set the Mode switch to CW
>
> 15. Flip the SEND switch UP (keys the transmitter)
>
> 16. Repeat steps 10 and 11. If no further dip in IP current and no further peak of RF output is noted flip the SEND switch down (unkeys the transmitter).
>
> 17. Set the tuners' front panel control from dummy load to the tuners' antenna setting. This connects the 820 to the tuners' input.
>
> 18. Set the 820's CAR control fully CCW
>
> 19. Set the tuners' meter switch to SWR
>
> 20. Flip the SEND switch UP (keys the transmitter)
>
> 21. Rotate the CAR control to the 820s' IP meter indicates approximately 150ma. This level keeps the final current lower than the normal 225ma at full output
>
> 22. Adjust knob "A" for a reduction in the tuners' SWR meter
>
> 23. Adjust knob "B" for a further reduction in the tuners' SWR meter
>
> 24. Alternate between steps 22 and 23 until you achieve the lowest SWR reading possible. This may not be a perfect 1:1 but it should be quite low.
>

> 25. Rotate the 820s' CAR control for an IP meter indication of 225ma, set the tuners' meter to display power output. The tuners' meter should display full output, approximately 100 to 110 watts.
>
> 26. Flip the SEND switch DOWN (unkeys the transmitter).
>
> Perform the above steps "quickly". If necessary, unkey the transmitter between steps. The key is not to keep the 820 keyed at full output for more than a few seconds.
>
> I agree, the PI Network does operate similar to a tuner. The transmitters' PI Networks' job is to transform the final amplifier's output high impedance down to a much lower impedance, typically 50 ohms. The impedance range of the 820s' PI Network has a limited impedance range, between approximately 30 ohms to 100 ohms or so.
>
> An antenna tuner performs a similar function as the PI Network does. The tuner transformers a high antenna system impedance to a low impedance to match as closely as possible to the transmitters' output impedance.
>
> Not all antennas require a tuner. If the feed line is coax, the antenna is built for a certain band, and the antenna is trimmed for the lowest SWR, an antenna tuner is not needed.
>
> A G5RV antenna is considered to be an "all band" antenna. However, not all G5RV antennas will work on all HF ham bands without changing the feed line configuration. For example, a 102 foot long G5RV will not operate on 160 meters without changes made. Regardless of the length of the G5RV antenna used, a tuner is required for maximum efficiency and power transfer (lowest SWR) from the transmitter to the antenna.
>
> The ARRL handbook and other documents discuss the various types of antenna and feed lines along with what tuners to use etc. I recommend reading them for a more detailed description on this subject.
>
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > John and Mike:
> >
> > What I was trying to describe is this:
> >
> > I will switch the antenna tuner into the dummy load, put the rig in "Tune" mode and adjust for max power and minimum Ip on the radio's meter and the antenna tuner's wattmeter.
> >
> > Then I switch over to mode that will put out some power CW or SSB - still into the dummy load - and discover that my Load setting is not correct any more. In fact, I can find

820S load setting and an antenna tuner setting that look good in Tune but is exactly wrong in terms of real RF power output.
> >
> > Then if I change the Load setting everything changes. I can end up chasing the settings on the radio and the anenna tuner around. Tweak the Load control and it will make big changes in the required Antenna Tuner settings. At that point it is best to start over at Tune mode.
> >
> > It seems that with the MFJ-949E, unlike the other two antenna tuners I have tried, there are often two settings that will look good in Tune mode but will give radically different results in terms of power delivered to the dummy load. MFJ even says this is possible but with the other two tuners it did not seem to happen nearly as readily.
> >
> > Thanks!
> >
> > Robert
>

29302. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 17:55:45 UTC
From: Charlie , W5COV
Topic: 29230 Message: 29302

Gordon ,

I thought the SteppIR required paper money for a tuner . <grin>

But I love it for contesting .

Hope you are doing well .

73 , Charlie , W5COV
SKCC # 19

[Non-text portions of this message have been removed]

29303. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 18:02:08 UTC
From: w5rkl
Topic: 29230 Message: 29303

Hi Gordon,

Antennas for 80 and 160 quite often have a narrow band width. I have a 5BTV vertical that requires no tuner on all bands. Having said that, if I moved more than about 25Khz either side of the tuned vertical frequency on 80 meters the efficiency and SWR with the vertical goes to pot.

For the heck of it last year when 6 was open, I tried using the 5BTV vertical on 6 meters. I removed the 80 meter resonator so the vertical is now a 4BTV. Surprisingly I was able to work quite a few stations on 6. The SWR was below 2:1. I credit the low SWR to the 100 foot long coax run from the shack to the remote antenna switch. The vertical is not designed to operate on 6 but it was fun working stations using it.

I have a shortened 80 meter dipole that when erected as high as I can get it, allows me to work almost everyone I can hear with a low SWR without a tuner. However, the shortened 80 meter dipole has a narrow bandwidth either side of the resonant frequency. I use to check into the local area AM group a few years back, I no longer operate AM, and the dipole worked very well.

I have never tried a SteppIR but I have tried and currently use a G5RV through a Drake MN-2000 tuner. It does a very good job even though I am only able to get it up 30 feet.

I'm not a contester or DX Chaser, or awards chaser. I ragchew on CW and sometimes, when I'm in the mood, operate sideband.

I'm doing well. The weather is warming up after a week of below freezing temperatures. We had 2 inches of snow fall last week but most of it is gone now. There is still some snow in the shaded areas.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Mike,
> My SteppIR doesn't require a Tuner :-) It tunes itself Hi Hi...
> But you are correct, My Verticals both do If I move too far from the
> Band centers, especially on 80 and 160
> Hope all is well.
> 73,
> Gordon
>
> On 1/14/2011 7:52 AM, w5rkl wrote:
> >
> > Ken and John,
> >

> > While this is true for the most part, there are antennas and feed
> > lines arrangements that do require a tuner.
> >
> > An inverted L, a long wire, G5RV, or an open wire fed antennas require
> > an antenna tuner.
> >
> > Modern and most vintage transmitters and transceivers along with
> > linear amplifiers have unbalanced coax outputs. Unbalanced coax
> > outputs are not directly compatible with balanced or end fed antennas.
> > Therefore some form of matching network, a tuner for example, is
> > required for maximum power transfer from the transmitter to the
> > antenna for maximum efficiency.
> >
> > As I stated in my previous response, not all antennas require a tuner.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> > <k8jd@> wrote:
> > >
> > > BRAVO ! well stated.
> > >
> > > When I moved to my present QTH I built all my homerew antennas to
> > match 50 ohm
> > > coax feed and eliminate the need to mess with a tuner.
> > >
> > >
> > > _____
> > > From: Ken <atm_ken_hunter@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Thu, January 13, 2011 9:45:07 PM
> > > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
> > >
> > >
> > > It's apparent that some folks do not realize the Pi-Net output
> > circuitry is in
> > > fact a "tuner" that matches the final tubes Plate impedance to the Load
> > > impedance and that adding another "tuner" after the Pi-Net only
> > complicates
> > > things.
> > >
> > > The external "tuner" is not needed in most cases. If the Pi-Network
> > can't tune
> > > it, fix it.
> > >
> > > Ken - KB7H

> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "roberteleazer@"
> > > <roberteleazer@> wrote:
> > > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
>

29304. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 18:14:55 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29304

Hi Charlie,
Yes it does hi hi.
I love mine for contesting as well. I'm thinking of adding the 30/40
add-on this summer.
I am doing Great. Thanks for asking.
Feel better then I have in 15 years now that I have a new lung.
I hope all is well with you alos.
best 73,
Gordon
N6WK
SKCC # 3

On 1/14/2011 9:55 AM, Charlie , W5COV wrote:
>
> Gordon ,
>
> I thought the SteppIR required paper money for a tuner . <grin>
>
> But I love it for contesting .
>
> Hope you are doing well .
>
> 73 , Charlie , W5COV
> SKCC # 19
>
> [Non-text portions of this message have been removed]
>
>

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29305. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 18:21:24 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29305

Hi Mike,
I find the same thing with my 80 and 160 antennas. Move very far
from center and the SWR goes up quickly.
I had a Long wire a few years ago for 160, it needed a tuner for sure,
but it worked very well for me.
I have used my Butternut HF6V on 6 meters but it doesn't work as well as
my SteppIR.
I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
versatile hi hi
Our temps are rising. We are supposed to be close to 80 for the
next few days. I Love it.
Great weather to do Antenna work.

73,
Gordon
N6WK

On 1/14/2011 10:02 AM, w5rkl wrote:
>
> Hi Gordon,
>
> Antennas for 80 and 160 quite often have a narrow band width. I have a
> 5BTV vertical that requires no tuner on all bands. Having said that,
> if I moved more than about 25Khz either side of the tuned vertical
> frequency on 80 meters the efficiency and SWR with the vertical goes
> to pot.
>
> For the heck of it last year when 6 was open, I tried using the 5BTV
> vertical on 6 meters. I removed the 80 meter resonator so the vertical
> is now a 4BTV. Surprisingly I was able to work quite a few stations on
> 6. The SWR was below 2:1. I credit the low SWR to the 100 foot long
> coax run from the shack to the remote antenna switch. The vertical is
> not designed to operate on 6 but it was fun working stations using it.
>
> I have a shortened 80 meter dipole that when erected as high as I can
> get it, allows me to work almost everyone I can hear with a low SWR
> without a tuner. However, the shortened 80 meter dipole has a narrow
> bandwidth either side of the resonant frequency. I use to check into
> the local area AM group a few years back, I no longer operate AM, and
> the dipole worked very well.
>
> I have never tried a SteppIR but I have tried and currently use a G5RV
> through a Drake MN-2000 tuner. It does a very good job even though I
> am only able to get it up 30 feet.
>

> I'm not a contester or DX Chaser, or awards chaser. I ragchew on CW
> and sometimes, when I'm in the mood, operate sideband.
>
> I'm doing well. The weather is warming up after a week of below
> freezing temperatures. We had 2 inches of snow fall last week but most
> of it is gone now. There is still some snow in the shaded areas.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Mike,
> > My SteppIR doesn't require a Tuner :-) It tunes itself Hi Hi...
> > But you are correct, My Verticals both do If I move too far from the
> > Band centers, especially on 80 and 160
> > Hope all is well.
> > 73,
> > Gordon
> >
> > On 1/14/2011 7:52 AM, w5rkl wrote:
> > >
> > > Ken and John,
> > >
> > > While this is true for the most part, there are antennas and feed
> > > lines arrangements that do require a tuner.
> > >
> > > An inverted L, a long wire, G5RV, or an open wire fed antennas
> require
> > > an antenna tuner.
> > >
> > > Modern and most vintage transmitters and transceivers along with
> > > linear amplifiers have unbalanced coax outputs. Unbalanced coax
> > > outputs are not directly compatible with balanced or end fed
> antennas.
> > > Therefore some form of matching network, a tuner for example, is
> > > required for maximum power transfer from the transmitter to the
> > > antenna for maximum efficiency.
> > >
> > > As I stated in my previous response, not all antennas require a tuner.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson

> > > <k8jd@> wrote:
> > > >
> > > > BRAVO ! well stated.
> > > >
> > > > When I moved to my present QTH I built all my homerew antennas to
> > > match 50 ohm
> > > > coax feed and eliminate the need to mess with a tuner.
> > > >
> > > >
> > > > _____
> > > > From: Ken <atm_ken_hunter@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Thu, January 13, 2011 9:45:07 PM
> > > > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> > > >
> > > >
> > > > It's apparent that some folks do not realize the Pi-Net output
> > > circuitry is in
> > > > fact a "tuner" that matches the final tubes Plate impedance to
> the Load
> > > > impedance and that adding another "tuner" after the Pi-Net only
> > > complicates
> > > > things.
> > > >
> > > > The external "tuner" is not needed in most cases. If the Pi-Network
> > > can't tune
> > > > it, fix it.
> > > >
> > > > Ken - KB7H
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "roberteleazer@"
> > > > <roberteleazer@> wrote:
> > > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> >
>

29306. Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 20:54:37 UTC
From: w5rkl
Topic: 29230 Message: 29306

Temps up to 80? Man, send it this way. We were down below freezing. We could use some 70 to 80 degree weather.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Hi Mike,
> I find the same thing with my 80 and 160 antennas. Move very far
> from center and the SWR goes up quickly.
> I had a Long wire a few years ago for 160, it needed a tuner for sure,
> but it worked very well for me.
> I have used my Butternut HF6V on 6 meters but it doesn't work as well as
> my SteppIR.
> I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
> versatile hi hi
> Our temps are rising. We are supposed to be close to 80 for the
> next few days. I Love it.
> Great weather to do Antenna work.
>
> 73,
> Gordon
> N6WK
>
> On 1/14/2011 10:02 AM, w5rkl wrote:
> >
> > Hi Gordon,
> >
> > Antennas for 80 and 160 quite often have a narrow band width. I have a
> > 5BTV vertical that requires no tuner on all bands. Having said that,
> > if I moved more than about 25Khz either side of the tuned vertical
> > frequency on 80 meters the efficiency and SWR with the vertical goes
> > to pot.
> >
> > For the heck of it last year when 6 was open, I tried using the 5BTV
> > vertical on 6 meters. I removed the 80 meter resonator so the vertical
> > is now a 4BTV. Surprisingly I was able to work quite a few stations on
> > 6. The SWR was below 2:1. I credit the low SWR to the 100 foot long
> > coax run from the shack to the remote antenna switch. The vertical is
> > not designed to operate on 6 but it was fun working stations using it.
> >
> > I have a shortened 80 meter dipole that when erected as high as I can
> > get it, allows me to work almost everyone I can hear with a low SWR

> > without a tuner. However, the shortened 80 meter dipole has a narrow
> > bandwidth either side of the resonant frequency. I use to check into
> > the local area AM group a few years back, I no longer operate AM, and
> > the dipole worked very well.
> >
> > I have never tried a SteppIR but I have tried and currently use a G5RV
> > through a Drake MN-2000 tuner. It does a very good job even though I
> > am only able to get it up 30 feet.
> >
> > I'm not a contester or DX Chaser, or awards chaser. I ragchew on CW
> > and sometimes, when I'm in the mood, operate sideband.
> >
> > I'm doing well. The weather is warming up after a week of below
> > freezing temperatures. We had 2 inches of snow fall last week but most
> > of it is gone now. There is still some snow in the shaded areas.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Mike,
> > > My SteppIR doesn't require a Tuner :-) It tunes itself Hi Hi...
> > > But you are correct, My Verticals both do If I move too far from the
> > > Band centers, especially on 80 and 160
> > > Hope all is well.
> > > 73,
> > > Gordon
> > >
> > > On 1/14/2011 7:52 AM, w5rkl wrote:
> > > >
> > > > Ken and John,
> > > >
> > > > While this is true for the most part, there are antennas and feed
> > > > lines arrangements that do require a tuner.
> > > >
> > > > An inverted L, a long wire, G5RV, or an open wire fed antennas
> > require
> > > > an antenna tuner.
> > > >
> > > > Modern and most vintage transmitters and transceivers along with
> > > > linear amplifiers have unbalanced coax outputs. Unbalanced coax
> > > > outputs are not directly compatible with balanced or end fed
> > antennas.
> > > > Therefore some form of matching network, a tuner for example, is
> > > > required for maximum power transfer from the transmitter to the
> > > > antenna for maximum efficiency.
> > > >

> > > > As I stated in my previous response, not all antennas require a tuner.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> > > > <k8jd@> wrote:
> > > > >
> > > > > BRAVO ! well stated.
> > > > >
> > > > > When I moved to my present QTH I built all my homerew antennas to
> > > > match 50 ohm
> > > > > coax feed and eliminate the need to mess with a tuner.
> > > > >
> > > > >
> > > > > _____
> > > > > From: Ken <atm_ken_hunter@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > Sent: Thu, January 13, 2011 9:45:07 PM
> > > > > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > output
> > > > >
> > > > >
> > > > > It's apparent that some folks do not realize the Pi-Net output
> > > > circuitry is in
> > > > > fact a "tuner" that matches the final tubes Plate impedance to
> > the Load
> > > > > impedance and that adding another "tuner" after the Pi-Net only
> > > > complicates
> > > > > things.
> > > > >
> > > > > The external "tuner" is not needed in most cases. If the Pi-Network
> > > > can't tune
> > > > > it, fix it.
> > > > >
> > > > > Ken - KB7H
> > > > >
> > > > > --- In TS-520_820_530_830@...m
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "roberteleazer@"
> > > > > <roberteleazer@> wrote:
> > > > > >
> > > > >
> > > > >
> > > > >
> > > > >

> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > > >
> > > >
> > >
>

29307. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 21:18:53 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29307

I was going to go out and do some Antenna work today, but it is
literally too Hot out there right now.
Patio Thermometer says 80 at this Moment.

You guys can keep the Cold !!

Gordon
N6WK

On 1/14/2011 12:54 PM, w5rkl wrote:
>
> Temps up to 80? Man, send it this way. We were down below freezing. We
> could use some 70 to 80 degree weather.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Hi Mike,
> > I find the same thing with my 80 and 160 antennas. Move very far
> > from center and the SWR goes up quickly.
> > I had a Long wire a few years ago for 160, it needed a tuner for sure,
> > but it worked very well for me.
> > I have used my Butternut HF6V on 6 meters but it doesn't work as
> well as
> > my SteppIR.
> > I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
> > versatile hi hi
> > Our temps are rising. We are supposed to be close to 80 for the
> > next few days. I Love it.
> > Great weather to do Antenna work.
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/14/2011 10:02 AM, w5rkl wrote:
> > >
> > > Hi Gordon,
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> > > 6. The SWR was below 2:1. I credit the low SWR to the 100 foot long
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> G5RV
> > > through a Drake MN-2000 tuner. It does a very good job even though I
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> > > I'm not a contester or DX Chaser, or awards chaser. I ragchew on CW
> > > and sometimes, when I'm in the mood, operate sideband.
> > >
> > > I'm doing well. The weather is warming up after a week of below
> > > freezing temperatures. We had 2 inches of snow fall last week but
> most
> > > of it is gone now. There is still some snow in the shaded areas.
> > >
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> > > Mike
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> > > --- In TS-520_820_530_830@yahoogroups.com
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
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> > > > But you are correct, My Verticals both do If I move too far from the
> > > > Band centers, especially on 80 and 160
> > > > Hope all is well.
> > > > 73,
> > > > Gordon
> > > >
> > > > On 1/14/2011 7:52 AM, w5rkl wrote:

> > > > >
> > > > > Ken and John,
> > > > >
> > > > > While this is true for the most part, there are antennas and feed
> > > > > lines arrangements that do require a tuner.
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> > > > > an antenna tuner.
> > > > >
> > > > > Modern and most vintage transmitters and transceivers along with
> > > > > linear amplifiers have unbalanced coax outputs. Unbalanced coax
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> > > > > Therefore some form of matching network, a tuner for example, is
> > > > > required for maximum power transfer from the transmitter to the
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> > > > > As I stated in my previous response, not all antennas require
> a tuner.
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
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> > > > > >
> > > > > >
> > > > > > _____
> > > > > > From: Ken <atm_ken_hunter@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Thu, January 13, 2011 9:45:07 PM
> > > > > > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > > output
> > > > > >
> > > > > >

> > > > > > It's apparent that some folks do not realize the Pi-Net output
> > > > > > circuitry is in
> > > > > > > fact a "tuner" that matches the final tubes Plate impedance to
> > > > the Load
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> > > > > > >
> > > > > > > The external "tuner" is not needed in most cases. If the
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> > > > > > >
> > > > > > > Ken - KB7H
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "roberteleazer@"
> > > > > > <roberteleazer@> wrote:
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> >
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>

29308. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-14 22:04:55 UTC
From: george dumond
Topic: 29230 Message: 29308

HI Gordon ,
Please send some of that heat my way. It has been colder than flint here in MO.
Good to see you feeling better. Thanks again for all your help the old 830 is
working like a charm now!
Take care god bless
73s
George
k0gwd

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 14, 2011 3:18:53 PM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

I was going to go out and do some Antenna work today, but it is
literally too Hot out there right now.
Patio Thermometer says 80 at this Moment.

You guys can keep the Cold !!

Gordon
N6WK

On 1/14/2011 12:54 PM, w5rkl wrote:
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> well as
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> > > --- In TS-520_820_530_830@yahoogroups.com
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> > > > > > From: Ken <atm_ken_hunter@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Thu, January 13, 2011 9:45:07 PM
> > > > > > Subject: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > > output
> > > > > >
> > > > > >
> > > > > > It's apparent that some folks do not realize the Pi-Net output
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> > > > > > <roberteleazer@> wrote:
> > > > > > >
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> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

29309. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 00:40:30 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29309

Hi George,
I'd send the heat if I could, but may be tough.
I'll enjoy it for you though, rest assured! hi hi
It's 4:30 now and still almost 75 out.
Pleased the ole 830 is working good. That's what I like to hear!

73 my friend,
Gordon
N6WK

On 1/14/2011 2:04 PM, george dumond wrote:
>
> ? HI Gordon ,
> Please send some of that heat my way. It has been colder than flint
> here in MO.
> Good to see you feeling better. Thanks again for all your help the old
> 830 is
> working like a charm now!
> Take care god bless
> 73s
> George
> k0gwd
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Fri, January 14, 2011 3:18:53 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> ?
> I was going to go out and do some Antenna work today, but it is
> literally too Hot out there right now.
> Patio Thermometer says 80 at this Moment.
>
> You guys can keep the Cold !!
>
> Gordon
> N6WK
>
> On 1/14/2011 12:54 PM, w5rkl wrote:
> >
> > Temps up to 80? Man, send it this way. We were down below freezing. We
> > could use some 70 to 80 degree weather.

> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
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> > > I find the same thing with my 80 and 160 antennas. Move very far
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> > > versatile hi hi
> > > Our temps are rising. We are supposed to be close to 80 for the
> > > next few days. I Love it.
> > > Great weather to do Antenna work.
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> > > 73,
> > > Gordon
> > > N6WK
> > >
>

29310. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 03:57:12 UTC
From: Chuck Goelz
Topic: 29230 Message: 29310

17 and dropping here... Won't see 80 degrees for at least 4, more likely 5 months...

I'm so envious, Gordon!!!

Chuck, WA3CEJ
----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 14, 2011 7:40 PM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Hi George,
I'd send the heat if I could, but may be tough.
I'll enjoy it for you though, rest assured! hi hi
It's 4:30 now and still almost 75 out.
Pleased the ole 830 is working good. That's what I like to hear!

73 my friend,
Gordon
N6WK

On 1/14/2011 2:04 PM, george dumond wrote:
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> Â HI Gordon ,
> Please send some of that heat my way. It has been colder than flint
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> Good to see you feeling better. Thanks again for all your help the old
> 830 is
> working like a charm now!
> Take care god bless
> 73s
> George
> k0gwd
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Fri, January 14, 2011 3:18:53 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Â
> I was going to go out and do some Antenna work today, but it is
> literally too Hot out there right now.
> Patio Thermometer says 80 at this Moment.

>
> You guys can keep the Cold !!
>
> Gordon
> N6WK
>
> On 1/14/2011 12:54 PM, w5rkl wrote:
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> > > Our temps are rising. We are supposed to be close to 80 for the
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> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
>

[Non-text portions of this message have been removed]

29311. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 04:07:49 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29311

Brrrr, 17 is waaaay too cold for me !!
Right now it is 8PM and we have all the doors and windows open.
It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
I'm Lovin it !!

73,'s
Gordon

On 1/14/2011 7:57 PM, Chuck Goelz wrote:
>
> 17 and dropping here... Won't see 80 degrees for at least 4, more
> likely 5 months...
>
> I'm so envious, Gordon!!!
>
> Chuck, WA3CEJ
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
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> Sent: Friday, January 14, 2011 7:40 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
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> > From: "n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>" <n6wk@... <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>>
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> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > >
> > > > Hi Mike,
> > > > I find the same thing with my 80 and 160 antennas. Move very far
> > > > from center and the SWR goes up quickly.
> > > > I had a Long wire a few years ago for 160, it needed a tuner for
> sure,
> > > > but it worked very well for me.
> > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
> > > well as
> > > > my SteppIR.
> > > > I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
> > > > versatile hi hi
> > > > Our temps are rising. We are supposed to be close to 80 for the
> > > > next few days. I Love it.
> > > > Great weather to do Antenna work.

> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > > >
> >
>

29312. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 04:50:36 UTC
From: Chuck Goelz
Topic: 29230 Message: 29312

Gordon,

Yeah, too cold for me, too....

Thinking that Florida may be a better place to retire... When I was young (mid 60's) I can remember a bunch of us going up to Vermont to operate November Sweepstakes... Was a blast. It snowed ALL weekend. At the end, we cut the guys on the tower and just let it fall into the 3' feet of snow, loaded it up onto the roof of one of our cars and headed home with smiles on our faces and no issues with the cold weather... Now, at 61 I feel the cold much more deeply!!!

So glad to see that you are doing so well since the transplant... But I do wish that you would be a bit more generous and share some of that weather with us in the northeast!!!

Oh, BTW, Jerry & I were successful in repairing the TS-520 that we talked with you about about a year ago... I intend to write up the repair details for you. And thank you for the FET that you sent us -- it is being well used!!

Cheers,
Chuck, WA3CEJ

----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 14, 2011 11:07 PM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Brrrr, 17 is waaaay too cold for me !!
Right now it is 8PM and we have all the doors and windows open.
It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
I'm Lovin it !!

73,'s
Gordon

On 1/14/2011 7:57 PM, Chuck Goelz wrote:
>
> 17 and dropping here... Won't see 80 degrees for at least 4, more
> likely 5 months...
>
> I'm so envious, Gordon!!!
>
> Chuck, WA3CEJ
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Sent: Friday, January 14, 2011 7:40 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Hi George,
> I'd send the heat if I could, but may be tough.
> I'll enjoy it for you though, rest assured! hi hi
> It's 4:30 now and still almost 75 out.
> Pleased the ole 830 is working good. That's what I like to hear!
>
> 73 my friend,
> Gordon
> N6WK
>
> On 1/14/2011 2:04 PM, george dumond wrote:
> >
> > Â HI Gordon ,
> > Please send some of that heat my way. It has been colder than flint
> > here in MO.
> > Good to see you feeling better. Thanks again for all your help the old
> > 830 is
> > working like a charm now!
> > Take care god bless
> > 73s
> > George
> > k0gwd
> >
> > _____
> > From: "n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>" <n6wk@... <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Fri, January 14, 2011 3:18:53 PM
> > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> >
> > Â
> > I was going to go out and do some Antenna work today, but it is
> > literally too Hot out there right now.
> > Patio Thermometer says 80 at this Moment.
> >
> > You guys can keep the Cold !!
> >
> > Gordon
> > N6WK
> >
> > On 1/14/2011 12:54 PM, w5rkl wrote:
> > >
> > > Temps up to 80? Man, send it this way. We were down below freezing. We

> > > could use some 70 to 80 degree weather.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > >
> > > > Hi Mike,
> > > > I find the same thing with my 80 and 160 antennas. Move very far
> > > > from center and the SWR goes up quickly.
> > > > I had a Long wire a few years ago for 160, it needed a tuner for
> sure,
> > > > but it worked very well for me.
> > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
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> > > > my SteppIR.
> > > > I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
> > > > versatile hi hi
> > > > Our temps are rising. We are supposed to be close to 80 for the
> > > > next few days. I Love it.
> > > > Great weather to do Antenna work.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > >
> >

[Non-text portions of this message have been removed]

29313. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 05:09:19 UTC
From: n6wk@n6wk.com
Topic: 29230 Message: 29313

Chuck,
Please let me know what you guys found on that 520. I am always
interested in that.
I had a TS-830S and a TS-530S in here that both had a weird symptom.
Every time you tried to adjust the idle Current, anything above about 25
or 30 ma would make the IP needle PEG.
It turned out (on both of them) that the Band switch coupler had broken
and somehow bent the top plate of the Neutralization cap down so that it
was touching the next plate.
I'll know exactly what to look for if I ever see that symptom again. I
chased my tail for days on the first unit but went right to it on the
second hi hi.
I really wish I could send some of this nice weather to you guys. I have
relatives in Upstate New York and they tell me it's been a bitter Winter.
My Sister in North Carolina is begging to come stay in my spare Bedroom
for the Winter hi hi
Is Jerry ok ? I sent him an Email a couple of months ago and never
got a reply.
You are Most welcome for the MOSFET
73,
Gordon
N6WK

On 1/14/2011 8:50 PM, Chuck Goelz wrote:
>
> Gordon,
>
> Yeah, too cold for me, too....
>
> Thinking that Florida may be a better place to retire... When I was
> young (mid 60's) I can remember a bunch of us going up to Vermont to
> operate November Sweepstakes... Was a blast. It snowed ALL weekend. At
> the end, we cut the guys on the tower and just let it fall into the 3'
> feet of snow, loaded it up onto the roof of one of our cars and headed
> home with smiles on our faces and no issues with the cold weather...
> Now, at 61 I feel the cold much more deeply!!!
>
> So glad to see that you are doing so well since the transplant... But
> I do wish that you would be a bit more generous and share some of that
> weather with us in the northeast!!!
>
> Oh, BTW, Jerry & I were successful in repairing the TS-520 that we
> talked with you about about a year ago... I intend to write up the
> repair details for you. And thank you for the FET that you sent us --
> it is being well used!!

>
> Cheers,
> Chuck, WA3CEJ
>
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, January 14, 2011 11:07 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Brrrr, 17 is waaaay too cold for me !!
> Right now it is 8PM and we have all the doors and windows open.
> It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
> I'm Lovin it !!
>
> 73,'s
> Gordon
>
> On 1/14/2011 7:57 PM, Chuck Goelz wrote:
> >
> > 17 and dropping here... Won't see 80 degrees for at least 4, more
> > likely 5 months...
> >
> > I'm so envious, Gordon!!!
> >
> > Chuck, WA3CEJ
> > ----- Original Message -----
> > From: n6wk@... <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, January 14, 2011 7:40 PM
> > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> >
> > Hi George,
> > I'd send the heat if I could, but may be tough.
> > I'll enjoy it for you though, rest assured! hi hi
> > It's 4:30 now and still almost 75 out.
> > Pleased the ole 830 is working good. That's what I like to hear!
> >
> > 73 my friend,
> > Gordon
> > N6WK
> >
> > On 1/14/2011 2:04 PM, george dumond wrote:
> > >
> > > ? HI Gordon ,
> > > Please send some of that heat my way. It has been colder than flint

> > > here in MO.
> > > Good to see you feeling better. Thanks again for all your help the old
> > > 830 is
> > > working like a charm now!
> > > Take care god bless
> > > 73s
> > > George
> > > k0gwd
> > >
> > > _____
> > > From: "n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>" <n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>
> > > <mailto:n6wk%40n6wk.com>>
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Fri, January 14, 2011 3:18:53 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > output
> > >
> > > ?
> > > I was going to go out and do some Antenna work today, but it is
> > > literally too Hot out there right now.
> > > Patio Thermometer says 80 at this Moment.
> > >
> > > You guys can keep the Cold !!
> > >
> > > Gordon
> > > N6WK
> > >
> > > On 1/14/2011 12:54 PM, w5rkl wrote:
> > > >
> > > > Temps up to 80? Man, send it this way. We were down below
> freezing. We
> > > > could use some 70 to 80 degree weather.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > > >
> > > > > Hi Mike,

> > > > > I find the same thing with my 80 and 160 antennas. Move very far
> > > > > from center and the SWR goes up quickly.
> > > > > I had a Long wire a few years ago for 160, it needed a tuner for
> > sure,
> > > > > but it worked very well for me.
> > > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
> > > > well as
> > > > > my SteppIR.
> > > > > I work a lot of CW and SSB as well as some PSK and RTTY. I try
> to be
> > > > > versatile hi hi
> > > > > Our temps are rising. We are supposed to be close to 80 for the
> > > > > next few days. I Love it.
> > > > > Great weather to do Antenna work.
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> > > > > 73,
> > > > > Gordon
> > > > > N6WK
> > > > >
> > >
> >
>

29314. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 05:28:00 UTC
From: Chuck Goelz
Topic: 29230 Message: 29314

Gordon,

Yes, I will follow up on the 520 repair details... I don't have all of the details of it here at the moment, but I can tell you for sure that the low drive was NOT caused by a problem on the RF unit or any of the coil boards...

Yes, Jerry is fine. Much better after back and knee surgeries. If you emailed him and he didn't reply, then the email was never received, I'm very sure!! He's a very close friend (we were just out tonight tipping a few at the local VFW), and I know that he would not ignore an email from you!!

Cheers,
Chuck, WA3CEJ

----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 15, 2011 12:09 AM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Chuck,
Please let me know what you guys found on that 520. I am always
interested in that.
I had a TS-830S and a TS-530S in here that both had a weird symptom.
Every time you tried to adjust the idle Current, anything above about 25
or 30 ma would make the IP needle PEG.
It turned out (on both of them) that the Band switch coupler had broken
and somehow bent the top plate of the Neutralization cap down so that it
was touching the next plate.
I'll know exactly what to look for if I ever see that symptom again. I
chased my tail for days on the first unit but went right to it on the
second hi hi.
I really wish I could send some of this nice weather to you guys. I have
relatives in Upstate New York and they tell me it's been a bitter Winter.
My Sister in North Carolina is begging to come stay in my spare Bedroom
for the Winter hi hi
Is Jerry ok ? I sent him an Email a couple of months ago and never
got a reply.
You are Most welcome for the MOSFET
73,
Gordon
N6WK

On 1/14/2011 8:50 PM, Chuck Goelz wrote:
>
> Gordon,

>
> Yeah, too cold for me, too....
>
> Thinking that Florida may be a better place to retire... When I was
> young (mid 60's) I can remember a bunch of us going up to Vermont to
> operate November Sweepstakes... Was a blast. It snowed ALL weekend. At
> the end, we cut the guys on the tower and just let it fall into the 3'
> feet of snow, loaded it up onto the roof of one of our cars and headed
> home with smiles on our faces and no issues with the cold weather...
> Now, at 61 I feel the cold much more deeply!!!
>
> So glad to see that you are doing so well since the transplant... But
> I do wish that you would be a bit more generous and share some of that
> weather with us in the northeast!!!
>
> Oh, BTW, Jerry & I were successful in repairing the TS-520 that we
> talked with you about about a year ago... I intend to write up the
> repair details for you. And thank you for the FET that you sent us --
> it is being well used!!
>
> Cheers,
> Chuck, WA3CEJ
>
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, January 14, 2011 11:07 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Brrrr, 17 is waaaay too cold for me !!
> Right now it is 8PM and we have all the doors and windows open.
> It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
> I'm Lovin it !!
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> 73,'s
> Gordon
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> On 1/14/2011 7:57 PM, Chuck Goelz wrote:
> >
> > 17 and dropping here... Won't see 80 degrees for at least 4, more
> > likely 5 months...
> >
> > I'm so envious, Gordon!!!
> >
> > Chuck, WA3CEJ
> > ----- Original Message -----
> > From: n6wk@... <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, January 14, 2011 7:40 PM
> > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> >
> > Hi George,
> > I'd send the heat if I could, but may be tough.
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> > It's 4:30 now and still almost 75 out.
> > Pleased the ole 830 is working good. That's what I like to hear!
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> > 73 my friend,
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> > On 1/14/2011 2:04 PM, george dumond wrote:
> > >
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> > > Good to see you feeling better. Thanks again for all your help the old
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> <mailto:n6wk%40n6wk.com>
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Fri, January 14, 2011 3:18:53 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > output
> > > >
> > > Â
> > > I was going to go out and do some Antenna work today, but it is
> > > literally too Hot out there right now.
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> > > Gordon

> > > N6WK
> > >
> > > On 1/14/2011 12:54 PM, w5rkl wrote:
> > > >
> > > > Temps up to 80? Man, send it this way. We were down below
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> > > > could use some 70 to 80 degree weather.
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> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > > >
> > > > > Hi Mike,
> > > > > I find the same thing with my 80 and 160 antennas. Move very far
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> > > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
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> > > > > my SteppIR.
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> > > > >
> > > > > 73,
> > > > > Gordon
> > > > > N6WK
> > > > >
> > > >
> > >
> >
>

[Non-text portions of this message have been removed]

29315. TS-820S display reading 19.0000

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 13:12:56 UTC
From: Peter Carter
Topic: 28723 Message: 29315

Yea I know, this question have been asked 10000 times before, but here is a twist to it.

My TS-820S display was working just fine, then it stopped completely(BLANK). I took it apart as I have done before, cleaned ALL of the contacts, re-soldered some joints, sand down the areas where the screws make contact to the case....basically did all that I can to establish a good contact. Put it back together, turn it on and bingo it worked(so I thought)...well it did but only on the higher bands, on 1.8, 7, and 3.5 it displays 9.000.0., all others are ok.

Question, can this be related to the band switch given that I have cleaned this completely?

Thanks,

29316. Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 13:13:42 UTC
From: Tom
Topic: 29316 Message: 29316

I've not been able to contact Ken via email or phone in the last few weeks. I just wanted to confirm his mailing address before I send him my trusty 830S for it's 25yr physical checkup. Can anyone one confirm his most recent mailing address? Is he possibly on vacation?

Thanks for any help.

Tom
W4TMW

29317. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 13:35:51 UTC
From: ki4ax
Topic: 29316 Message: 29317

Tom,

Ken's address is:
3745 Allenwood St.
Sarasota, Fl 34232

This is the return address off a box of stuff I ordered a couple of month's ago. I suppose it is possible that he is on vacation but usually he will set his e-mail for an auto reply when he is away. I know he suffers from cluster headaches from time to time and I know that it takes him out for a week or so when it happens. I don't know what's up right now but I know that he is usually pretty good about answering his e-mails.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <mtnest@...> wrote:
>
>
>
> I've not been able to contact Ken via email or phone in the last few weeks. I just wanted to confirm his mailing address before I send him my trusty 830S for it's 25yr physical checkup. Can anyone one confirm his most recent mailing address? Is he possibly on vacation?
>
> Thanks for any help.
>
> Tom
> W4TMW
>

29318. Re: TS-820S display reading 19.0000

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 13:43:49 UTC
From: w5rkl
Topic: 28723 Message: 29318

Good morning Peter,

I going to assume the 820 itself is working fine but the digital display is having problems. Is that correct?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> Yea I know, this question have been asked 10000 times before, but here is a twist to it.
>
> My TS-820S display was working just fine, then it stopped completely(BLANK). I took it apart as I have done before, cleaned ALL of the contacts, re-soldered some joints, sand down the areas where the screws make contact to the case....basically did all that I can to establish a good contact. Put it back together, turn it on and bingo it worked(so I thought)...well it did but only on the higher bands, on 1.8, 7, and 3.5 it displays 9.000.0., all others are ok.
>
> Question, can this be related to the band switch given that I have cleaned this completely?
>
> Thanks,
>

29319. Re: TS-820S display reading 19.0000

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 15:40:59 UTC
From: w5rkl
Topic: 28723 Message: 29319

Peter,

If you have access to a frequency counter you can check and, if necessary, adjust the 1Mhz reference oscillator in the DG-1 digital display.

With the digital display module installed in the 820 and connected to the plugs, look at the top of the digital display module. There you will see a long row of pins where the display tube, behind the 820 front panel, connects. Next to this row of pins are a row of "3" pins. The 3 pins are, front to back;

Top of the digital display module
<.....> CL2 G CL1 o

The "<.....>" shown above are the multiple pins the display tube behind the front panel plugs into.

The "o" shown above to the right of "CL2 G CL1" is the small hole next to the 3 pins.

You do not need the 3 pin plug as shown in the 820 service manual, page 48. Small alligator clips or small round female sockets attached to the braid and center conductor of a shield cable (short length of RG-174 will do fine) will work. Just be sure you do not short CL1 and G together.

Short "CL2" and "G" pins together.

Connect a frequency counter, cables' center conductor to "CL1" and cables shield to "G".

Power up the 820 and note the frequency displayed on the frequency counter, NOT the 820s' front panel display display.

If the frequency displayed on the frequency counter is NOT 1Mhz +/- 5Hz, use a plastic aligning tool and adjust TC1 through the small hole on the top of the digital display module so the frequency counter displays 1Mhz +/- 5Hz.

Check for proper display of the 820s' digital display bands on ALL bands.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> Yea I know, this question have been asked 10000 times before, but here is a twist to it.
>
> My TS-820S display was working just fine, then it stopped completely(BLANK). I took it apart as I have done before, cleaned ALL of the contacts, re-soldered some joints, sand down the areas where the screws make contact to the case....basically did all that I can to establish a good contact. Put it back together, turn it on and bingo it worked(so I

thought)...well it did but only on the higher bands, on 1.8, 7, and 3.5 it displays 9.000.0., all others are ok.
>
> Question, can this be related to the band switch given that I have cleaned this completely?
>
> Thanks,
>

29320. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 16:01:19 UTC
From: Jerry Keller (K3BZ)
Topic: 29230 Message: 29320

?Chuck's right, Gordon, either I didn't get it or I lost it, but I would never ignore an email from you. Did you send it on the reflector or direct to my k3bz address?
Concerning the 520 which now works very well and looks terrific in Chuck's shack with the rest of his Kenwood gear, a properly detailed technical write-up would have to come from Chuck... he's the brains here... but I can join him equally in thanking you for the parts and the help. The 520 is a gem and I think I learned quite a bit assisting Chuck in its repair.
Speaking of repairs, last year was a humdinger... 4 surgeries and they all went very well. And like the 520, I now have some new parts! Good to hear you are doing well also. Onward and upward!

73, Jerry K3BZ

-----Original Message-----
From: Chuck Goelz
Sent: Saturday, January 15, 2011 12:28 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Gordon,

Yes, I will follow up on the 520 repair details... I don't have all of the details of it here at the moment, but I can tell you for sure that the low drive was NOT caused by a problem on the RF unit or any of the coil boards...

Yes, Jerry is fine. Much better after back and knee surgeries. If you emailed him and he didn't reply, then the email was never received, I'm very sure!! He's a very close friend (we were just out tonight tipping a few at the local VFW), and I know that he would not ignore an email from you!!

Cheers,
Chuck, WA3CEJ

----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 15, 2011 12:09 AM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Chuck,
Please let me know what you guys found on that 520. I am always interested in that.
I had a TS-830S and a TS-530S in here that both had a weird symptom. Every time you tried to adjust the idle Current, anything above about 25 or 30 ma would make the IP needle PEG.

It turned out (on both of them) that the Band switch coupler had broken and somehow bent the top plate of the Neutralization cap down so that it was touching the next plate.
I'll know exactly what to look for if I ever see that symptom again. I chased my tail for days on the first unit but went right to it on the second hi hi.
I really wish I could send some of this nice weather to you guys. I have relatives in Upstate New York and they tell me it's been a bitter Winter. My Sister in North Carolina is begging to come stay in my spare Bedroom for the Winter hi hi
Is Jerry ok ? I sent him an Email a couple of months ago and never got a reply.
You are Most welcome for the MOSFET
73,
Gordon
N6WK

On 1/14/2011 8:50 PM, Chuck Goelz wrote:
>
> Gordon,
>
> Yeah, too cold for me, too....
>
> Thinking that Florida may be a better place to retire... When I was
> young (mid 60's) I can remember a bunch of us going up to Vermont to
> operate November Sweepstakes... Was a blast. It snowed ALL weekend. At
> the end, we cut the guys on the tower and just let it fall into the 3'
> feet of snow, loaded it up onto the roof of one of our cars and headed
> home with smiles on our faces and no issues with the cold weather...
> Now, at 61 I feel the cold much more deeply!!!
>
> So glad to see that you are doing so well since the transplant... But
> I do wish that you would be a bit more generous and share some of that
> weather with us in the northeast!!!
>
> Oh, BTW, Jerry & I were successful in repairing the TS-520 that we
> talked with you about about a year ago... I intend to write up the
> repair details for you. And thank you for the FET that you sent us --
> it is being well used!!
>
> Cheers,
> Chuck, WA3CEJ
>
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, January 14, 2011 11:07 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
output

>
> Brrrr, 17 is waaaay too cold for me !!
> Right now it is 8PM and we have all the doors and windows open.
> It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
> I'm Lovin it !!
>
> 73,'s
> Gordon
>
> On 1/14/2011 7:57 PM, Chuck Goelz wrote:
> >
> > 17 and dropping here... Won't see 80 degrees for at least 4, more
> > likely 5 months...
> >
> > I'm so envious, Gordon!!!
> >
> > Chuck, WA3CEJ
> > ----- Original Message -----
> > From: n6wk@... <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, January 14, 2011 7:40 PM
> > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> >
> > Hi George,
> > I'd send the heat if I could, but may be tough.
> > I'll enjoy it for you though, rest assured! hi hi
> > It's 4:30 now and still almost 75 out.
> > Pleased the ole 830 is working good. That's what I like to hear!
> >
> > 73 my friend,
> > Gordon
> > N6WK
> >
> > On 1/14/2011 2:04 PM, george dumond wrote:
> > >
> > > ? HI Gordon ,
> > > Please send some of that heat my way. It has been colder than flint
> > > here in MO.
> > > Good to see you feeling better. Thanks again for all your help the
> old
> > > 830 is
> > > working like a charm now!
> > > Take care god bless
> > > 73s
> > > George
> > > k0gwd
> > >

> > > _____
> > > From: "n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>" <n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>
> > > <mailto:n6wk%40n6wk.com>>
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Fri, January 14, 2011 3:18:53 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> > output
> > > >
> > > ?
> > > I was going to go out and do some Antenna work today, but it is
> > > literally too Hot out there right now.
> > > Patio Thermometer says 80 at this Moment.
> > > >
> > > You guys can keep the Cold !!
> > > >
> > > Gordon
> > > N6WK
> > > >
> > > On 1/14/2011 12:54 PM, w5rkl wrote:
> > > > >
> > > > Temps up to 80? Man, send it this way. We were down below
> freezing. We
> > > > could use some 70 to 80 degree weather.
> > > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > > > >
> > > > > Hi Mike,
> > > > > I find the same thing with my 80 and 160 antennas. Move very far
> > > > > from center and the SWR goes up quickly.
> > > > > I had a Long wire a few years ago for 160, it needed a tuner for
> > sure,
> > > > > but it worked very well for me.
> > > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
> > > > well as
> > > > > my SteppIR.
> > > > > I work a lot of CW and SSB as well as some PSK and RTTY. I try

> to be
> > > > > versatile hi hi
> > > > > Our temps are rising. We are supposed to be close to 80 for the
> > > > > next few days. I Love it.
> > > > > Great weather to do Antenna work.
> > > > >
> > > > > 73,
> > > > > Gordon
> > > > > N6WK
> > > > >
> > >
> >
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

29321. 820 and the weather

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 16:43:58 UTC
From: Bob
Topic: 29321 Message: 29321

Gordon, Mike and the group

On this Saturday morning I am getting caught up on all the posts. Gordon I am enjoying the weather as well here in So Cal. It is 72 deg at 7:30 AM and we will be in the low to mid 80â□□s again today. Yes a great day to do antenna work or for that matter go surfing this morning and then to the local mountains to go snow ski in the afternoon. Love So Cal. We do have a lot of houses for sale so all those that are looking for a warm climate there is no excuses now!
I have to tell everyone this is so much fun reading all these posts. I enjoy all of them.
Gordon it is great to hear you are doing so well. Keep it up. Not only for the group but some day I will have to bring you my 820 that I have never found the issue. My old test bench has failed me and I put the 820 on the shelf to come back and look at it another day.
Still only receives strong very local stations, and no RF output. It can transmit and receive across the room on all bands track both Transmit and Receive Audio, Vox, controls all work. So it can work DX to the next room. So some day you can coach me step by step on how to find the issue.
Happy New Year to all
73
Bob Musser
KB6KPK

29322. TS-520s Alignment Tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 05:52:16 UTC
From: morsenut
Topic: 29322 Message: 29322

Many years ago, I was working on a TS-520 that had a few minor issues - I got it working pretty good but it needed a bit more attention.

I still have it in my basement and plan to get back to it - even though it has been several years since I have been active (and who knows what I will find when I take it out of storage).

Anyway, do any of you guys remember that the 520 originally came with a tapered hex-shaped tuning rod that was used to align the rig?

Am I correct about that? I think the owners' manual mentions it.

As I recall, I stopped working on the radio because I did not have that tool and could not find one anywhere.

Anyone have or know where to get one?

73 to all,

Tim
WU3U

29323. TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 14:32:09 UTC
From: silverstone38s
Topic: 29323 Message: 29323

Most of you who responded to my first post (thank you very much!) know that I'm new to the ham world, as well as to this level of electronics. My working TS-530S is on its way to me and I continue to work through the following books:

ARRL Ham Radio License Manual - Technician
US Postal Service Electrical Fundamentals 1970
FCC Regs Part 97
Getting Started in Electronics - Forrest Mimms III 1983

I am on the lookout for books that you have recommended, such as 1940s-1960s manuals, including John Frye's Basic Radio, but have not had luck yet.

As I scour the thrift shops, etc., looking for books, I might also come across some electronics equipment and am curious what I should be looking for. I see many times that those posting questions are told to test this or that, so it makes sense to have some basic meters/tools with which to work.

I have some basic digital Volt meters and a small analog Micronta, both of which measure Ohms as well. I also have an adjustable Weller soldering station - low end, but not bad. I also have a Weller 140/100 watts soldering gun. I even acquired a work bench, complete with anti-static mat, solution, and a grounded wrist strap a couple years ago. All I was looking for was a bench and the company was closing. The woman said they had sold all of the benches, then realized that one was covered in boxes, etc. When we uncovered it, it was in great shape and had all the grounding straps attached. I'll take it!

Anyway, a local shop has an autoranging capacitance meter for sale. Made by BK for $50 and I'm wondering if that's something worth having for basic diagnostics. I know this is a bit of "cart before the horse", but I can't focus on just studying. I have to spread the "energy" around. It's just how I roll.

So, any thoughts you have on diagnostic equipment that will help you, help me, please speak out.

thanks

29324. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 15:49:55 UTC
From: zapvss
Topic: 29316 Message: 29324

I sent him an email this week to order some parts but have not received a reply, 3 days now. I hope he is OK.

Denis KB9CHF

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Tom,
>
> Ken's address is:
> 3745 Allenwood St.
> Sarasota, Fl 34232
>
> This is the return address off a box of stuff I ordered a couple of month's ago. I suppose it is possible that he is on vacation but usually he will set his e-mail for an auto reply when he is away. I know he suffers from cluster headaches from time to time and I know that it takes him out for a week or so when it happens. I don't know what's up right now but I know that he is usually pretty good about answering his e-mails.
>
> Dan KI4AX
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Tom" <mtnest@> wrote:
> >
> >
> >
> > I've not been able to contact Ken via email or phone in the last few weeks. I just wanted to confirm his mailing address before I send him my trusty 830S for it's 25yr physical checkup. Can anyone one confirm his most recent mailing address? Is he possibly on vacation?
> >
> > Thanks for any help.
> >
> > Tom
> > W4TMW
> >
>

29325. Re: [TS-520_820_530_830] TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 17:34:57 UTC
From: Charlie , W5COV
Topic: 29323 Message: 29325

I find www.abebooks.com as a very useful site to look for books that are no longer in print .

The prices may vary widely since these are individuals that sell used books .

However I have picked up many real gems for a buck or two .

Usual Disclaimer no financial interest , just a satisfied customer .

Charlie , W5COV

[Non-text portions of this message have been removed]

29326. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 17:38:16 UTC
From: Tom
Topic: 29316 Message: 29326

Thanks to Dan and Dennis for the info. Well, that's the address I have too but this morning I found that the phone no. I was using was not correct. However, the email I used was taken from his website so I suppose it was correct. Anyway, I feel a little uncomfortable sending my rig until I know there will be someone to accept it.
Maybe he's just on vacation or really busy.

Thanks again to you both...

73
Tom

29327. Re: [TS-520_820_530_830] Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 17:55:42 UTC
From: n6wk@n6wk.com
Topic: 29316 Message: 29327

Tom,
Best advice is to Talk to ken before sending any Rigs. I know he is
around 2 months backed up at present.

73,
Gordon

On 1/15/2011 9:38 AM, Tom wrote:
>
>
>
> Thanks to Dan and Dennis for the info. Well, that's the address I have
> too but this morning I found that the phone no. I was using was not
> correct. However, the email I used was taken from his website so I
> suppose it was correct. Anyway, I feel a little uncomfortable sending
> my rig until I know there will be someone to accept it.
> Maybe he's just on vacation or really busy.
>
> Thanks again to you both...
>
> 73
> Tom
>
>

29328. Re: TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 17:46:57 UTC
From: silverstone38s
Topic: 29323 Message: 29328

--- In TS-520_820_530_830@yahoogroups.com, "Charlie , W5COV" <cvest@...> wrote:
>
> I find www.abebooks.com as a very useful site to look for books that are no longer in print .
>
> The prices may vary widely since these are individuals that sell used books .
>
> However I have picked up many real gems for a buck or two .
>
> Usual Disclaimer no financial interest , just a satisfied customer .
>
> Charlie , W5COV
>
> [Non-text portions of this message have been removed]
>

Thanks Charlie. I was on there this morning, as I found an old article on John Fyre and the author mentioned ABE as well. I'll dig a little deeper on that site and see what comes up.

29329. Re: [TS-520_820_530_830] Re: TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 18:09:10 UTC
From: Jim Atkins
Topic: 29323 Message: 29329

Another favorite site is http://www.addall.com/

----- Original Message -----
From: silverstone38s
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 15, 2011 12:46 PM
Subject: [TS-520_820_530_830] Re: TS-530S is on the way, what type of test equipment should I be looking for?

--- In TS-520_820_530_830@yahoogroups.com, "Charlie , W5COV" <cvest@...> wrote:
>
> I find www.abebooks.com as a very useful site to look for books that are no longer in print .
>
> The prices may vary widely since these are individuals that sell used books .
>
> However I have picked up many real gems for a buck or two .
>
> Usual Disclaimer no financial interest , just a satisfied customer .
>
> Charlie , W5COV
>
> [Non-text portions of this message have been removed]
>

Thanks Charlie. I was on there this morning, as I found an old article on John Fyre and the author mentioned ABE as well. I'll dig a little deeper on that site and see what comes up.

[Non-text portions of this message have been removed]

29330. Re: TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 18:13:53 UTC
From: silverstone38s
Topic: 29323 Message: 29330

Thanks guys. I also just found my Cen-Tech Multi-meter. Certainly not top of the line, but it does the following:

Voltage test
Current test
Resistance test
Capacitance test
Measure Frequency
Continuity and Diode test
Transistor Test

29331. Re: [TS-520_820_530_830] Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 21:27:47 UTC
From: Joseph Stiles
Topic: 29316 Message: 29331

Tom,

I do know that Ken (k4eaa) will only take your rig if you contact him prior to sending any rig AND he will give you a "send to me date." He's really busy...and has a lot of other things going on besides fixin' KW hybrids.

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 15, 2011 9:55:42 AM
Subject: Re: [TS-520_820_530_830] Re: Address for K4EAA...

Tom,
Best advice is to Talk to ken before sending any Rigs. I know he is around 2 months backed up at present.

73,
Gordon

On 1/15/2011 9:38 AM, Tom wrote:
>
>
>
> Thanks to Dan and Dennis for the info. Well, that's the address I have
> too but this morning I found that the phone no. I was using was not
> correct. However, the email I used was taken from his website so I
> suppose it was correct. Anyway, I feel a little uncomfortable sending
> my rig until I know there will be someone to accept it.
> Maybe he's just on vacation or really busy.
>
> Thanks again to you both...
>
> 73
> Tom
>
>

[Non-text portions of this message have been removed]

29332. Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-15 22:06:55 UTC
From: W8HW
Topic: 29230 Message: 29332

I have to admit that I have never been sorry for moving to Florida... Bruce, W8HW
-- I Buy and/or repair Broke (Broke or not broke) 2-way radios --

Commercial 2-way-Marine-Ham-CB-Broadcast

w8hw@...

----- Original Message -----
From: Chuck Goelz
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 14, 2011 11:50 PM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Gordon,

Yeah, too cold for me, too....

Thinking that Florida may be a better place to retire... When I was young (mid 60's) I can remember a bunch of us going up to Vermont to operate November Sweepstakes... Was a blast. It snowed ALL weekend. At the end, we cut the guys on the tower and just let it fall into the 3' feet of snow, loaded it up onto the roof of one of our cars and headed home with smiles on our faces and no issues with the cold weather... Now, at 61 I feel the cold much more deeply!!!

So glad to see that you are doing so well since the transplant... But I do wish that you would be a bit more generous and share some of that weather with us in the northeast!!!

Oh, BTW, Jerry & I were successful in repairing the TS-520 that we talked with you about about a year ago... I intend to write up the repair details for you. And thank you for the FET that you sent us -- it is being well used!!

Cheers,
Chuck, WA3CEJ

----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, January 14, 2011 11:07 PM
Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output

Brrrr, 17 is waaaay too cold for me !!
Right now it is 8PM and we have all the doors and windows open.
It's like a Summers evening here. Clear skies, lots of Stars and WARM !!
I'm Lovin it !!

73,'s
Gordon

On 1/14/2011 7:57 PM, Chuck Goelz wrote:
>
> 17 and dropping here... Won't see 80 degrees for at least 4, more
> likely 5 months...
>
> I'm so envious, Gordon!!!
>
> Chuck, WA3CEJ
> ----- Original Message -----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Friday, January 14, 2011 7:40 PM
> Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF output
>
> Hi George,
> I'd send the heat if I could, but may be tough.
> I'll enjoy it for you though, rest assured! hi hi
> It's 4:30 now and still almost 75 out.
> Pleased the ole 830 is working good. That's what I like to hear!
>
> 73 my friend,
> Gordon
> N6WK
>
> On 1/14/2011 2:04 PM, george dumond wrote:
> >
> > Â HI Gordon ,
> > Please send some of that heat my way. It has been colder than flint
> > here in MO.
> > Good to see you feeling better. Thanks again for all your help the old
> > 830 is
> > working like a charm now!
> > Take care god bless
> > 73s
> > George
> > k0gwd
> >
> > _____
> > From: "n6wk@... <mailto:n6wk%40n6wk.com>
> <mailto:n6wk%40n6wk.com>" <n6wk@... <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Fri, January 14, 2011 3:18:53 PM
> > Subject: Re: [TS-520_820_530_830] Re: Sudden Decrease in TS-820S RF
> output
> >
> > Â
> > I was going to go out and do some Antenna work today, but it is

> > literally too Hot out there right now.
> > Patio Thermometer says 80 at this Moment.
> >
> > You guys can keep the Cold !!
> >
> > Gordon
> > N6WK
> >
> > On 1/14/2011 12:54 PM, w5rkl wrote:
> > >
> > > Temps up to 80? Man, send it this way. We were down below freezing. We
> > > could use some 70 to 80 degree weather.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> > > >
> > > > Hi Mike,
> > > > I find the same thing with my 80 and 160 antennas. Move very far
> > > > from center and the SWR goes up quickly.
> > > > I had a Long wire a few years ago for 160, it needed a tuner for
> sure,
> > > > but it worked very well for me.
> > > > I have used my Butternut HF6V on 6 meters but it doesn't work as
> > > well as
> > > > my SteppIR.
> > > > I work a lot of CW and SSB as well as some PSK and RTTY. I try to be
> > > > versatile hi hi
> > > > Our temps are rising. We are supposed to be close to 80 for the
> > > > next few days. I Love it.
> > > > Great weather to do Antenna work.
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > >
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29333. Re: [TS-520_820_530_830] Re: TS-530S is on the way, what type of test equipment should I be looking for?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 01:24:18 UTC
From: Charlie , W5COV
Topic: 29323 Message: 29333

There are some people on there that want prices higher than eBay , but many times the same exact book is available for a dollar or two .

I have a nice library of books that I had been looking for , that I found on there where the shipping was more than the book .

I check it often when I remember a book from my past , or see one mentioned on a group as a good reference or circuit book .

I don't think I have ever paid more than $10 for a really hard to find book . It may take me a few months of waiting , but what you are looking for will usually show up at a decent price .

GOOD LUCK !!

Charlie , W5COV

> I find www.abebooks.com as a very useful site to look for books that are no longer in print .
>
> The prices may vary widely since these are individuals that sell used books .
>
> However I have picked up many real gems for a buck or two .
>
> Usual Disclaimer no financial interest , just a satisfied customer .
>
> Charlie , W5COV
>
> [Non-text portions of this message have been removed]
>

Thanks Charlie. I was on there this morning, as I found an old article on John Fyre and the author mentioned ABE as well. I'll dig a little deeper on that site and see what comes up.

[Non-text portions of this message have been removed]

29334. TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 01:56:02 UTC
From: alancgut
Topic: 29334 Message: 29334

Hello All,

I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.

This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.

Idling current shows OK at 60ma. HV shows OK at about 900v. SG switch is on. Tried a different 12BY7 I had here and no change. All voltages on the 12BY7 socket check out per K4EAA schematic. That's as far as I got so far.

I checked all previous posts here and see recommendations to change out R5 & R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.

I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.

Regards, Alan WB2FZC

29335. Re: TS-520s Alignment Tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 04:33:50 UTC
From: mydogchillroy
Topic: 29322 Message: 29335

Tim,
Ken has them for the 520 see the link below
520 alignment tool <http://www.k4eaa.com/parts.htm>
Alternatively, Arcade Electronics has a 10 piece nylon tool set, part #
90-804:
Cal-Rad 90-804http://www.arcade-electronics.com/detail.aspx?ID=20139
<http://www.arcade-electronics.com/detail.aspx?ID=20139>
Hope this helps,
73james aj4vp

<http://www.arcade-electronics.com/detail.aspx?ID=20139> --- In
TS-520_820_530_830@yahoogroups.com, "morsenut" <morsenut@...> wrote:
>
> Many years ago, I was working on a TS-520 that had a few minor issues
- I got it working pretty good but it needed a bit more attention.
>
> I still have it in my basement and plan to get back to it - even
though it has been several years since I have been active (and who knows
what I will find when I take it out of storage).
>
> Anyway, do any of you guys remember that the 520 originally came with
a tapered hex-shaped tuning rod that was used to align the rig?
>
> Am I correct about that? I think the owners' manual mentions it.
>
> As I recall, I stopped working on the radio because I did not have
that tool and could not find one anywhere.
>
> Anyone have or know where to get one?
>
> 73 to all,
>
> Tim
> WU3U
>

[Non-text portions of this message have been removed]

29336. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 04:36:45 UTC
From: alancgut
Topic: 29334 Message: 29336

Update....

Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.

This points to looking at the two resistors R15 & R16 on the rectifier board mentioned in a previous post (must have been a typo previously as R5&R6 were stated). I measured them in circuit and get about 35K on each. However, I did a little "wiggling" of R16 with the test lead and she jumps to near continuity, so I have something going on there. I'll pull the board tomorrow, pop the resistors and check them and check all soldering.

Note that my digital fluke was jumping around trying to find a value. Hard to see what was going on. So, I pulled out my Simpson analog to take a look. You could see the drop immediately on the good ole analog meter.

Any other ideas?

Regards. Alan, WB2FZC

> Hello All,
>
> I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.
>
> This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.
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>
> I checked all previous posts here and see recommendations to change out R5 & R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.
>
> I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.
>
> Regards, Alan WB2FZC
>

29337. TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:01:45 UTC
From: Joseph Stiles
Topic: 29337 Message: 29337

Greeting Group!

Took another closet queen out to see why the 2 high bands were not working correctly. The big tip off was the display. I figured..what the heck..let's check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I could not get proper frequency on my counter. I was following the procedure in the service manual on Pg 52 # 5-2.

I pulled the PLL out and took a look inside. 2 screws were missing that hold down X60-1010...so..continued to dismantle the unit and on the VCO found 2 XTALS, X9 & X10 that were obvious not from the factory. Missing the blue plastic wrap with the freq. on it..etc. These were straight metal cans with freq on the top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this mod let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ. Now gotta go dig through some parts and find some replacements.

I up loaded some pictures. It will be listed under TS-820(S) CB HACK

73's joe wb7uqu

[Non-text portions of this message have been removed]

29338. Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:11:30 UTC
From: Joseph Stiles
Topic: 29337 Message: 29338

Sorry for the "TYPO" 3rd line should read 29 & 29.5MHz ...not 29.9

joe

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 15, 2011 9:01:45 PM
Subject: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack

Greeting Group!

Took another closet queen out to see why the 2 high bands were not working correctly. The big tip off was the display. I figured..what the heck..let's check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I could not get proper frequency on my counter. I was following the procedure in the service manual on Pg 52 # 5-2.

I pulled the PLL out and took a look inside. 2 screws were missing that hold down X60-1010...so..continued to dismantle the unit and on the VCO found 2 XTALS, X9 & X10 that were obvious not from the factory. Missing the blue plastic

wrap with the freq. on it..etc. These were straight metal cans with freq on the top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this mod

let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ. Now gotta go dig through some parts and find some replacements.

I up loaded some pictures. It will be listed under TS-820(S) CB HACK

73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29339. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:12:25 UTC
From: w5rkl
Topic: 29334 Message: 29339

Hi Alan,

Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.

The resistors, R15 and R16, form a voltage divider on the Rectifier Unit and only in TUNE mode. The normal screen voltage to the final tubes, CW, USB, and LSB Mode switch positions, originates at the Rectifier Units' "SG2" terminal. When the 830 is placed in TUNE mode the screen voltage flows from the "SG2" line on the Rectifier Unit through R15 and R16 with the screen voltage being applied through the Mode switch, in TUNE Mode, at the junction of R15 and R15 on the Rectifier Unit. This results in a lower final tube screen voltage at the Rectifier Unit's "TUNE" terminal, to both final tubes to protect the final tubes during tune up.

If either of the resistors have failed, for what ever reason (resistance has increased significantly, resistors are burnt/cracked, or the solder connection on the PC board foil has failed), the final tube screen voltage will be significantly less than the normal screen voltage which results in a significant reduction in power output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@...> wrote:
>
> Update....
>
> Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
>
> This points to looking at the two resistors R15 & R16 on the rectifier board mentioned in a previous post (must have been a typo previously as R5&R6 were stated). I measured them in circuit and get about 35K on each. However, I did a little "wiggling" of R16 with the test lead and she jumps to near continuity, so I have something going on there. I'll pull the board tomorrow, pop the resistors and check them and check all soldering.
>
> Note that my digital fluke was jumping around trying to find a value. Hard to see what was going on. So, I pulled out my Simpson analog to take a look. You could see the drop immediately on the good ole analog meter.
>
> Any other ideas?
>
> Regards. Alan, WB2FZC
>
>

>
> > Hello All,
> >
> > I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.
> >
> > This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.
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> >
> > I checked all previous posts here and see recommendations to change out R5 & R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.
> >
> > I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.
> >
> > Regards, Alan WB2FZC
> >
>

29340. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:15:46 UTC
From: w5rkl
Topic: 29334 Message: 29340

One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Alan,
>
> Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.
>
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>
> If either of the resistors have failed, for what ever reason (resistance has increased significantly, resistors are burnt/cracked, or the solder connection on the PC board foil has failed), the final tube screen voltage will be significantly less than the normal screen voltage which results in a significant reduction in power output.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> >
> > Update....
> >
> > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of

each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
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> > Regards. Alan, WB2FZC
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> >
> >
> > > Hello All,
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> > > Regards, Alan WB2FZC
> > >
> >
>

29341. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:33:23 UTC
From: alancgut
Topic: 29334 Message: 29341

Mike,

All that you have said makes sense but I do not get full power in the CW mode either. Maybe something else is going on also. I'll check further tomorrow on the SG2 circuitry and let you know.

Alan, WB2FZC

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Alan,
> >
> > Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.
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> > 73s
> > Mike
> > W5RKL
> >

> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> > >
> > > Update....
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> > > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
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> > > > Regards, Alan WB2FZC
> > > > >
> > > >
> > >
> >

29342. Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 05:54:56 UTC
From: Joseph Stiles
Topic: 29337 Message: 29342

OK..one more "TYPO"... this board with the modification is the PD board
X50-1340 on the other side of the VCO in the metal PLL box

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 15, 2011 9:11:30 PM
Subject: Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack

Sorry for the "TYPO" 3rd line should read 29 & 29.5MHz ...not 29.9

joe

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 15, 2011 9:01:45 PM
Subject: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack

Greeting Group!

Took another closet queen out to see why the 2 high bands were not working
correctly. The big tip off was the display. I figured..what the heck..let's
check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I
could not get proper frequency on my counter. I was following the procedure in
the service manual on Pg 52 # 5-2.

I pulled the PLL out and took a look inside. 2 screws were missing that hold
down X60-1010...so..continued to dismantle the unit and on the VCO found 2
XTALS, X9 & X10 that were obvious not from the factory. Missing the blue plastic

wrap with the freq. on it..etc. These were straight metal cans with freq on the
top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this mod

let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ.
Now gotta go dig through some parts and find some replacements.

I up loaded some pictures. It will be listed under TS-820(S) CB HACK

73's joe wb7uqu

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29343. Thank you

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 06:55:56 UTC
From: Tom H
Topic: 29343 Message: 29343

I just wanted to say a big thank you to all of the knowledgable people in this group. I've been through my TS820S from top to bottom and it is performing factory fresh. Tomorrow is VE testing, so by this time tomorrow night I should have my General and will be able to fully enjoy this fine piece of radio gear. I've received excellent signal reports on 10 meters and am looking forward to exploring more of the bands, Tom KD7CDC

29344. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 13:00:06 UTC
From: Tom
Topic: 29316 Message: 29344

Thank you all again for the new revelations.

I was not aware of the 'contact before sending' requirement. Which leads me to....does anyone have his phone number? The phone number I used ended in -7222 and was confirmed by the party I spoke to as not correct for Ken. I found that number on the internet from another
'Group' archive.

Tom
W4TMW

29345. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 13:08:24 UTC
From: ki4ax
Topic: 29316 Message: 29345

Tom,

Try 941-780-4330 and see if he answers.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <mtnest@...> wrote:
>
>
>
> Thank you all again for the new revelations.
>
> I was not aware of the 'contact before sending' requirement. Which leads me to....does anyone have his phone number? The phone number I used ended in -7222 and was confirmed by the party I spoke to as not correct for Ken. I found that number on the internet from another
> 'Group' archive.
>
> Tom
> W4TMW
>

29346. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 13:58:02 UTC
From: w5rkl
Topic: 29334 Message: 29346

Alan,

You might consider connecting your DC voltage meter (set to measure at least 300VDC) to the Final Unit's SG terminal and chassis ground. Set the Mode switch to TUNE then CW or all sideband positions. There should be a difference the voltage, TUNE mode being less. This test will determine whether there is a break in the wiring to and from the Mode switch.

Also, as you said, if "wiggling" or "moving" resistors R15 and R16 causes the SG voltages on the Final Unit to change or become erratic then I would look for a bad solder connection on the Rectifier Unit.

While you are checking voltages on the Rectifier Unit, visually watch the relay RL1 on the Rectifier Unit when switching the rear panel SG switch from ON to OFF and back ON again. The relay on the Rectifier Unit should energize in the OFF position but not in the ON position. You should see AND here it change with the different positions of the SG switch on the rear panel. Just be sure you leave the SG switch in the ON position when finish.

Just a few other places to check.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@...> wrote:
>
> Mike,
>
> All that you have said makes sense but I do not get full power in the CW mode either. Maybe something else is going on also. I'll check further tomorrow on the SG2 circuitry and let you know.
>
> Alan, WB2FZC
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> > One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.
> >
> > 73s
> > Mike
> > W5RKL

> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Alan,
> > >
> > > Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.
> > >
> > > The resistors, R15 and R16, form a voltage divider on the Rectifier Unit and only in TUNE mode. The normal screen voltage to the final tubes, CW, USB, and LSB Mode switch positions, originates at the Rectifier Units' "SG2" terminal. When the 830 is placed in TUNE mode the screen voltage flows from the "SG2" line on the Rectifier Unit through R15 and R16 with the screen voltage being applied through the Mode switch, in TUNE Mode, at the junction of R15 and R15 on the Rectifier Unit. This results in a lower final tube screen voltage at the Rectifier Unit's "TUNE" terminal, to both final tubes to protect the final tubes during tune up.
> > >
> > > If either of the resistors have failed, for what ever reason (resistance has increased significantly, resistors are burnt/cracked, or the solder connection on the PC board foil has failed), the final tube screen voltage will be significantly less than the normal screen voltage which results in a significant reduction in power output.
> > >
> > > 73s
> > > Mike
> > > W5RKL
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> > >
> > >
> > >
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> > > >
> > > > Update....
> > > >
> > > > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
> > > >
> > > > This points to looking at the two resistors R15 & R16 on the rectifier board mentioned in a previous post (must have been a typo previously as R5&R6 were stated). I measured them in circuit and get about 35K on each. However, I did a little "wiggling" of R16 with the test lead and she jumps to near continuity, so I have something going on there. I'll pull the board tomorrow, pop the resistors and check them and check all soldering.
> > > >
> > > > Note that my digital fluke was jumping around trying to find a value. Hard to see what was going on. So, I pulled out my Simpson analog to take a look. You could see the drop immediately on the good ole analog meter.
> > > >

> > > > Any other ideas?
> > > >
> > > > Regards. Alan, WB2FZC
> > > >
> > > >
> > > >
> > > > > Hello All,
> > > > >
> > > > > I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.
> > > > >
> > > > > This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.
> > > > >
> > > > > Idling current shows OK at 60ma. HV shows OK at about 900v. SG switch is on. Tried a different 12BY7 I had here and no change. All voltages on the 12BY7 socket check out per K4EAA schematic. That's as far as I got so far.
> > > > >
> > > > > I checked all previous posts here and see recommendations to change out R5 & R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.
> > > > >
> > > > > I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.
> > > > >
> > > > > Regards, Alan WB2FZC
> > > > >
> > > > >
> > > >
> > >
> >

29347. Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 14:04:37 UTC
From: Daniel TOESCA
Topic: 29117 Message: 29347

Hi Joe,

Followed the thread and asking myself if you can hear the calibrator ????

Had some '520 and never used anything other than the internal calibrator to
do the alignment job !

The user's manual is clear enough, even for someone with common, not
extraordinary.. skill, and there is a service manual downloadable all over
the web, just google a bit.

The calibrator usually goes up to +20dB over 9 on 80, about S9 on 20 and
about S6-7 on ten meter.

Just my two eurocents...

Good luck and be patient, it will come alive, I promise you !

73's - Daniel, ON5PY

2011/1/4 Joseph Stiles <stilesjoseph@...>

>
>
> Joe,
>
> tnx fer kind offer...hang on to it for right now..I have 2 taken from a
> non-working unit...don't know right now is they are ok...if not...I have a
> couple to new NTE222's in the "bin."
>
> 73's joe wb7uqu
>
> _____
> From: jsloss <k7mks@comcast.net <k7mks%40comcast.net>>
>
> To: TS-520_820_530_830@...m<TS-520_820_530_830%40yahoogroups.com>
> Sent: Tue, January 4, 2011 9:11:06 AM
>
> Subject: Re: [TS-520_820_530_830] Re: TS 520 "OSC" freq's
>
> Joe: Give me a call at 425.747.5349 Bellevue. I have a good 3SK35 that you
> can
> try in your 520's RF board at Q-5.
>
> joe k7mks
>
> [Non-text portions of this message have been removed]

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> [Non-text portions of this message have been removed]
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>

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29348. Re: TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 14:11:42 UTC
From: w5rkl
Topic: 29337 Message: 29348

Joe,

If you remember the discussions about how CB hackers modify the TS-520s RF Unit HET OSC crystals to operate on 11 meters, the CB hackers, as you have found out, do a similar modification to the 820s' PLL Units' crystals to make the 820 operate on 11 meters.

The different crystals you found in the 820s' PLL Unit result in a different "VCO" signal to appear on the RF Units' "VCO" terminal allowing the 820 to operate on 11 meters or other non-ham bands. Good job on using simple math calculations to determine and actually see what has been done to your 820.

If you do not have replacement crystals from an 820 parts radio, you can buy them from International Crystals in Oklahoma City, OK

http://www.icmfg.com/hamradio-manufacturers.html

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> OK..one more "TYPO"... this board with the modification is the PD board
> X50-1340 on the other side of the VCO in the metal PLL box
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 15, 2011 9:11:30 PM
> Subject: Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack
>
>
> Sorry for the "TYPO" 3rd line should read 29 & 29.5MHz ...not 29.9
>
> joe
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 15, 2011 9:01:45 PM

> Subject: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack
>
> Greeting Group!
>
> Took another closet queen out to see why the 2 high bands were not working
> correctly. The big tip off was the display. I figured..what the heck..let's
> check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I
> could not get proper frequency on my counter. I was following the procedure in
> the service manual on Pg 52 # 5-2.
>
> I pulled the PLL out and took a look inside. 2 screws were missing that hold
> down X60-1010...so..continued to dismantle the unit and on the VCO found 2
> XTALS, X9 & X10 that were obvious not from the factory. Missing the blue plastic
>
>
> wrap with the freq. on it..etc. These were straight metal cans with freq on the
> top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this mod
>
>
> let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ.
> Now gotta go dig through some parts and find some replacements.
>
> I up loaded some pictures. It will be listed under TS-820(S) CB HACK
>
> 73's joe wb7uqu
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29349. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 12:47:11 UTC
From: Paul
Topic: 29334 Message: 29349

Alan
I have had this same problem several times with the TS-830s that I restored. My problem was caused by a bad connector pin on the TIFF signal. Check out the ts-830 Survival Guide available at several sites on the internet. Look for the problem "Loss of ALC". The info here will give you the specifics to fix the problem.

Good Luck

Paul W3BK

--- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@...> wrote:
>
> Mike,
>
> All that you have said makes sense but I do not get full power in the CW mode either. Maybe something else is going on also. I'll check further tomorrow on the SG2 circuitry and let you know.
>
> Alan, WB2FZC
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> > One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Alan,
> > >
> > > Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.
> > >
> > > The resistors, R15 and R16, form a voltage divider on the Rectifier Unit and only in TUNE mode. The normal screen voltage to the final tubes, CW, USB, and LSB Mode switch positions, originates at the Rectifier Units' "SG2" terminal. When the 830 is placed in TUNE mode the screen voltage flows from the "SG2" line on the Rectifier Unit through R15 and R16 with the screen voltage being applied through the Mode switch, in TUNE Mode, at the

junction of R15 and R15 on the Rectifier Unit. This results in a lower final tube screen voltage at the Rectifier Unit's "TUNE" terminal, to both final tubes to protect the final tubes during tune up.
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> > > If either of the resistors have failed, for what ever reason (resistance has increased significantly, resistors are burnt/cracked, or the solder connection on the PC board foil has failed), the final tube screen voltage will be significantly less than the normal screen voltage which results in a significant reduction in power output.
> > >
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> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> > > >
> > > > Update....
> > > >
> > > > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
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> > > > This points to looking at the two resistors R15 & R16 on the rectifier board mentioned in a previous post (must have been a typo previously as R5&R6 were stated). I measured them in circuit and get about 35K on each. However, I did a little "wiggling" of R16 with the test lead and she jumps to near continuity, so I have something going on there. I'll pull the board tomorrow, pop the resistors and check them and check all soldering.
> > > >
> > > > Note that my digital fluke was jumping around trying to find a value. Hard to see what was going on. So, I pulled out my Simpson analog to take a look. You could see the drop immediately on the good ole analog meter.
> > > >
> > > > Any other ideas?
> > > >
> > > > Regards. Alan, WB2FZC
> > > >
> > > >
> > > >
> > > > > Hello All,
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> > > > > I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.
> > > > >
> > > > > This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the

carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.
> > > > >
> > > > > Idling current shows OK at 60ma. HV shows OK at about 900v. SG switch is on. Tried a different 12BY7 I had here and no change. All voltages on the 12BY7 socket check out per K4EAA schematic. That's as far as I got so far.
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> > > > > I checked all previous posts here and see recommendations to change out R5 & R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.
> > > > >
> > > > > I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.
> > > > >
> > > > > Regards, Alan WB2FZC
> > > > >
> > > > >
> > > >
> > >
>

29350. Kenwood tv-506 transverter for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 17:31:22 UTC
From: Michael
Topic: 29350 Message: 29350

My tv-506, is now listed on eham. Priced at $185 plus shipping.

29351. Sell TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 18:02:24 UTC
From: Bill Scurlock
Topic: 29351 Message: 29351

I have a very nice TS-830S, s/n 4090097, that I have decided to sell. All the filter positions are full, the HV capacitors replaced, 1N5711 diodes have been installed in the product detector and balanced modulator, it has the KB-1 weighted tuning knob, and the USB and LSB carrier frequencies have been adjusted using Spectrogram to equalize frequency response. This radio has been used on a regular basis since I refurbished it 4 or 5 years ago. To the best of my knowledge, everything functions properly on this TS-830S. If you are interested in purchasing a radio in this condition, please send me an email at "k5gcw at sbcglobal.net" and I will send you more information and photos.

This radio will only be sold and shipped within the contiguous United States.

Thanks and 73, Bill, K5GCW

[Non-text portions of this message have been removed]

29352. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 19:59:50 UTC
From: alancgut
Topic: 29334 Message: 29352

Paul & Mike,

Problem solved. Went in and re-soldered R15 & R16 and saw no change. I then pulled the TIF connectors on the IF and RF boards, cleaned them and re-seated them. Full ALC. Back in business. Thanks guys.

It's funny. I have the survival guide and saw that section, but it was titled "intermittent" ALC, so I breezed right past it. A few months ago, I cleaned and re-seated all connectors but I bet I skipped the TIF connector on the RF board because it was inaccessible underneath the counter board. This time I pulled everything out that was in the way and cleaned it.

Again, thanks to both of you for taking your time to help. It means a lot and you both saved me a ton of time.

Regards, Alan WB2FZC

--- In TS-520_820_530_830@yahoogroups.com, "Paul" <paul2n2222@...> wrote:
>
> Alan
> I have had this same problem several times with the TS-830s that I restored. My problem was caused by a bad connector pin on the TIFF signal. Check out the ts-830 Survival Guide available at several sites on the internet. Look for the problem "Loss of ALC". The info here will give you the specifics to fix the problem.
>
> Good Luck
>
> Paul W3BK
>
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> > Alan, WB2FZC
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> > > One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.
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> > > > > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
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> > > > > > Hello All,
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> > > > > >
> > > > > >
> > > > >

> > >
> >
>

29353. Re: [TS-520_820_530_830] Re: TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 20:21:16 UTC
From: Joseph Stiles
Topic: 29337 Message: 29353

Mike & Group,

Mike, thanks for your nice comment. I found another "PLL/VCO/PD BOX" and tried it..still had same problem. I found another in the parts box...and tried that one..BINGO. I opened up the 1st replacement and..gee..guess what! That one had been modified also. No wonder I have gotten them for real cheap. Good training & practice. Oh well. Think I'll get some xtal's from the place you stated below so I have some good spare stuff around. Tnx fer all the help you have given me and others..it's been REAL helpful!

73's joe wb7uqu

_____
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 16, 2011 6:11:42 AM
Subject: [TS-520_820_530_830] Re: TS-820(S) CB/Free Band Hack

Joe,

If you remember the discussions about how CB hackers modify the TS-520s RF Unit HET OSC crystals to operate on 11 meters, the CB hackers, as you have found out, do a similar modification to the 820s' PLL Units' crystals to make the 820 operate on 11 meters.

The different crystals you found in the 820s' PLL Unit result in a different "VCO" signal to appear on the RF Units' "VCO" terminal allowing the 820 to operate on 11 meters or other non-ham bands. Good job on using simple math calculations to determine and actually see what has been done to your 820.

If you do not have replacement crystals from an 820 parts radio, you can buy them from International Crystals in Oklahoma City, OK

http://www.icmfg.com/hamradio-manufacturers.html

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> OK..one more "TYPO"... this board with the modification is the PD board
> X50-1340 on the other side of the VCO in the metal PLL box
>
> 73's joe wb7uqu
>

>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 15, 2011 9:11:30 PM
> Subject: Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack
>
>
> Sorry for the "TYPO" 3rd line should read 29 & 29.5MHz ...not 29.9
>
> joe
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 15, 2011 9:01:45 PM
> Subject: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack
>
> Greeting Group!
>
> Took another closet queen out to see why the 2 high bands were not working
> correctly. The big tip off was the display. I figured..what the heck..let's
> check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I

> could not get proper frequency on my counter. I was following the procedure in

> the service manual on Pg 52 # 5-2.
>
> I pulled the PLL out and took a look inside. 2 screws were missing that hold
> down X60-1010...so..continued to dismantle the unit and on the VCO found 2
> XTALS, X9 & X10 that were obvious not from the factory. Missing the blue
>plastic
>
>
>
> wrap with the freq. on it..etc. These were straight metal cans with freq on the
>
> top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this
>mod
>
>
>
> let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ.
> Now gotta go dig through some parts and find some replacements.
>
> I up loaded some pictures. It will be listed under TS-820(S) CB HACK
>
> 73's joe wb7uqu

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29354. Re: [TS-520_820_530_830] Sell TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 18:04:16 UTC
From: Sandy
Topic: 29351 Message: 29354

On 1/16/2011 12:02 PM, Bill Scurlock wrote:
>
> I have a very nice TS-830S, s/n 4090097, that I have decided to sell.
> All the filter positions are full, the HV capacitors replaced, 1N5711
> diodes have been installed in the product detector and balanced
> modulator, it has the KB-1 weighted tuning knob, and the USB and LSB
> carrier frequencies have been adjusted using Spectrogram to equalize
> frequency response. This radio has been used on a regular basis since
> I refurbished it 4 or 5 years ago. To the best of my knowledge,
> everything functions properly on this TS-830S. If you are interested
> in purchasing a radio in this condition, please send me an email at
> "k5gcw at sbcglobal.net" and I will send you more information and photos.
>
> This radio will only be sold and shipped within the contiguous United
> States.
>
> Thanks and 73, Bill, K5GCW
>
> [Non-text portions of this message have been removed]
>
>
any pics?
Price?

Thanks,

n9pgo

[Non-text portions of this message have been removed]

29355. Re: TS-820(S) CB/Free Band Hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 22:21:03 UTC
From: w5rkl
Topic: 29337 Message: 29355

You're welcome and congratulations on fixing your 820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & Group,
>
> Mike, thanks for your nice comment. I found another "PLL/VCO/PD BOX" and
> tried it..still had same problem. I found another in the parts box...and tried
> that one..BINGO. I opened up the 1st replacement and..gee..guess what! That one
> had been modified also. No wonder I have gotten them for real cheap. Good
> training & practice. Oh well. Think I'll get some xtal's from the place you
> stated below so I have some good spare stuff around. Tnx fer all the help you
> have given me and others..it's been REAL helpful!
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, January 16, 2011 6:11:42 AM
> Subject: [TS-520_820_530_830] Re: TS-820(S) CB/Free Band Hack
>
>
> Joe,
>
> If you remember the discussions about how CB hackers modify the TS-520s RF Unit
> HET OSC crystals to operate on 11 meters, the CB hackers, as you have found out,
> do a similar modification to the 820s' PLL Units' crystals to make the 820
> operate on 11 meters.
>
> The different crystals you found in the 820s' PLL Unit result in a different
> "VCO" signal to appear on the RF Units' "VCO" terminal allowing the 820 to
> operate on 11 meters or other non-ham bands. Good job on using simple math
> calculations to determine and actually see what has been done to your 820.
>
> If you do not have replacement crystals from an 820 parts radio, you can buy
> them from International Crystals in Oklahoma City, OK

>
> http://www.icmfg.com/hamradio-manufacturers.html
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > OK..one more "TYPO"... this board with the modification is the PD board
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> >
> >
> >
> >
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> > From: Joseph Stiles <stilesjoseph@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, January 15, 2011 9:11:30 PM
> > Subject: Re: [TS-520_820_530_830] TS-820(S) CB/Free Band Hack
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> >
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> > Greeting Group!
> >
> > Took another closet queen out to see why the 2 high bands were not working
> > correctly. The big tip off was the display. I figured..what the heck..let's
> > check the PLL for proper freq's. All was good until the 29 & 29.9 Mhz bands. I
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> > could not get proper frequency on my counter. I was following the procedure in
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> > the service manual on Pg 52 # 5-2.
> >
> > I pulled the PLL out and took a look inside. 2 screws were missing that hold
> > down X60-1010...so..continued to dismantle the unit and on the VCO found 2
> > XTALS, X9 & X10 that were obvious not from the factory. Missing the blue
> >plastic

> >
> >
> >
> > wrap with the freq. on it..etc. These were straight metal cans with freq on the
> >
> > top. X-9 was 32.500MHZ & X10 was 33.00MHZ. Doin' a bit of cypherin',... this
> >mod
> >
> >
> >
> > let the rig cover most all of the 26 & 27 MHz bands..with a touch into 28MHZ.
> > Now gotta go dig through some parts and find some replacements.
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> > I up loaded some pictures. It will be listed under TS-820(S) CB HACK
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29356. Re: TS-830S Suddenly no drive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 22:23:21 UTC
From: w5rkl
Topic: 29334 Message: 29356

You're welcome Alan and congratulations on fixing your 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@...> wrote:
>
> Paul & Mike,
>
> Problem solved. Went in and re-soldered R15 & R16 and saw no change. I then pulled the TIF connectors on the IF and RF boards, cleaned them and re-seated them. Full ALC. Back in business. Thanks guys.
>
> It's funny. I have the survival guide and saw that section, but it was titled "intermittent" ALC, so I breezed right past it. A few months ago, I cleaned and re-seated all connectors but I bet I skipped the TIF connector on the RF board because it was inaccessible underneath the counter board. This time I pulled everything out that was in the way and cleaned it.
>
> Again, thanks to both of you for taking your time to help. It means a lot and you both saved me a ton of time.
>
> Regards, Alan WB2FZC
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Paul" <paul2n2222@> wrote:
> >
> > Alan
> > I have had this same problem several times with the TS-830s that I restored. My problem was caused by a bad connector pin on the TIFF signal. Check out the ts-830 Survival Guide available at several sites on the internet. Look for the problem "Loss of ALC". The info here will give you the specifics to fix the problem.
> >
> > Good Luck
> >
> > Paul W3BK
> >
> >
> >
> >
> >
> >
> >
> >

> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> > >
> > > Mike,
> > >
> > > All that you have said makes sense but I do not get full power in the CW mode either. Maybe something else is going on also. I'll check further tomorrow on the SG2 circuitry and let you know.
> > >
> > > Alan, WB2FZC
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > > One other thing. If you can tune the 830 up in CW mode to full output but TUNE mode results in less than normal power output, then that is a clear sign that resistors R15 and R16 are the source of your problem. As you said, moving the resistors with a plastic tool causes the screen voltage to abruptly change in TUNE mode, that too is a clear sign of a problem with the resistors and/or the circuit board solder connections.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Hi Alan,
> > > > >
> > > > > Either the body/bodies of the resistors are cracked/broken (discoloration/burnt looking) or the PC boards' foil and solder connection has failed.
> > > > >
> > > > > The resistors, R15 and R16, form a voltage divider on the Rectifier Unit and only in TUNE mode. The normal screen voltage to the final tubes, CW, USB, and LSB Mode switch positions, originates at the Rectifier Units' "SG2" terminal. When the 830 is placed in TUNE mode the screen voltage flows from the "SG2" line on the Rectifier Unit through R15 and R16 with the screen voltage being applied through the Mode switch, in TUNE Mode, at the junction of R15 and R15 on the Rectifier Unit. This results in a lower final tube screen voltage at the Rectifier Unit's "TUNE" terminal, to both final tubes to protect the final tubes during tune up.
> > > > >
> > > > > If either of the resistors have failed, for what ever reason (resistance has increased significantly, resistors are burnt/cracked, or the solder connection on the PC board foil has failed), the final tube screen voltage will be significantly less than the normal screen voltage which results in a significant reduction in power output.
> > > > >
> > > > > 73s

> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "alancgut" <agutfruc@> wrote:
> > > > > >
> > > > > > Update....
> > > > > >
> > > > > > Just checked the voltages in the final unit and found 130v. on pin 3, screen grid, of each 6146B. This is about half of the expected 264v. Tracing through, I also get the same 130v. at pins PD2 & SG1 on the rectifier unit.
> > > > > >
> > > > > > This points to looking at the two resistors R15 & R16 on the rectifier board mentioned in a previous post (must have been a typo previously as R5&R6 were stated). I measured them in circuit and get about 35K on each. However, I did a little "wiggling" of R16 with the test lead and she jumps to near continuity, so I have something going on there. I'll pull the board tomorrow, pop the resistors and check them and check all soldering.
> > > > > >
> > > > > > Note that my digital fluke was jumping around trying to find a value. Hard to see what was going on. So, I pulled out my Simpson analog to take a look. You could see the drop immediately on the good ole analog meter.
> > > > > >
> > > > > > Any other ideas?
> > > > > >
> > > > > > Regards. Alan, WB2FZC
> > > > > >
> > > > > >
> > > > > >
> > > > > > Hello All,
> > > > > >
> > > > > > I have been thoroughly enjoying my TS-830S for the past few months after going all through it and bringing it up to excellent operating condition.
> > > > > >
> > > > > > This morning, I went to tune up and discovered almost zero drive on all bands when trying to peak the ALC in the tune position. This happened suddenly without warning. I get about 10% meter deflection with no peaking action whatsoever. Of course, I have the carrier control full CW. Same on all bands. Rig manages to show about 10W RF out on all bands. Also, I can twiddle the drive control while watching RF out and see a slight effect. So, I have something going on.
> > > > > >
> > > > > > Idling current shows OK at 60ma. HV shows OK at about 900v. SG switch is on. Tried a different 12BY7 I had here and no change. All voltages on the 12BY7 socket check out per K4EAA schematic. That's as far as I got so far.
> > > > > >
> > > > > > I checked all previous posts here and see recommendations to change out R5 &

R6 on the rectifier board. Also I see that Q22 and Q29 on the IF board have been problematic. However, I don't have anything to replace them with here right now.
> > > > > > >
> > > > > > > I'm going back down to the shack right now to investigate further. Any suggestions out there as to what I might look for? I have a spare set of finals that I'm going to try - but I don't think that there's much chance they would go out so suddenly.
> > > > > > > >
> > > > > > > > Regards, Alan WB2FZC
> > > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
>

29357. Re: [TS-520_820_530_830] Sell TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 21:30:32 UTC
From: W8HW
Topic: 29351 Message: 29357

How much are you asking?
-- Buy and/or Repair Broke (Broke or not broke) 2-way radios --

Commercial 2-way-Marine-Ham-CB-Broadcast

w8hw@...

----- Original Message -----
From: Sandy
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 16, 2011 1:04 PM
Subject: Re: [TS-520_820_530_830] Sell TS-830S

On 1/16/2011 12:02 PM, Bill Scurlock wrote:
>
> I have a very nice TS-830S, s/n 4090097, that I have decided to sell.
> All the filter positions are full, the HV capacitors replaced, 1N5711
> diodes have been installed in the product detector and balanced
> modulator, it has the KB-1 weighted tuning knob, and the USB and LSB
> carrier frequencies have been adjusted using Spectrogram to equalize
> frequency response. This radio has been used on a regular basis since
> I refurbished it 4 or 5 years ago. To the best of my knowledge,
> everything functions properly on this TS-830S. If you are interested
> in purchasing a radio in this condition, please send me an email at
> "k5gcw at sbcglobal.net" and I will send you more information and photos.
>
> This radio will only be sold and shipped within the contiguous United
> States.
>
> Thanks and 73, Bill, K5GCW
>
> [Non-text portions of this message have been removed]
>
>
any pics?
Price?

Thanks,

n9pgo

[Non-text portions of this message have been removed]

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29358. Adjustments on bottom of TS-530S and other tuning items

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-16 22:23:39 UTC
From: nelsonsb66
Topic: 29358 Message: 29358

I see some adjustment places on the bottom of the rig, and cannot seem to find a reference on what they are for, or how to use them. They are:

Carrier F. Adj (CWT/USB/LSB)
Std Osc F. Adj

I am getting my rig ready for use after 15+ years in storage and have finished both the recieve and transmit tuning listed in the manual. The signal wave form on my scope looks good - not a perfectly smooth edge to the waveform, but just very small variations.

Also, in tuning it up, I noticed that the rig does not transit on 12M at all - all the rest of the bands work just fine. The WARC connection has been severed according to instructions to allow all bands to transmit, and both 30M and 17M work very well. Any ideas?

Lastly, when I use 10 or 15 M, I seem to need to crank up the carrier to maximum (or near) to get any signal strength. I am concerned that I am overdriving the circuit with either the end result being signal distortion, circuit failure, or both. I do not see this behavior on any of the other bands (other than 12M as listed above).

Any help is appreciated!

29359. Re: Address for K4EAA...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 14:46:56 UTC
From: Tom
Topic: 29316 Message: 29359

To Dan and others who responded directly, thanks, that did the trick.

I did not talk to him directly, but confirmed it was his phone number and was able to leave a message.

73,
Tom
W4TMW

> Tom,
>
> Try 941-780-4330 and see if he answers.
>
> Dan KI4AX

29360. from Anthony ve4akf

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 13:38:09 UTC
From: tony
Topic: 29360 Message: 29360

Hello,
I have been repairing a kenwood ts-820s . This is about the digital display problems.
The problem was a display stuck on 9000.
As mentioned on the net by others I had resoldered the 2 pcbs .cleaned them up .the connectors cleaned.
So after this the 1.8 mhz to 14 mhz displayed the correct frequency.
However, from 21 mhz and up the display was lite up but the frequencies varied with no lock.
I had readjust the TC1 trimmer on the IF board.As well found a nice spot in the T1 and T2 xfmrs so 21 mhz band would work on the display.As well the 1.8 to 14 mhz bands still functioning .
but the 28 mhz bands still do not function on the digital readout.
Is one of the amplifiers in the stream lacking amplification to provide signal to the display boards ?
Is it a alignment problem ? or a old changed value part ?
Still working on here at the shack.
Any one have any ideas .?
Thanks Anthony ve4akf

29361. Re: [TS-520_820_530_830] from Anthony ve4akf

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 17:41:33 UTC
From: Joseph Stiles
Topic: 29360 Message: 29361

Anthony,

I just got done removing a "CB" hack job on an 820S..(.see a few post back). The higher bands, 28 - 29.5Mhz range were affected by the "retuning" of the transformers in the PLL. Might want to check there to see. Procedure and frequency values are in the service manual starting on Pg 52 ... Section 5-2-1. Good Luck.

73's joe wb7uqu

From: tony <electrikradio@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 17, 2011 5:38:09 AM
Subject: [TS-520_820_530_830] from Anthony ve4akf

Hello,
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As mentioned on the net by others I had resoldered the 2 pcbs .cleaned them up .the connectors cleaned.
So after this the 1.8 mhz to 14 mhz displayed the correct frequency.
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but the 28 mhz bands still do not function on the digital readout.
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Is it a alignment problem ? or a old changed value part ?
Still working on here at the shack.
Any one have any ideas .?
Thanks Anthony ve4akf

[Non-text portions of this message have been removed]

29362. Re: Adjustments on bottom of TS-530S and other tuning items

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 22:03:12 UTC
From: w5rkl
Topic: 29358 Message: 29362

Hi Nelson,

The holes on the bottom are there to adjust, when needed (alignment) the PLL Unit's CAR and individual VCO Oscillators without having to remove the cabinet.

Unless there is evidence, through troubleshooting and testing, that points to one or more of these adjustments through the bottom of the 530s' cabinet, do not mess with them.

If the CAR control, in TUNE and/or CW mode must be turned much higher that 12 o'clock and/or almost completely CW, to achieve any level of power output during tune up in TUNE and CW mode, that could be caused by a number of things

1. Weak driver tube
2. Weak finals
3. Improper alignment
4. Improper tune up methods used
5. LV (210 and 300 volt) and HV power supplies
6. Bad connections in/on the individual PC board plugs and pins, there are a number of them throughout the 530.
7. Broken PC board foil runs to the PC board pins due to age, shock, mishandling, or bad soldering at the factory or previous owner

and/or other possible failures.

Loos of RF power output on any band quite often, but not always, results in loss of both receive and transmit This is assuming there isn't any other failures in the PLL Carrier and VCO circuits and VFO circuitry etc. The PLL Unit which contains the VCO, CAR, and VFO input controls both transmit AND receive. A failure in any one of these circuits will affect, cause failure to occur, in both transmit and receive.

There is a terminal on the RF Unit labeled "VCO". This terminal is where the PLL Unit's VCO signal for ALL bands is applied to the RF Unit. If you have access to an o'scope and frequency counter, you might monitor the RF Unit's "VCO" terminal between transmit and receive on 12 meters. The 12 meters VCO signal should be present in both receive AND transmit.

You didn't state what you level of technical skills, troubleshooting and repair, of electronic gear is. This is not meant be disrespectful so please don't take it that way. If you skill level is limited, maybe even non-existent, I would recommend finding a local ham who has the skills in troubleshooting and repair to assist you. If you skills are up to it, I recommend, if you do not current hold, the operators and service manuals at Gordons' website

www.n6wk.com/kenwood/

These manuals will help you track down the source of your loss of RF output. Take voltage readings and compare them with the service manual. Tap "lightly" on the IF Unit relay to

see if the symptoms change. If they do then it's quite possible, after a thorough visual inspection of the foil side of the board where the relay and surround components are attached and soldered, could be the source of your problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "nelsonsb66" <nelsonse@...> wrote:
>
> I see some adjustment places on the bottom of the rig, and cannot seem to find a reference on what they are for, or how to use them. They are:
>
> Carrier F. Adj (CWT/USB/LSB)
> Std Osc F. Adj
>
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> Also, in tuning it up, I noticed that the rig does not transit on 12M at all - all the rest of the bands work just fine. The WARC connection has been severed according to instructions to allow all bands to transmit, and both 30M and 17M work very well. Any ideas?
>
> Lastly, when I use 10 or 15 M, I seem to need to crank up the carrier to maximum (or near) to get any signal strength. I am concerned that I am overdriving the circuit with either the end result being signal distortion, circuit failure, or both. I do not see this behavior on any of the other bands (other than 12M as listed above).
>
> Any help is appreciated!
>

29363. TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 22:08:42 UTC
From: Charles
Topic: 29363 Message: 29363

I'm still quite new to the world of hybrids and I've noticed that the sensitivity of my 520SE is significantly less than that of my TS-940. (Yes, I appreciate that the 940 is a more advanced model with greater capabilities.)
Basically, using the same dipole, a reasonably strong and clear SSB signal on the 940 will barely be heard on my 520SE, if at all. I do have wonderfully clear reception on "SOME" strong stations with my 520SE, but there seems to be a considerable lack of sensitivity for many other weaker signals.
I haven't made any calibration tests or adjustments as of yet because the rig is a mint condition model that looks like someone bought it, tried it a few times, and then stuck it on the shelf for many years and never messed around with any factory settings. I also realize that you can't tell anything by appearance alone. It's only an opinion of mine.
Question: Is this lack of sensitivity the usual level of performance for this radio?

73
Charlie Shaw
KB3BTO

29364. Re: TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 22:27:06 UTC
From: Daniel TOESCA
Topic: 29363 Message: 29364

Hi Charlie,

As a ballpark idea, the 520"s internal calibrator level is usually around S9 on 20 meter, S9+20 on 80 meter and S6-7 on 10 meter.

If you connect both of your sets together through the antenna connector - BEWARE !!! DO NOT TRANSMIT !!! - you can monitor this calibrator level and appreciate if there is any difference.

Or build a simple signal source using a cheap Xtal, 3.579 MHz color-burst is OK - adjust its level for about S5 on your 940 and check you 520 thereafter.

Causes of loss of sensitivity are many, and the simplest ones are : bad bandswitch contacts (use some contact spray and rotate them several times) - relay issues - maybe component issue = RF amplifier MOSFET zapped - maybe alignment issues.

Check the calibrator level and the bandswitch first.

73's

Daniel, ON5PY

[Non-text portions of this message have been removed]

29365. Re: [TS-520_820_530_830] TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 22:49:56 UTC
From: Joseph Stiles
Topic: 29363 Message: 29365

Charlie,

The sensitivity of all the KW hybrids is very good to excellent. Some others in the group may back me up..but..get yourself some DE-OXIT. Turn OFF rig, let it sit for about 1/2 hour..then measure the HV caps to MAKE SURE that all the voltage is gone. THERE ARE LETHAL VOLTS IN THERE! You don't need to make the XYL a widow. Take every connector you can off...use some DE-OXIT, reapply/remove the connectors several times each. Also...use it on every multi-wafer switch, pot, and other controls. Blow off residue with "caned air." You can get at ...I think Walmart...I get mine from Costco..in a 6 pack. Make sure that all connectors are properly seated..and fire off the rig. I have been astounded at the results of cleaning the controls/connectors, especially after a rig has sat for awhile. Good Luck.

From: Charles <cshaw@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, January 17, 2011 2:08:42 PM
Subject: [TS-520_820_530_830] TS-520SE SENSITIVITY QUESTION

I'm still quite new to the world of hybrids and I've noticed that the sensitivity of my 520SE is significantly less than that of my TS-940. (Yes, I appreciate that the 940 is a more advanced model with greater capabilities.) Basically, using the same dipole, a reasonably strong and clear SSB signal on the 940 will barely be heard on my 520SE, if at all. I do have wonderfully clear reception on "SOME" strong stations with my 520SE, but there seems to be a considerable lack of sensitivity for many other weaker signals.
I haven't made any calibration tests or adjustments as of yet because the rig is a mint condition model that looks like someone bought it, tried it a few times, and then stuck it on the shelf for many years and never messed around with any factory settings. I also realize that you can't tell anything by appearance alone. It's only an opinion of mine.
Question: Is this lack of sensitivity the usual level of performance for this radio?

73
Charlie Shaw
KB3BTO

[Non-text portions of this message have been removed]

29366. Re: TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-18 00:26:14 UTC
From: Charles
Topic: 29363 Message: 29366

> a widow. Take every connector you can off...use some DE-OXIT, reapply/remove the
> connectors several times each. Also...use it on every multi-wafer switch, pot,

The rig hasn't been used much, or so it would appear. There's been 2 responses to the original question and both suggest a connector problem. This makes perfect sense to me. Daniel and Joe, thanks for your suggestions. I'll try and clean those contacts within the next day or two. I'll respond to this message thread with the results just as soon as I can.
Thanks for your help.

Charlie Shaw
KB3BTO

29367. Re: [TS-520_820_530_830] Re: Adjustments on bottom of TS-530S and other tuning items

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-18 01:37:45 UTC
From: Steve Nelson
Topic: 29358 Message: 29367

Thanks for the input! I appreciate the detail, and do not take you
providing this level of response as any indication of my technical ability!

I have the troubleshooting manual now - thanks for the pointers in the right
direction. I will start running down the list and see what happens.

Thanks again!

-s

KA0GWU

On Mon, Jan 17, 2011 at 2:03 PM, w5rkl <w5rkl@...> wrote:

>
>
> Hi Nelson,
>
> The holes on the bottom are there to adjust, when needed (alignment) the
> PLL Unit's CAR and individual VCO Oscillators without having to remove the
> cabinet.
>
> Unless there is evidence, through troubleshooting and testing, that points
> to one or more of these adjustments through the bottom of the 530s' cabinet,
> do not mess with them.
>
> If the CAR control, in TUNE and/or CW mode must be turned much higher that
> 12 o'clock and/or almost completely CW, to achieve any level of power output
> during tune up in TUNE and CW mode, that could be caused by a number of
> things
>
> 1. Weak driver tube
> 2. Weak finals
> 3. Improper alignment
> 4. Improper tune up methods used
> 5. LV (210 and 300 volt) and HV power supplies
> 6. Bad connections in/on the individual PC board plugs and pins, there are
> a number of them throughout the 530.
> 7. Broken PC board foil runs to the PC board pins due to age, shock,
> mishandling, or bad soldering at the factory or previous owner
>
> and/or other possible failures.
>
> Loos of RF power output on any band quite often, but not always, results in
> loss of both receive and transmit This is assuming there isn't any other

> failures in the PLL Carrier and VCO circuits and VFO circuitry etc. The PLL
> Unit which contains the VCO, CAR, and VFO input controls both transmit AND
> receive. A failure in any one of these circuits will affect, cause failure
> to occur, in both transmit and receive.
>
> There is a terminal on the RF Unit labeled "VCO". This terminal is where
> the PLL Unit's VCO signal for ALL bands is applied to the RF Unit. If you
> have access to an o'scope and frequency counter, you might monitor the RF
> Unit's "VCO" terminal between transmit and receive on 12 meters. The 12
> meters VCO signal should be present in both receive AND transmit.
>
> You didn't state what you level of technical skills, troubleshooting and
> repair, of electronic gear is. This is not meant be disrespectful so please
> don't take it that way. If you skill level is limited, maybe even
> non-existent, I would recommend finding a local ham who has the skills in
> troubleshooting and repair to assist you. If you skills are up to it, I
> recommend, if you do not current hold, the operators and service manuals at
> Gordons' website
>
> www.n6wk.com/kenwood/
>
> These manuals will help you track down the source of your loss of RF
> output. Take voltage readings and compare them with the service manual. Tap
> "lightly" on the IF Unit relay to see if the symptoms change. If they do
> then it's quite possible, after a thorough visual inspection of the foil
> side of the board where the relay and surround components are attached and
> soldered, could be the source of your problem.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>,
> "nelsonsb66" <nelsonse@...> wrote:
> >
> > I see some adjustment places on the bottom of the rig, and cannot seem to
> find a reference on what they are for, or how to use them. They are:
> >
> > Carrier F. Adj (CWT/USB/LSB)
> > Std Osc F. Adj
> >
> > I am getting my rig ready for use after 15+ years in storage and have
> finished both the recieve and transmit tuning listed in the manual. The
> signal wave form on my scope looks good - not a perfectly smooth edge to the
> waveform, but just very small variations.
> >
> > Also, in tuning it up, I noticed that the rig does not transit on 12M at
> all - all the rest of the bands work just fine. The WARC connection has been
> severed according to instructions to allow all bands to transmit, and both

> 30M and 17M work very well. Any ideas?
> >
> > Lastly, when I use 10 or 15 M, I seem to need to crank up the carrier to
> maximum (or near) to get any signal strength. I am concerned that I am
> overdriving the circuit with either the end result being signal distortion,
> circuit failure, or both. I do not see this behavior on any of the other
> bands (other than 12M as listed above).
> >
> > Any help is appreciated!
> >
>
>
>

--
Steven B. Nelson
nelsonse@...

[Non-text portions of this message have been removed]

29368. Re: [TS-520_820_530_830] from Anthony ve4akf

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-17 19:07:22 UTC
From: tony
Topic: 29360 Message: 29368

hello, I went to the manual section as you said.I have tried the 28 mhz coil vco adjustment. it is delicate to adjust but I know good to go slow.
it did not stabalize the display on this band.This adjustment not doing the trick. I did check the vco voltages before and was good.
Possible the transfomers underneath the shielding in the PLL unit need adjustment.I would have get at it maybe.
T1,T2,T3 of board X50-1340-00 of from the Q21 .I think this is prt of the loop circuit as signal path follws here.
Well any sugestions ? Parts or something changed value or something. I only have the service manual , a DMM and a VTVM here and solder station.
Ill keep on it hope I can fix it up .
Thanks Anthony

29369. Re: from Anthony ve4akf

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-18 15:39:26 UTC
From: w5rkl
Topic: 29360 Message: 29369

Tony,

Does the 820, by itself work on all bands even though the digital display displays the wrong frequency on the higher bands? You can test this by disconnecting the plug on the bottom of the digital display, it's an edge type plug/connector. If the 820 works fine without the digital display then the problem is more than likely not in the 820 but rather in the digital display unit.

Have you checked the digital display units' internal 1Mhz reference oscillator frequency? If not and you have a frequency counter, do the following:

1. Short the CL2 and G pins together on top of the digital display unit.

2. Connect the frequency counter to pins CL1 and G on the top of the digital display

The frequency counter display should be 1Mhz +/- 5Hz. If not then adjust TC-1 through the small hole on the top of the digital display unit so the frequency counter displays 1Mhz +/- 5Hz.

The "CL1", "G", and "CL2" pins are the "3" pins at the top rear of the digital display unit. They are separate from the multiple pins that connect the digital display tube behind the front panel to the digital display unit. The pins are front to back, CL2, G, CL1.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "tony" <electrikradio@...> wrote:
>
> hello, I went to the manual section as you said.I have tried the 28 mhz coil
> vco adjustment. it is delicate to adjust but I know good to go slow.
> it did not stabalize the display on this band.This adjustment not doing the
> trick. I did check the vco voltages before and was good.
> Possible the transfomers underneath the shielding in the PLL unit need
> adjustment.I would have get at it maybe.
> T1,T2,T3 of board X50-1340-00 of from the Q21 .I think this is prt of the
> loop circuit as signal path follws here.
> Well any sugestions ? Parts or something changed value or something. I only
> have the service manual , a DMM and a VTVM here and solder station.
> Ill keep on it hope I can fix it up .
> Thanks Anthony
>

29370. Re: [TS-520_820_530_830] Re: from Anthony ve4akf

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-18 23:02:25 UTC
From: tony
Topic: 29360 Message: 29370

Hello, Thank you for the information.
I have been in contact with AK4AA and also YV5ABH about the problem in my kenwood ts820s
At first the display was intermittant etc . would show 9000 ..
So I had resoldered the 2 counter boards and cleaned them up .Also those pins for the pcbs.
So at this point 1.8 mhz to 14 became to function.
21 to 29 mhz bands the display still light up but digits rolling around changing .No lock .
Since I have limited equipment .A VTVM with not much frequency response ,A DMM , a wave meter, solder station I can only do so much.But I have the rig as well to tell me whats is what.
I had adjusted the TC1 trimmer in the IF and adjusted the coils in the counter board so that 21 MHZ would show correct display and also 1.8 to 14 MHZ display good.
The adjustments made by going slow turning and watch the display and listening to the receiver and the meter.
So now the 10 meter bands do not lock in .The display still rolls about changing digits.
It was told to me that AK4AA had solved this problem.and with help of YV5ABH they informed me that an unwanted frequency component is disrupting the counter circuit at the higher bands in the PLL .Suspected part faluire is the IC number SN76514N. or a component tied in the circuit somewhere.
The solution of AK4AA was to install a LC cicuit in the counter filter section.
A 330 pf cap and a 1.3 uH inductor.to trap out the unwanted frequncy component.Much time and effort gone into that to find out as well as laboratory grade equipment.
It is obvious a part changed value some where or a fault in an IC occured.
So now I am looking for a 1.3 uH coil. It is difficult to find one . I do not have any toroid forms and or test equipmet to wind one and find the freqeuncy.
I had bought the old kenwood from a fellow ham up here.Has some problem but want to fix it up good.For me that is ham radio always improving and fixing the station .
So thats my story.Still working on it .
Looking for a coil now .
Thank you .
Anthony ve4akf

29371. Re: TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 00:26:59 UTC
From: Charles
Topic: 29363 Message: 29371

> The rig hasn't been used much, or so it would appear. There's been 2 responses to the original question and both suggest a connector problem. This makes perfect sense to me.
> Daniel and Joe, thanks for your suggestions. I'll try and clean those contacts within the next day or two. I'll respond to this message thread with the results just as soon as I can.
> Thanks for your help.
>

I got a break today: we had snow and the freezing rain so my chores were canceled :) I went over and familiarized myself with the "innards" of the 520SE, spraying contact cleaner and oiling (clock oil) the variable capacitor bearings as I went.
I also used contact cleaner on the MFJ-986 tuner that I'm using that has been sitting on the shelf for 12 years (hmmmmm?) and, between the two pieces of equipment, I was successful. The sensitivity is "good" but does not compare to the TS-940 but that should be expected, I guess? Sensitivity has greatly improved, so it's "mission accomplished."
My thanks again to Daniel and Joe for their input.

73
Charlie Shaw
KB3BTO

29372. VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 00:45:14 UTC
From: Charles
Topic: 29372 Message: 29372

I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
Constructive input is welcome.
Thanks.

Charlie Shaw
KB3BTO

29373. RE: [TS-520_820_530_830] VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 00:49:05 UTC
From: Greg Anders
Topic: 29372 Message: 29373

Hi Charlie,

There are two advantages if you consider either a value to you.

1. You can work split frequency or jump to another frequency quickly.

2. The external VFO's sometimes offer less drift/better stability. The external VFO will not have to endure the temperature build-up/swing as the one in the radio which is affected

By the heat generated from the 12BY7A driver tube. I have seen less drift in the past using a remote VFO on practically every hybrid I have owned (Kenwood and Yaesu).

FWIW,

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Charles
Sent: Tuesday, January 18, 2011 4:45 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-520S ADVANTAGES?

I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
Constructive input is welcome.
Thanks.

Charlie Shaw
KB3BTO

[Non-text portions of this message have been removed]

29374. Re: VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 01:07:46 UTC
From: ki4ax
Topic: 29372 Message: 29374

Charlie,

Having the external VFO will allow you to work on two different frequencies at the same time. TX on one and RX on the other. Alot of DX stations will call on one freq. and listen on another. Unless you are able to work split freqs. you will be unable to work those stations. Some DX is cross band...TX on 10m and listen on 20m or something like that.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
> I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
> I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
> Constructive input is welcome.
> Thanks.
>
> Charlie Shaw
> KB3BTO
>

29375. no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 03:35:33 UTC
From: daves@prowirelesscomm.com
Topic: 29375 Message: 29375

Thanks for the great group.

Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.

I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.

29376. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 04:23:31 UTC
From: w5rkl
Topic: 29375 Message: 29376

Hello Dave,

What model of hybrid are you having this problem with? You forgot to mention which one.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, daves@... wrote:
>
> Thanks for the great group.
>
> Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
>
> I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
>

29377. TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 05:29:43 UTC
From: w5rkl
Topic: 29377 Message: 29377

If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the same!

First, turn the bad board over and note the number coated with solder on the foil side. The number could be

J25-1381-03

or

J25-1381-13

or some other number. The number on the back of the replacement board MUST be the same as the number on the back of your bad board. If they are not the same, the replacement board will not work in your 820!

The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few other signals into and out of the board.

The one glaring symptom will be complete loss of audio to the speaker, regardless of the volume control setting. This could lead you to believe Q3 on the board is bad. That is not necessarily true. What most likely has happened is you purchase a different "factory" designed AF AVR Unit board that is not compatible with your 820!

So, if you have to replace the 820s' AF AVR Unit board make sure you check and note the number on the foils side of the board so when you buy a replacement board from a parts seller or parts radio, the replacement board has the same exact number on the foil side as your board has! The X49-1080-00 number does not means all AF AVR Unit boards are the same!

How do I know this? I just bought a board that had a different number on the back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm telling you so you don't make the same mistake I did!

73s
Mike
W5RKL

29378. Re: VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 06:32:04 UTC
From: Leslie Smith
Topic: 29372 Message: 29378

I believe the chief advantage is in split frequency operation.

With an external VFO you can quickly switch between two frequencies.

Les

--

_____
Surf the Web in a faster, safer and easier way:
Download Opera 9 at http://www.opera.com

29379. Re: VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 12:39:26 UTC
From: D
Topic: 29372 Message: 29379

Does the external VFO allow one to work split with the transverters (TV-506/502)?
Thanks,
Dave
kd0fqx

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Charlie,
>
> Having the external VFO will allow you to work on two different frequencies at the same time. TX on one and RX on the other. Alot of DX stations will call on one freq. and listen on another. Unless you are able to work split freqs. you will be unable to work those stations. Some DX is cross band...TX on 10m and listen on 20m or something like that.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@> wrote:
> >
> > I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
> > I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
> > Constructive input is welcome.
> > Thanks.
> >
> > Charlie Shaw
> > KB3BTO
> >
>

29380. Re: [TS-520_820_530_830] VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 12:52:43 UTC
From: John Davidson
Topic: 29372 Message: 29380

Operating "split" is an advantager only if you are an avid DXer where DX stations listen on a stated frequency and transmit on another, usually beyond the "RIT" capability.

From: Charles <cshaw@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 18, 2011 7:45:14 PM
Subject: [TS-520_820_530_830] VFO-520S ADVANTAGES?

I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
Constructive input is welcome.
Thanks.

Charlie Shaw
KB3BTO

[Non-text portions of this message have been removed]

29381. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 14:33:27 UTC
From: daves@prowirelesscomm.com
Topic: 29375 Message: 29381

Wow, yeah. I could see why that would help.

It is a TS-520S

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Dave,
>
> What model of hybrid are you having this problem with? You forgot to mention which one.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> >
> > Thanks for the great group.
> >
> > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> >
> > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> >
>

29382. Re: VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 14:34:10 UTC
From: Charles
Topic: 29372 Message: 29382

--- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@...> wrote:
>
> I believe the chief advantage is in split frequency operation.
>
> With an external VFO you can quickly switch between two frequencies.
>
> Les
>

Thanks to everybody for the quality input. I hadn't considered either the effects of temperature or working split and both are factors worthy of deeper thought on my part. Thanks again.

73
Charlie Shaw
KB3BTO

29383. Re: VFO-520S ADVANTAGES?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 14:46:06 UTC
From: w5rkl
Topic: 29372 Message: 29383

Yes.

The Xverter, TV-502 2 meter or TV-506 are nothing more than transmit and receive converters between the 520 and the TV-502 2 meter converter or TV-506 6 meter converter.

The 520 operates on 10 meters when using the TV-502 or TV-506 converters. The 520s' final amplifier is disabled when using the TV-502 or TV-506 converters.

The basic conversion is as follows:

Transmit:

The 520s' 10 meter transmit signal is applied to the TV-502 or TV-506 converters where it is "up converted" to 2 or 6 meters.

Receive:

The 2 or 6 meter signal is "down converted" to 10 meters where it is applied to the 520. The 520 processing the "down converted" 28Mhz signal as it normal would for a 10 meter signal.

The VFO is NOT disabled when using the TV-502 or TV-506, 2 or 6 meter converters. Therefore, you can use the internal and external VFOs when using the TV-502 or TV-506 2 and 6 meter converters.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "D" <dave.phelps@...> wrote:
>
> Does the external VFO allow one to work split with the transverters (TV-506/502)?
> Thanks,
> Dave
> kd0fqx
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > Charlie,
> >
> > Having the external VFO will allow you to work on two different frequencies at the same time. TX on one and RX on the other. Alot of DX stations will call on one freq. and listen on another. Unless you are able to work split freqs. you will be unable to work those stations. Some DX is cross band...TX on 10m and listen on 20m or something like that.
> >
> > Dan KI4AX
> >

> > --- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@> wrote:
> > >
> > > I've been considering buying an external VFO for my 520SE but after looking at the schematic for the internal VFO and comparing it to the external VFO, I don't seen much of a difference. In fact, they look the same with the exception of the switches and indicator lights and a few other bits.
> > > I don't have an "EE" degree and I'm new to hybrids, but I don't see a significant advantage to having an external VFO. Am I missing something obvious? Is there a clear-cut advantage in using an external VFO?
> > > Constructive input is welcome.
> > > Thanks.
> > >
> > > Charlie Shaw
> > > KB3BTO
> > >
> >
>

29384. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 15:07:52 UTC
From: w5rkl
Topic: 29375 Message: 29384

Dave,

Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.

The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK

http://www.icmfg.com/hamradio.html

They have an 800 toll free number you can call to place the order.

Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.

Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, daves@... wrote:
>
> Wow, yeah. I could see why that would help.
>
> It is a TS-520S
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Dave,
> >
> > What model of hybrid are you having this problem with? You forgot to mention which one.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > >

> > > Thanks for the great group.
> > >
> > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > >
> > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> > >
> >
>

29385. Re: [TS-520_820_530_830] Re: TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 15:15:42 UTC
From: Joseph Stiles
Topic: 29363 Message: 29385

Charlie,

Glad to hear that "it's alive." If you can, check out the "basic alignment" procedure in the operators manual. It's rather easy and, may add some more ears. Not too long ago I got a "non-working" 820S for free. The guy didn't want it and was just going to toss it. Well, got it home and something obviously had been spilled on/in it. Looked like coffee with cream & sugar....that had been there for a while... well, took some DE-OXIT, small paint brush and about 2 hours. It's still hummin' away.

73's joe wb7uqu

_____
From: Charles <cshaw@epix.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 18, 2011 4:26:59 PM
Subject: [TS-520_820_530_830] Re: TS-520SE SENSITIVITY QUESTION

> The rig hasn't been used much, or so it would appear. There's been 2
>responses to the original question and both suggest a connector problem. This
>makes perfect sense to me.
> Daniel and Joe, thanks for your suggestions. I'll try and clean those
>contacts within the next day or two. I'll respond to this message thread with
>the results just as soon as I can.
> Thanks for your help.
>

I got a break today: we had snow and the freezing rain so my chores were canceled :) I went over and familiarized myself with the "innards" of the 520SE, spraying contact cleaner and oiling (clock oil) the variable capacitor bearings as I went.

I also used contact cleaner on the MFJ-986 tuner that I'm using that has been sitting on the shelf for 12 years (hmmmmm?) and, between the two pieces of equipment, I was successful. The sensitivity is "good" but does not compare to the TS-940 but that should be expected, I guess? Sensitivity has greatly improved, so it's "mission accomplished."
My thanks again to Daniel and Joe for their input.

73
Charlie Shaw
KB3BTO

[Non-text portions of this message have been removed]

29386. TS-830s or 830 Gold wanted

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 16:17:17 UTC
From: jon_g4fut
Topic: 29386 Message: 29386

I want to add a Kenwood 830s or 830 Gold to my Kenwood collection. Of course it must have all the filters (especially CW) and be in good working order. This will be UK only unfortunately as US - UK postage costs are stupidly ridiculous.
I can collect within a 100 mile radius for my QTH in Barnard Castle..see G4FUT QRZ.com for details.
Happy New Year to all.
Jon G4FUT

29387. Re: [TS-520_820_530_830] TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 17:34:48 UTC
From: Alan Riley
Topic: 29377 Message: 29387

Thanks for the info, Mike. I would much rather learn from someone else's mistakes as opposed to my own! :>)

73,
Alan, KD5R

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 18, 2011 11:29 PM
Subject: [TS-520_820_530_830] TS-820 AF AVR Unit board

If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the same!

First, turn the bad board over and note the number coated with solder on the foil side. The number could be

J25-1381-03

or

J25-1381-13

or some other number. The number on the back of the replacement board MUST be the same as the number on the back of your bad board. If they are not the same, the replacement board will not work in your 820!

The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few other signals into and out of the board.

The one glaring symptom will be complete loss of audio to the speaker, regardless of the volume control setting. This could lead you to believe Q3 on the board is bad. That is not necessarily true. What most likely has happened is you purchase a different "factory" designed AF AVR Unit board that is not compatible with your 820!

So, if you have to replace the 820s' AF AVR Unit board make sure you check and note the number on the foils side of the board so when you buy a replacement board from a parts seller or parts radio, the replacement board has the same exact number on the foil side as your board has! The X49-1080-00 number does not means all AF AVR Unit boards are the same!

How do I know this? I just bought a board that had a different number on the back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm telling you so you don't make the same mistake I did!

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

29388. Re: [TS-520_820_530_830] TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 18:18:09 UTC
From: Joseph Stiles
Topic: 29377 Message: 29388

Mike,

Now you tell me! Guess that explains it and makes sense with another "closet queen" I have. Oh well...gives me another thing to do! TNX MIKE!

73's joe wb7uqu

From: Alan Riley <arr44@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 19, 2011 9:34:48 AM
Subject: Re: [TS-520_820_530_830] TS-820 AF AVR Unit board

Thanks for the info, Mike. I would much rather learn from someone else's mistakes as opposed to my own! :>)

73,
Alan, KD5R

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, January 18, 2011 11:29 PM
Subject: [TS-520_820_530_830] TS-820 AF AVR Unit board

If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the same!

First, turn the bad board over and note the number coated with solder on the foil side. The number could be

J25-1381-03

or

J25-1381-13

or some other number. The number on the back of the replacement board MUST be the same as the number on the back of your bad board. If they are not the same, the replacement board will not work in your 820!

The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few other signals into and out of the board.

The one glaring symptom will be complete loss of audio to the speaker, regardless of the volume control setting. This could lead you to believe Q3 on the board is bad. That is not necessarily true. What most likely has happened is you purchase a different "factory" designed AF AVR Unit board that is not compatible with your 820!

So, if you have to replace the 820s' AF AVR Unit board make sure you check and note the number on the foils side of the board so when you buy a replacement board from a parts seller or parts radio, the replacement board has the same exact number on the foil side as your board has! The X49-1080-00 number does not means all AF AVR Unit boards are the same!

How do I know this? I just bought a board that had a different number on the back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm telling you so you don't make the same mistake I did!

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29389. VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 18:32:03 UTC
From: alamar_r
Topic: 29389 Message: 29389

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

29390. RE: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 19:31:19 UTC
From: Greg Anders
Topic: 29389 Message: 29390

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

[Non-text portions of this message have been removed]

29391. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 19:28:59 UTC
From: John Cox
Topic: 29389 Message: 29391

I have two that are khaki. look factory to me.

--- On Wed, 1/19/11, alamar_r <arr44@...> wrote:

From: alamar_r <arr44@...>
Subject: [TS-520_820_530_830] VFO-820 Question
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, January 19, 2011, 6:32 PM

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

[Non-text portions of this message have been removed]

29392. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 19:01:21 UTC
From: daves@prowirelesscomm.com
Topic: 29375 Message: 29392

Thanks for the info.
--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Dave,
>
> Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.
>
> The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK
>
> http://www.icmfg.com/hamradio.html
>
> They have an 800 toll free number you can call to place the order.
>
> Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.
>
> Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> >
> > Wow, yeah. I could see why that would help.
> >
> > It is a TS-520S
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Dave,
> > >
> > > What model of hybrid are you having this problem with? You forgot to mention which one.
> > >

> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > >
> > > > Thanks for the great group.
> > > >
> > > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > > >
> > > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> > > >
> > >
> > >
> >
>

29393. Re: TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 20:52:53 UTC
From: w5rkl
Topic: 29377 Message: 29393

If you download the 820 "service manual", look at the AF AVR Unit schematic on page "58", then download the 820 "operators'" manual and look at the AF AVR Unit schematic on page 31, you will instantly see the differences in AF AVR Units' AF3 plug pins.

The AF AVR Unit boards, placed on a desk, side by side, look the same. The X49 numbers are also the same, no difference in suffix. What makes them different is the foil side solder mask numbers. My original factory AF AVR Unit board had

J25-1380-13

on the foil side. The spare board I bought had

J25-1380-03

on the foils side.

While looking at the "service manual", page 58, showing the xray component and foil side of the board, I noticed the xray board has the number "J25-1380-03" clearly showing but the schematic appears to be for the "13" suffix board. What caught my eye on the boards' xray photo was the presence of R45 and R46 shown. Those components are NOT on the "13" suffix boards! The only component on the foil side of a "13" suffix board is a disc capacitor between amplifier chip Q3 pins "2" and "5".

The important issue here is to pay attention to the board numbers on the foil side of the board and not just the X49 number on the component side of the board. All of the boards in the 820, and I'm sure the other hybrids as well, have these numbers. I too, thought the boards were interchangeable but I found out, first hand, they are not.

I just thought it was important to let folks know to pay attention to the board numbers (foil side) to ensure any replacement boards they were going to use had the same numbers and the boards were compatible. It is an "easy" mistake to make, anyone would have made the same mistake. For the 03 suffix board to work in a 13 suffix wired 820, the wires on the AF3 plug would have to be rearranged by pulling them out and placing them in the appropriate holes in the plug. That can very easily result in broken wires. Therefore, I do not recommend doing that.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Now you tell me! Guess that explains it and makes sense with another "closet
> queen" I have. Oh well...gives me another thing to do! TNX MIKE!
>

> 73's joe wb7uqu
>
>
>
>
> _____
> From: Alan Riley <arr44@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 19, 2011 9:34:48 AM
> Subject: Re: [TS-520_820_530_830] TS-820 AF AVR Unit board
>
>
> Thanks for the info, Mike. I would much rather learn from someone else's
> mistakes as opposed to my own! :>)
>
> 73,
> Alan, KD5R
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, January 18, 2011 11:29 PM
> Subject: [TS-520_820_530_830] TS-820 AF AVR Unit board
>
> If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't
> rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a
> parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the
> same!
>
> First, turn the bad board over and note the number coated with solder on the
> foil side. The number could be
>
> J25-1381-03
>
> or
>
> J25-1381-13
>
> or some other number. The number on the back of the replacement board MUST be
> the same as the number on the back of your bad board. If they are not the same,
> the replacement board will not work in your 820!
>
> The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This
> plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few
> other signals into and out of the board.
>
>
> The one glaring symptom will be complete loss of audio to the speaker,
> regardless of the volume control setting. This could lead you to believe Q3 on
> the board is bad. That is not necessarily true. What most likely has happened is

> you purchase a different "factory" designed AF AVR Unit board that is not
> compatible with your 820!
>
>
> So, if you have to replace the 820s' AF AVR Unit board make sure you check and
> note the number on the foils side of the board so when you buy a replacement
> board from a parts seller or parts radio, the replacement board has the same
> exact number on the foil side as your board has! The X49-1080-00 number does not
> means all AF AVR Unit boards are the same!
>
> How do I know this? I just bought a board that had a different number on the
> back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm
> telling you so you don't make the same mistake I did!
>
> 73s
> Mike
> W5RKL
>
> [Non-text portions of this message have been removed]
>
>
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>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29394. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 21:03:32 UTC
From: w5rkl
Topic: 29375 Message: 29394

If you have access to a RF signal generator that tunes through 22 Mhz, tune the generator to 22.895Mhz. Set the generators' output signal level to a low level and inject the signal at TP3 on the RF Unit. Set the 520s' band switch to 20 meters, and connect an antenna to the 520. You should now hear 20 meter signals.

If the receiver comes to life on 20 meters then that indicates the 20 meter, 22.895Mhz, het osc crystal is bad.

Again, as I said before, make sure you have checked and cleaned the band switch wafers before performing this test to ensure the band switch wafer is not the source of the problem. Also check wiring to the switch wafer to ensure there are no broken wires.

The above test is easy to do, all you need is a simple RF signal generator. I recommend using a .01ufd 50VDC or .1ufd 50VDC disc capacitor between TP3 and the signal generators' output. This will isolate the generator, "DC wise", from TP3, preventing any DC voltage from being applied to TP3. All you want at TP3 is an RF signal from the generator, no DC voltage.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, daves@... wrote:
>
>
> Thanks for the info.
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Dave,
> >
> > Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.
> >
> > The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK
> >
> > http://www.icmfg.com/hamradio.html
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> > They have an 800 toll free number you can call to place the order.
> >
> > Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.

> >
> > Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > >
> > > Wow, yeah. I could see why that would help.
> > >
> > > It is a TS-520S
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hello Dave,
> > > >
> > > > What model of hybrid are you having this problem with? You forgot to mention which one.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > >
> > > > > Thanks for the great group.
> > > > >
> > > > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > > > >
> > > > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> > > > >
> > > > >
> > > >
> > >
> > >
> >
> >
>

29395. Re: TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 21:06:35 UTC
From: w5rkl
Topic: 29377 Message: 29395

The numbers should be

J25-1381-03

and

J25-1381-13

in my last response. The number "1380" is a typo.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If you download the 820 "service manual", look at the AF AVR Unit schematic on page "58", then download the 820 "operators'" manual and look at the AF AVR Unit schematic on page 31, you will instantly see the differences in AF AVR Units' AF3 plug pins.
>
> The AF AVR Unit boards, placed on a desk, side by side, look the same. The X49 numbers are also the same, no difference in suffix. What makes them different is the foil side solder mask numbers. My original factory AF AVR Unit board had
>
> J25-1380-13
>
> on the foil side. The spare board I bought had
>
> J25-1380-03
>
> on the foils side.
>
> While looking at the "service manual", page 58, showing the xray component and foil side of the board, I noticed the xray board has the number "J25-1380-03" clearly showing but the schematic appears to be for the "13" suffix board. What caught my eye on the boards' xray photo was the presence of R45 and R46 shown. Those components are NOT on the "13" suffix boards! The only component on the foil side of a "13" suffix board is a disc capacitor between amplifier chip Q3 pins "2" and "5".
>
> The important issue here is to pay attention to the board numbers on the foil side of the board and not just the X49 number on the component side of the board. All of the boards in the 820, and I'm sure the other hybrids as well, have these numbers. I too, thought the boards were interchangeable but I found out, first hand, they are not.
>
> I just thought it was important to let folks know to pay attention to the board numbers (foil side) to ensure any replacement boards they were going to use had the same numbers

and the boards were compatible. It is an "easy" mistake to make, anyone would have made the same mistake. For the 03 suffix board to work in a 13 suffix wired 820, the wires on the AF3 plug would have to be rearranged by pulling them out and placing them in the appropriate holes in the plug. That can very easily result in broken wires. Therefore, I do not recommend doing that.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Mike,
> >
> > Now you tell me! Guess that explains it and makes sense with another "closet
> > queen" I have. Oh well...gives me another thing to do! TNX MIKE!
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> > _____
> > From: Alan Riley <arr44@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, January 19, 2011 9:34:48 AM
> > Subject: Re: [TS-520_820_530_830] TS-820 AF AVR Unit board
> >
> >
> > Thanks for the info, Mike. I would much rather learn from someone else's
> > mistakes as opposed to my own! :>)
> >
> > 73,
> > Alan, KD5R
> >
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tuesday, January 18, 2011 11:29 PM
> > Subject: [TS-520_820_530_830] TS-820 AF AVR Unit board
> >
> > If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't
> > rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a
> > parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the
> > same!
> >
> > First, turn the bad board over and note the number coated with solder on the
> > foil side. The number could be
> >

> > J25-1381-03
> >
> > or
> >
> > J25-1381-13
> >
> > or some other number. The number on the back of the replacement board MUST be
> > the same as the number on the back of your bad board. If they are not the same,
> > the replacement board will not work in your 820!
> >
> > The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This
> > plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few
> > other signals into and out of the board.
> >
> >
> > The one glaring symptom will be complete loss of audio to the speaker,
> > regardless of the volume control setting. This could lead you to believe Q3 on
> > the board is bad. That is not necessarily true. What most likely has happened is
> > you purchase a different "factory" designed AF AVR Unit board that is not
> > compatible with your 820!
> >
> >
> > So, if you have to replace the 820s' AF AVR Unit board make sure you check and
> > note the number on the foils side of the board so when you buy a replacement
> > board from a parts seller or parts radio, the replacement board has the same
> > exact number on the foil side as your board has! The X49-1080-00 number does not
> > means all AF AVR Unit boards are the same!
> >
> > How do I know this? I just bought a board that had a different number on the
> > back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm
> > telling you so you don't make the same mistake I did!
> >
> > 73s
> > Mike
> > W5RKL
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29396. Re: TS-820 AF AVR Unit board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 21:16:22 UTC
From: w5rkl
Topic: 29377 Message: 29396

Joe,

The power supplies, 3.3VDC and 9VDC, on the boards are the same as are the pins on AF1 and AF2 plugs. No difference there. The significant differences is on plug AF3.

I remembered some time ago, a year or so maybe, I saw 2 different AF AVR Unit schematics. At the time I wasn't replacing or buying spare boards so I ignored it. The seller is sending me the correct "13" suffix board, free, and told me to keep the "03" suffix board. Nothing lost but a lot gained.

Modifying the boards pins is not possible since the foil side is different between the boards. It's also not a good idea to pull the pins on plug AF3 so they match the pins on the 03 suffix boards. Too risky which can result in broken wires. Remember, the 820 is quite old and age can take its toll on the plug wires and internal female sockets.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Now you tell me! Guess that explains it and makes sense with another "closet
> queen" I have. Oh well...gives me another thing to do! TNX MIKE!
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: Alan Riley <arr44@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 19, 2011 9:34:48 AM
> Subject: Re: [TS-520_820_530_830] TS-820 AF AVR Unit board
>
>
> Thanks for the info, Mike. I would much rather learn from someone else's
> mistakes as opposed to my own! :>)
>
> 73,
> Alan, KD5R
>
> ----- Original Message -----
> From: w5rkl

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, January 18, 2011 11:29 PM
> Subject: [TS-520_820_530_830] TS-820 AF AVR Unit board
>
> If you find yourself working on an 820 that has a bad AF AVR Unit board. Don't
> rush out and buy any old TS-820 X49-1080-00 AF AVR Unit board off eBay or from a
> parts radio. Why? Because not all TS-820 X49-1080-00 AF AVR Unit boards are the
> same!
>
> First, turn the bad board over and note the number coated with solder on the
> foil side. The number could be
>
> J25-1381-03
>
> or
>
> J25-1381-13
>
> or some other number. The number on the back of the replacement board MUST be
> the same as the number on the back of your bad board. If they are not the same,
> the replacement board will not work in your 820!
>
> The major difference between the TS-820 AF AVR Unit boards is on plug AF3! This
> plug routes the VFB signal, AV1 audio, AV2 audio, MON (Monitor) audio, and a few
> other signals into and out of the board.
>
>
> The one glaring symptom will be complete loss of audio to the speaker,
> regardless of the volume control setting. This could lead you to believe Q3 on
> the board is bad. That is not necessarily true. What most likely has happened is
> you purchase a different "factory" designed AF AVR Unit board that is not
> compatible with your 820!
>
>
> So, if you have to replace the 820s' AF AVR Unit board make sure you check and
> note the number on the foils side of the board so when you buy a replacement
> board from a parts seller or parts radio, the replacement board has the same
> exact number on the foil side as your board has! The X49-1080-00 number does not
> means all AF AVR Unit boards are the same!
>
> How do I know this? I just bought a board that had a different number on the
> back, it had a suffix of "03" and not a suffix of "13" that my board had. I'm
> telling you so you don't make the same mistake I did!
>
> 73s
> Mike
> W5RKL
>
> [Non-text portions of this message have been removed]
>

>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29397. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-19 22:11:37 UTC
From: Joseph Stiles
Topic: 29389 Message: 29397

I agree, all the KW's I've seen/owned have been gray...over the years I think KW may have adjusted the color a bit... between say the 520 and the 830..as I've seen some that we not a total gray...but had just a slightly "olive" hue. Khaki? more than likely a repaint.

73's joe wb7uqu

From: Greg Anders <greg.anders@synopsys.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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[Non-text portions of this message have been removed]

29398. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 02:36:44 UTC
From: Alan Riley
Topic: 29389 Message: 29398

Joe, you may be right...the trouble is, both units look like factory paint jobs yet they are definitely not the same color.

I thought maybe since this VFO-820 doesn't have a spinner knob, that it could maybe be an early version that was also painted different.

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 4:11 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I agree, all the KW's I've seen/owned have been gray...over the years I think KW may have adjusted the color a bit... between say the 520 and the 830..as I've seen some that we not a total gray...but had just a slightly "olive" hue. Khaki? more than likely a repaint.

73's joe wb7uqu

From: Greg Anders <greg.anders@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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[Non-text portions of this message have been removed]

29399. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 02:40:58 UTC
From: Alan Riley
Topic: 29389 Message: 29399

Thanks, John...It's good to know someone else besides me has
a KW hybrid this color.

73,
Alan, KD5R

----- Original Message -----
From: John Cox
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 1:28 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I have two that are khaki. look factory to me.

--- On Wed, 1/19/11, alamar_r <arr44@...> wrote:

From: alamar_r <arr44@suddenlink.net>
Subject: [TS-520_820_530_830] VFO-820 Question
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, January 19, 2011, 6:32 PM

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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[Non-text portions of this message have been removed]

29400. TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 02:41:19 UTC
From: Chris Parnell
Topic: 29400 Message: 29400

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New Zealand.

Thank you
Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

29401. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 03:07:05 UTC
From: Joseph Stiles
Topic: 29389 Message: 29401

Alan,

I repainted numerous cabinets over the last few years. If the cabinet is not full of rust/corrosion, I clean it with a "scratchy pad" and some "simple green." This cleans well and is non-toxic/biodegradable. Also, it leaves the hammered/lumpy "factory look" to the paint. The "scratchy pad" will leave super-small scratches on the surface and also will take off what gloss is there. A light coat of gray auto primer, followed by the "color coat" will leave the case looking almost like "factory." There was a discussion about 3-4 weeks ago here regarding case painting. It was me wb7uqu, and Gordon n6wk and, another guy whom I can't remember right now. Good luck.....

73's joe wb7uqu

From: Alan Riley <arr44@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 19, 2011 6:36:44 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Joe, you may be right...the trouble is, both units look like factory paint jobs yet they are definitely not the same color.

I thought maybe since this VFO-820 doesn't have a spinner knob, that it could maybe be an early version that was also painted different.

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 4:11 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I agree, all the KW's I've seen/owned have been gray...over the years I think KW may have adjusted the color a bit... between say the 520 and the 830..as I've

seen some that we not a total gray...but had just a slightly "olive" hue. Khaki? more than likely a repaint.

73's joe wb7uqu

From: Greg Anders <greg.anders@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen

or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did

not have the spinner knob, instead having the older style non-spinner knob. What

was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this

one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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29402. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 03:11:12 UTC
From: Ruben Echevarria KA2HHB
Topic: 29400 Message: 29402

Check with Gordon N6WK http://www.n6wk.com/ Also Ken Kemski www.k4eaa.com
I believe there are a few people on eBay as well.
Send Gordon an email first.
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 9:41 PM
Subject: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s
and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New
Zealand.

Thank you
Chris Parnell, ZL1CDP

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[Non-text portions of this message have been removed]

29403. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 03:13:08 UTC
From: Joseph Stiles
Topic: 29400 Message: 29403

Chris,

There is a guy on EBAY that sells spray cans of the correct color. He's in the US. I think it's about $15.00 USD a can. I have used some and it's correct color/gloss. I don't know about sending ORM-D stuff to NZ. If you have a good sample to go by..a good automotive paint shop can help. Also, any paint supply house...I don't know what you have "down there" can "computer match" the color/gloss...it just might be more than you want to spend. Good luck.....

73's joe wb7uqu

From: Chris Parnell <cparnell1001@me.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 19, 2011 6:41:19 PM
Subject: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New Zealand.

Thank you
Chris Parnell, ZL1CDP

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[Non-text portions of this message have been removed]

29404. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 03:17:31 UTC
From: Chris Parnell
Topic: 29400 Message: 29404

Hi Ruben... Bugger, just ordered some kit from Ken too.
Thanks for the info...

Cheers
Chris

Sent from my iPhone

On 20/01/2011, at 4:11 PM, Ruben Echevarria KA2HHB <ka2hhb_2000@...> wrote:

> Check with Gordon N6WK http://www.n6wk.com/ Also Ken Kemski www.k4eaa.com
> I believe there are a few people on eBay as well.
> Send Gordon an email first.
> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308
> EPC#3390
> ----- Original Message -----
> From: Chris Parnell
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, January 19, 2011 9:41 PM
> Subject: [TS-520_820_530_830] TS-830s and TS-930s paint
>
> Hi everyone, new to the group.
>
> Is is possible to get spray paint cans that match the colour of the TS-830s
> and TS-930s still?
> If so, any good sources? Of course, I would need to get them shipped to New
> Zealand.
>
> Thank you
> Chris Parnell, ZL1CDP
>
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> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

29405. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 04:13:08 UTC
From: W LEWIS
Topic: 29400 Message: 29405

Chris,
I bought some paint from the guy on ebay and I can tell you it does not match which becomes a problem if you have several pieces in your Kenwood rig. You are much better off to take a sample to a good auto paint shop. They have computers that read the color for an exact match and they can also put the paint in a "rattle can" for you which will cost less money than buying on ebay. They also have a additive that is mixed with the paint in varying amounts to "adjust" the finish from high gloss to flat. The auto paint shop is definitely the way to go. Hope this info is helpful.
Best regards,
Butch Lewis
K0PSA

--- On Wed, 1/19/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, January 19, 2011, 9:13 PM

Chris,

There is a guy on EBAY that sells spray cans of the correct color. He's in the US. I think it's about $15.00 USD a can. I have used some and it's correct color/gloss. I don't know about sending ORM-D stuff to NZ. If you have a good sample to go by..a good automotive paint shop can help. Also, any paint supply house...I don't know what you have "down there" can "computer match" the color/gloss...it just might be more than you want to spend. Good luck.....

73's joe wb7uqu

_____
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 19, 2011 6:41:19 PM
Subject: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New Zealand.

Thank you
Chris Parnell, ZL1CDP

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29406. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 04:16:30 UTC
From: Ruben Echevarria KA2HHB
Topic: 29400 Message: 29406

I think you'll be fine with Ken .... Ken likes to do things right and he's a stickler for authenticity so whatever
he has should be on the money.
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
Cc: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 10:17 PM
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi Ruben... Bugger, just ordered some kit from Ken too.
Thanks for the info...

Cheers
Chris

Sent from my iPhone

On 20/01/2011, at 4:11 PM, Ruben Echevarria KA2HHB <ka2hhb_2000@...> wrote:

> Check with Gordon N6WK http://www.n6wk.com/ Also Ken Kemski www.k4eaa.com
> I believe there are a few people on eBay as well.
> Send Gordon an email first.
> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308
> EPC#3390
> ----- Original Message -----
> From: Chris Parnell
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, January 19, 2011 9:41 PM
> Subject: [TS-520_820_530_830] TS-830s and TS-930s paint
>
> Hi everyone, new to the group.
>
> Is is possible to get spray paint cans that match the colour of the TS-830s
> and TS-930s still?
> If so, any good sources? Of course, I would need to get them shipped to New
> Zealand.
>

> Thank you
> Chris Parnell, ZL1CDP
>
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29407. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 04:21:19 UTC
From: Ruben Echevarria KA2HHB
Topic: 29400 Message: 29407

BTW if you go into an auto parts store and they happen to sell Dupli-Color or Plastikote brand you can get very very close. I did a TS440SAT that I had that was in perfect shape and the radio came out looking brand new.
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
Cc: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 10:17 PM
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi Ruben... Bugger, just ordered some kit from Ken too.
Thanks for the info...

Cheers
Chris

Sent from my iPhone

On 20/01/2011, at 4:11 PM, Ruben Echevarria KA2HHB <ka2hhb_2000@...> wrote:

> Check with Gordon N6WK http://www.n6wk.com/ Also Ken Kemski www.k4eaa.com
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> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308
> EPC#3390
> ----- Original Message -----
> From: Chris Parnell
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, January 19, 2011 9:41 PM
> Subject: [TS-520_820_530_830] TS-830s and TS-930s paint
>
> Hi everyone, new to the group.
>
> Is is possible to get spray paint cans that match the colour of the TS-830s
> and TS-930s still?
> If so, any good sources? Of course, I would need to get them shipped to New
> Zealand.
>

> Thank you
> Chris Parnell, ZL1CDP
>
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29408. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 03:15:21 UTC
From: Chris Parnell
Topic: 29400 Message: 29408

Thanks Joe... I have seen them on eBay, just curious about shipping them to NZ by plane ;-)

Cheers Chris

Sent from my iPhone

On 20/01/2011, at 4:13 PM, Joseph Stiles <stilesjoseph@...> wrote:

> Chris,
>
> There is a guy on EBAY that sells spray cans of the correct color. He's in
> the US. I think it's about $15.00 USD a can. I have used some and it's correct
> color/gloss. I don't know about sending ORM-D stuff to NZ. If you have a good
> sample to go by..a good automotive paint shop can help. Also, any paint supply
> house...I don't know what you have "down there" can "computer match" the
> color/gloss...it just might be more than you want to spend. Good
> luck.....................
>
> 73's joe wb7uqu
>
> _____________________________
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 19, 2011 6:41:19 PM
> Subject: [TS-520_820_530_830] TS-830s and TS-930s paint
>
> Hi everyone, new to the group.
>
> Is is possible to get spray paint cans that match the colour of the TS-830s
> and TS-930s still?
> If so, any good sources? Of course, I would need to get them shipped to New
> Zealand.
>
> Thank you
> Chris Parnell, ZL1CDP
>
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29409. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 04:52:54 UTC
From: Ken
Topic: 29375 Message: 29409

It could also be that the 20 mtr het osc coil is adjusted incorrectly and the osc has "chirped out". Back the slug out to the top of the coil form then slowly turn it clockwise for a peak then back it off a bit as described in the manual.

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If you have access to a RF signal generator that tunes through 22 Mhz, tune the generator to 22.895Mhz. Set the generators' output signal level to a low level and inject the signal at TP3 on the RF Unit. Set the 520s' band switch to 20 meters, and connect an antenna to the 520. You should now hear 20 meter signals.
>
> If the receiver comes to life on 20 meters then that indicates the 20 meter, 22.895Mhz, het osc crystal is bad.
>
> Again, as I said before, make sure you have checked and cleaned the band switch wafers before performing this test to ensure the band switch wafer is not the source of the problem. Also check wiring to the switch wafer to ensure there are no broken wires.
>
> The above test is easy to do, all you need is a simple RF signal generator. I recommend using a .01ufd 50VDC or .1ufd 50VDC disc capacitor between TP3 and the signal generators' output. This will isolate the generator, "DC wise", from TP3, preventing any DC voltage from being applied to TP3. All you want at TP3 is an RF signal from the generator, no DC voltage.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> >
> >
> > Thanks for the info.
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Dave,
> > >
> > > Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.
> > >
> > > The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch

or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK
> > >
> > > http://www.icmfg.com/hamradio.html
> > >
> > > They have an 800 toll free number you can call to place the order.
> > >
> > > Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.
> > >
> > > Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > >
> > > > Wow, yeah. I could see why that would help.
> > > >
> > > > It is a TS-520S
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Hello Dave,
> > > > >
> > > > > What model of hybrid are you having this problem with? You forgot to mention which one.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > > >
> > > > > > Thanks for the great group.
> > > > > >
> > > > > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > > > > >
> > > > > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.

> > > > > >
> > > > >
> > > >
> > >
> >
>

29410. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 04:21:07 UTC
From: Chris Parnell
Topic: 29400 Message: 29410

Yes he seems very good☐ However I'm concerned about how we get the spray can over to NZ☐

Cheers
chris

From: Ruben Echevarria KA2HHB <ka2hhb_2000@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Wed, 19 Jan 2011 23:16:30 -0500
To: <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint

I think you'll be fine with Ken .... Ken likes to do things right and he's a stickler for authenticity so whatever
he has should be on the money.
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Cc: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, January 19, 2011 10:17 PM
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi Ruben... Bugger, just ordered some kit from Ken too.
Thanks for the info...

Cheers
Chris

Sent from my iPhone

On 20/01/2011, at 4:11 PM, Ruben Echevarria KA2HHB <ka2hhb_2000@yahoo.com
<mailto:ka2hhb_2000%40yahoo.com> > wrote:

> Check with Gordon N6WK http://www.n6wk.com/ Also Ken Kemski www.k4eaa.com
> I believe there are a few people on eBay as well.
> Send Gordon an email first.
> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308

> EPC#3390
> ----- Original Message -----
> From: Chris Parnell
> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wednesday, January 19, 2011 9:41 PM
> Subject: [TS-520_820_530_830] TS-830s and TS-930s paint
>
> Hi everyone, new to the group.
>
> Is is possible to get spray paint cans that match the colour of the
TS-830s
> and TS-930s still?
> If so, any good sources? Of course, I would need to get them shipped to
New
> Zealand.
>
> Thank you
> Chris Parnell, ZL1CDP
>
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29411. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 06:02:04 UTC
From: J T
Topic: 29400 Message: 29411

Hi Chris,
I found a very close match in Supercheap Auto for my TS-520. Hard to tell from my other rigs. Or, go to a paint shop with the cabinet and they will match the colour and put it in a spray can for you. Last time I did this the cost was about $25.00, got to be cheaper than trying to get it from the US .It is unlikely that an airline will carry them from the States.
Cheers,
John
ZL1DT
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 20, 2011 3:41 PM
Subject: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New Zealand.

Thank you
Chris Parnell, ZL1CDP

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[Non-text portions of this message have been removed]

29412. Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 12:11:40 UTC
From: Chris Parnell
Topic: 29400 Message: 29412

Thanks John, much appreciated mate.

Cheers
Chris

From: J T <zl1dt@kinect.co.nz>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Thu, 20 Jan 2011 19:02:04 +1300
To: <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi Chris,
I found a very close match in Supercheap Auto for my TS-520. Hard to tell from my other rigs. Or, go to a paint shop with the cabinet and they will match the colour and put it in a spray can for you. Last time I did this the cost was about $25.00, got to be cheaper than trying to get it from the US .It is unlikely that an airline will carry them from the States.
Cheers,
John
ZL1DT
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thursday, January 20, 2011 3:41 PM
Subject: [TS-520_820_530_830] TS-830s and TS-930s paint

Hi everyone, new to the group.

Is is possible to get spray paint cans that match the colour of the TS-830s and TS-930s still?
If so, any good sources? Of course, I would need to get them shipped to New Zealand.

Thank you
Chris Parnell, ZL1CDP

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29413. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 12:27:24 UTC
From: w5rkl
Topic: 29375 Message: 29413

Good morning Ken,

I agree if the 20 meter heterodyne oscillator coil has been misaligned either by Dave or if Dave is not the original owner, by a previous owner. That is why my initial response stated that Dave should be absolutely sure the 20 meter het crystal is, in fact, the source of the problem and not something else such as broken wires, dirty wafer switch, etc.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <atm_ken_hunter@...> wrote:
>
> It could also be that the 20 mtr het osc coil is adjusted incorrectly and the osc has "chirped out". Back the slug out to the top of the coil form then slowly turn it clockwise for a peak then back it off a bit as described in the manual.
>
> Ken - KB7H
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > If you have access to a RF signal generator that tunes through 22 Mhz, tune the generator to 22.895Mhz. Set the generators' output signal level to a low level and inject the signal at TP3 on the RF Unit. Set the 520s' band switch to 20 meters, and connect an antenna to the 520. You should now hear 20 meter signals.
> >
> > If the receiver comes to life on 20 meters then that indicates the 20 meter, 22.895Mhz, het osc crystal is bad.
> >
> > Again, as I said before, make sure you have checked and cleaned the band switch wafers before performing this test to ensure the band switch wafer is not the source of the problem. Also check wiring to the switch wafer to ensure there are no broken wires.
> >
> > The above test is easy to do, all you need is a simple RF signal generator. I recommend using a .01ufd 50VDC or .1ufd 50VDC disc capacitor between TP3 and the signal generators' output. This will isolate the generator, "DC wise", from TP3, preventing any DC voltage from being applied to TP3. All you want at TP3 is an RF signal from the generator, no DC voltage.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:

> > >
> > >
> > > Thanks for the info.
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Dave,
> > > >
> > > > Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.
> > > >
> > > > The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK
> > > >
> > > > http://www.icmfg.com/hamradio.html
> > > >
> > > > They have an 800 toll free number you can call to place the order.
> > > >
> > > > Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.
> > > >
> > > > Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > >
> > > > > Wow, yeah. I could see why that would help.
> > > > >
> > > > > It is a TS-520S
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > > Hello Dave,
> > > > > >
> > > > > > What model of hybrid are you having this problem with? You forgot to mention which one.
> > > > > >
> > > > > > 73s
> > > > > > Mike

> > > > > > W5RKL
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > > > >
> > > > > > > Thanks for the great group.
> > > > > > > >
> > > > > > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > > > > > >
> > > > > > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> > > > > > >
> > > > > > >
> > > > > >
> > > > > >
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> >

29414. RE: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 15:02:13 UTC
From: Greg Anders
Topic: 29389 Message: 29414

Wait a minute,

10-15 years ago I was fascinated with 830's. I bought three used radios over time and two sets of VFO's. As I remember one radio came with a khaki paint color.
I could never figure it out until later when I bought a second VFO (for another 830) and the VFO had the khaki paint. The problem was that I no longer had
The khaki colored 830….

FWIW,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Alan Riley
Sent: Wednesday, January 19, 2011 6:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Joe, you may be right...the trouble is, both units look like factory paint
jobs yet they are definitely not the same color.

I thought maybe since this VFO-820 doesn't have a spinner knob, that it
could maybe be an early version that was also painted different.

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, January 19, 2011 4:11 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I agree, all the KW's I've seen/owned have been gray...over the years I think
KW may have adjusted the color a bit... between say the 520 and the 830..as I've
seen some that we not a total gray...but had just a slightly "olive" hue.
Khaki? more than likely a repaint.

73's joe wb7uqu

_____
From: Greg Anders <greg.anders@...<mailto:greg.anders%40synopsys.com>>
To: "TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> [mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29415. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 15:34:36 UTC
From: Alan Riley
Topic: 29389 Message: 29415

Thanks, Joe. I went back and read the posts that you referenced. After reading those and other posts, it seems that no one paint color is going to match all of the KW hybrids out there.

Actually, I like the "warm" look of the khaki color as opposed to the "cold" look of the gray. It looks right at home on the hybrid. To get them both exactly the same will probably require repainting them both. I'm not limited to the use of spray cans here as I have both high pressure and HVLP spray equipment. It would be nice to have an oven like Gordon has for drying the paint. If I used the XYL's oven, I would have more to worry about than the color of my cabinets!

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, January 19, 2011 9:07 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Alan,

I repainted numerous cabinets over the last few years. If the cabinet is not full of rust/corrosion, I clean it with a "scratchy pad" and some "simple green." This cleans well and is non-toxic/biodegradable. Also, it leaves the hammered/lumpy "factory look" to the paint. The "scratchy pad" will leave super-small scratches on the surface and also will take off what gloss is there. A light coat of gray auto primer, followed by the "color coat" will leave the case looking almost like "factory." There was a discussion about 3-4 weeks ago here regarding case painting. It was me wb7uqu, and Gordon n6wk and, another guy whom I can't remember right now. Good luck.....

73's joe wb7uqu

[Non-text portions of this message have been removed]

29416. Re: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 15:49:16 UTC
From: Alan Riley
Topic: 29389 Message: 29416

Thanks, Greg. For a while I thought maybe I was the only one with a khaki hybrid!

I was in Lowes a while back and noticed they carried Rust-oleum camouflage paint
in three different colors, one of which was khaki. I didn't have my 40# hybrid under
my arm for comparison, but it appeared to be a close match. It dries to a flat,
non-reflective
finish but after curing, one should be able to buff it out to a suitable gloss level. Maybe
I'll pick up a can of it to try on a test surface.

73,
Alan, KD5R

----- Original Message -----
From: Greg Anders
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 20, 2011 9:02 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

Wait a minute,

10-15 years ago I was fascinated with 830's. I bought three used radios over time and two
sets of VFO's. As I remember one radio came with a khaki paint color.
I could never figure it out until later when I bought a second VFO (for another 830) and
the VFO had the khaki paint. The problem was that I no longer had
The khaki colored 830….

FWIW,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On
Behalf Of Alan Riley
Sent: Wednesday, January 19, 2011 6:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Joe, you may be right...the trouble is, both units look like factory paint
jobs yet they are definitely not the same color.

I thought maybe since this VFO-820 doesn't have a spinner knob, that it
could maybe be an early version that was also painted different.

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles

To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, January 19, 2011 4:11 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I agree, all the KW's I've seen/owned have been gray...over the years I think
KW may have adjusted the color a bit... between say the 520 and the 830..as I've
seen some that we not a total gray...but had just a slightly "olive" hue.
Khaki? more than likely a repaint.

73's joe wb7uqu

From: Greg Anders <greg.anders@...<mailto:greg.anders%40synopsys.com>>
To: "TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>"
<TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen
or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>]
On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the
problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did
not have the spinner knob, instead having the older style non-spinner knob. What
was not obvious from the picture, was that the cabinet color was not the khaki
color of my TS-820S and all the other hybrids that I've seen. This vfo is gray.
This is not a repaint job by a previous owner unless he was an expert. Inside
and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in
gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the
TS-820S and maybe someday replace the knob with a spinner type or just sell this
one and buy another one that already matches. I hate to change the color on it
if in fact this is the original color.

73,
Alan, KD5R

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29417. RE: [TS-520_820_530_830] VFO-820 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 17:16:49 UTC
From: Greg Anders
Topic: 29389 Message: 29417

Hi Alan,

From my younger days when I painted several automobiles…. If the Lowe's paint is an enamel buffing after curing often causes enamels to dull, not gloss.
Stoll, you can try it, or spray a light coat of clear gloss on top after the color paint hardens for a week or so.

Lacquers are the opposite. Unless you bake the "crap" out of lacquer immediately after spraying, the formaldehyde evaporator in the thinner which hardens
The paint thru evaporation causes the laquer to go dull, requiring buffing to get the gloss. GM had a two step curing/baking process when they used lacquer.
The first oven was around 180 degrees, the second was over 300 degrees to re-melt the finish after the formaldehyde was gone. No buffing required.

FYI,

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Alan Riley
Sent: Thursday, January 20, 2011 7:49 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Thanks, Greg. For a while I thought maybe I was the only one with a khaki hybrid!

I was in Lowes a while back and noticed they carried Rust-oleum camouflage paint
in three different colors, one of which was khaki. I didn't have my 40# hybrid under
my arm for comparison, but it appeared to be a close match. It dries to a flat,
non-reflective
finish but after curing, one should be able to buff it out to a suitable gloss level. Maybe I'll pick up a can of it to try on a test surface.

73,
Alan, KD5R

----- Original Message -----
From: Greg Anders
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thursday, January 20, 2011 9:02 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

Wait a minute,

10-15 years ago I was fascinated with 830's. I bought three used radios over time and two sets of VFO's. As I remember one radio came with a khaki paint color.
I could never figure it out until later when I bought a second VFO (for another 830) and the VFO had the khaki paint. The problem was that I no longer had

The khaki colored 830….

FWIW,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>]
On Behalf Of Alan Riley
Sent: Wednesday, January 19, 2011 6:37 PM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: Re: [TS-520_820_530_830] VFO-820 Question

Joe, you may be right...the trouble is, both units look like factory paint
jobs yet they are definitely not the same color.

I thought maybe since this VFO-820 doesn't have a spinner knob, that it
could maybe be an early version that was also painted different.

73,
Alan, KD5R

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto
:TS-520_820_530_830%40yahoogroups.com>
Sent: Wednesday, January 19, 2011 4:11 PM
Subject: Re: [TS-520_820_530_830] VFO-820 Question

I agree, all the KW's I've seen/owned have been gray...over the years I think
KW may have adjusted the color a bit... between say the 520 and the 830..as I've
seen some that we not a total gray...but had just a slightly "olive" hue.
Khaki? more than likely a repaint.

73's joe wb7uqu

_____
From: Greg Anders
<greg.anders@...<mailto:greg.anders%40synopsys.com><mailto:greg.anders%40synopsys.com>>
To: "TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailt
o:TS-520_820_530_830%40yahoogroups.com>" <TS-520_820_530_830@yahoogroups.com<mailto:TS-520
_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.com>>
Sent: Wed, January 19, 2011 11:31:19 AM
Subject: RE: [TS-520_820_530_830] VFO-820 Question

I don't believe I ever saw an 820 or the VFO in khaki.... Every unit I have seen
or owned is gray.

Or I am color blind,

Strange,

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mail
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ilto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of alamar_r
Sent: Wednesday, January 19, 2011 10:32 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto
:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] VFO-820 Question

A few months ago I bought a TS-820S "tech special" at a hamfest. I repaired the problems in it and then decided to look for a VFO-820 to go along with it.

I bought a nice looking one on eBay. It was obvious from the picture that it did not have the spinner knob, instead having the older style non-spinner knob. What was not obvious from the picture, was that the cabinet color was not the khaki color of my TS-820S and all the other hybrids that I've seen. This vfo is gray. This is not a repaint job by a previous owner unless he was an expert. Inside and out, this appears to be factory. Did Kenwood ever produce the VFO-820 in gray?

I'm not sure at this point whether to repaint the VFO-820 cabinet to match the TS-820S and maybe someday replace the knob with a spinner type or just sell this one and buy another one that already matches. I hate to change the color on it if in fact this is the original color.

73,
Alan, KD5R

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29418. TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 20:21:39 UTC
From: rkersey tds.net
Topic: 29418 Message: 29418

I've been trying to figure out a low cost option for adding 6 meter SSB to my station when I set up my TS-830S soon. Right now I am thinking of a Ten Tec 1208 and then maybe a 6 meter amp to boost the output. Since the transverter only takes 5 watts max and the amp will turn that into 100 watts and not take more than that, how to I make sure not to overdrive both of these with the 830? I thought there was a low power switch on the 830, but, looking at the instruction manual, I don't see it. Any ideas?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29419. TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 20:22:24 UTC
From: jon_g4fut
Topic: 29419 Message: 29419

Juts got a TS830s to add to my collection but the calibrator doesnt calibrate (no sound) also when I press the calibrator button the digital frequency freezes. Any suggestions gentlemen ?
Jon G4FUT

29420. Re: [TS-520_820_530_830] TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 20:25:33 UTC
From: n6wk@n6wk.com
Topic: 29419 Message: 29420

Jon,
The TS-830S does NOT have a Calibrator Button. The TS-530 does.
The TS-830S has a DH button which freezes the display. The Calibrator
Switch is on the Mic control on the 830.
Turn it fully CCW until it Clicks, then the Calibrator is On

73,
Gordon
N6WK

On 1/20/2011 12:22 PM, jon_g4fut wrote:
>
> Juts got a TS830s to add to my collection but the calibrator doesnt
> calibrate (no sound) also when I press the calibrator button the
> digital frequency freezes. Any suggestions gentlemen ?
> Jon G4FUT
>
>

29421. Re: [TS-520_820_530_830] TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 20:28:47 UTC
From: David Rust
Topic: 29418 Message: 29421

Roy, I don't think the transverter will work with the 830, I don't know how you can get that small amount of power from the 830.
Dave

[Non-text portions of this message have been removed]

29422. Re: TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 22:26:39 UTC
From: jon_g4fut
Topic: 29419 Message: 29422

Mike,
Thanks you very much for that information :-) I feel so stupid not noticing that, and thinking it was the same as my TS530sp :-)
Things will be better in a fortnight when I get the cataracts lifted LOL
What exactly does that button do?
Kind regards
Jon

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Jon,
> The TS-830S does NOT have a Calibrator Button. The TS-530 does.
> The TS-830S has a DH button which freezes the display. The Calibrator
> Switch is on the Mic control on the 830.
> Turn it fully CCW until it Clicks, then the Calibrator is On
>
> 73,
> Gordon
> N6WK
>
> On 1/20/2011 12:22 PM, jon_g4fut wrote:
> >
> > Juts got a TS830s to add to my collection but the calibrator doesnt
> > calibrate (no sound) also when I press the calibrator button the
> > digital frequency freezes. Any suggestions gentlemen ?
> > Jon G4FUT
> >
> >
>

29423. Re: [TS-520_820_530_830] Re: TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 22:35:50 UTC
From: n6wk@n6wk.com
Topic: 29419 Message: 29423

You are Welcome Jon.

73,
Gordon
N6WK

On 1/20/2011 2:26 PM, jon_g4fut wrote:
>
> Mike,
> Thanks you very much for that information :-) I feel so stupid not
> noticing that, and thinking it was the same as my TS530sp :-)
> Things will be better in a fortnight when I get the cataracts lifted LOL
> What exactly does that button do?
> Kind regards
> Jon
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Jon,
> > The TS-830S does NOT have a Calibrator Button. The TS-530 does.
> > The TS-830S has a DH button which freezes the display. The Calibrator
> > Switch is on the Mic control on the 830.
> > Turn it fully CCW until it Clicks, then the Calibrator is On
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/20/2011 12:22 PM, jon_g4fut wrote:
> > >
> > > Juts got a TS830s to add to my collection but the calibrator doesnt
> > > calibrate (no sound) also when I press the calibrator button the
> > > digital frequency freezes. Any suggestions gentlemen ?
> > > Jon G4FUT
> > >
> > >
> > >
> >
>
>

29424. Re: [TS-520_820_530_830] Re: TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-20 22:37:14 UTC
From: n6wk@n6wk.com
Topic: 29419 Message: 29424

Jon,
The DH button stands for "Display Hold" so you know what frequency you
were on if you start tuning around.

73,
Gordon
N6WK

On 1/20/2011 2:26 PM, jon_g4fut wrote:
>
> Mike,
> Thanks you very much for that information :-) I feel so stupid not
> noticing that, and thinking it was the same as my TS530sp :-)
> Things will be better in a fortnight when I get the cataracts lifted LOL
> What exactly does that button do?
> Kind regards
> Jon
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Jon,
> > The TS-830S does NOT have a Calibrator Button. The TS-530 does.
> > The TS-830S has a DH button which freezes the display. The Calibrator
> > Switch is on the Mic control on the 830.
> > Turn it fully CCW until it Clicks, then the Calibrator is On
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/20/2011 12:22 PM, jon_g4fut wrote:
> > >
> > > Juts got a TS830s to add to my collection but the calibrator doesnt
> > > calibrate (no sound) also when I press the calibrator button the
> > > digital frequency freezes. Any suggestions gentlemen ?
> > > Jon G4FUT
> > >
> > >
> >
>
>

29425. Re: TS830s calibrator

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 00:04:56 UTC
From: jon_g4fut
Topic: 29419 Message: 29425

HI Gordon,
Again many thansk. I've downloaded tye manual and now see what that button is for...
Kind regards
Jon

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Jon,
> The TS-830S does NOT have a Calibrator Button. The TS-530 does.
> The TS-830S has a DH button which freezes the display. The Calibrator
> Switch is on the Mic control on the 830.
> Turn it fully CCW until it Clicks, then the Calibrator is On
>
> 73,
> Gordon
> N6WK
>
> On 1/20/2011 12:22 PM, jon_g4fut wrote:
> >
> > Juts got a TS830s to add to my collection but the calibrator doesnt
> > calibrate (no sound) also when I press the calibrator button the
> > digital frequency freezes. Any suggestions gentlemen ?
> > Jon G4FUT
> >
> >
>

29426. New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 01:09:30 UTC
From: silverstone38s
Topic: 29426 Message: 29426

When grounding the station, which at this point is AC powered equipment (Kenwood hybrids), antenna tuner, SWR meter, I have the following options and questions.

Points to consider when addressing my questions:

1 - I'm new to this, so fire away. Try to be nice, but I can take it either way!

2 - my plan is to only have the equipment plugged in during use - I'll disconnect the surge protected power strip, when I'm not in the shack. My VFO will most likely be an analog and I don't believe other units, will have issue with being unplugged when not in use.

3 - My antenna will be indoors (an attic dipole). I'll just be putzing around on 40 meters, until I figure out what the heck I'm doing! Obviously, this could change in time and I would have to address lightning at that point.

Ok, so:

1 - I have a surge protected power strip connected to a grounded AC outlet. Ground was tested and the power strip indicates good ground as well (for what that's worth). Assuming it is correctly grounded, is this sufficient ground?

2 - My shack is a converted dining room, shared with the Mrs as a Study, so we have computers, etc., and it's presentable, carpeted, etc. I could drill a small hole in the floor, against the wall, and connect to a cold water pipe in the basement for ground. This is probably the shortest distance to ground (less than a few feet I would guess).

3 - Just outside the window of my shack, an outlet for our above ground pool filter was installed by an electricion. That outlet is grounded and I wonder about tapping into that with 8 gauge wire. Could be an option, but does involve getting the wire through the wall/window. Distance is maybe 10 to 12 feet.

4 - My electrical meter is about 30 feet from my operating station, but I could tie directly to the box. Still, that is 30 feet away.

Anyway,thanks for any suggestions.

29427. TS-830s No audio

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 03:02:29 UTC
From: John
Topic: 29427 Message: 29427

Recently purchased a TS-830s that seems to have a receive audio
problem. I can tune to WWV and watch the S Meter pulse in time to
the time signal pulses. And tune away from it and watch the s meter
drop. So, I know it's receiving wwv, but, no audio output. I checked
the Phone jack on the front as well as the external speaker out jack
and the internal speaker. All seems to be working fine. Just won't
pass no audio. I am wondering if Q4 or Q5 might be the culprit?
The guy I got the radio from told me he hooked it up once and there was
audio out from the internal speaker. (I bought the radio as a fixer upper so I don't hold
the no audio problem against him.)
The Calibration signal doesn't work either.
I did find one wire that was cut in two and taped back together, although no connection
between the two halves !! I re-soldered that
and put heat shrink on it but, that was not the problem.
Any ideas would be greatly appreciated.
james

29428. Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 12:51:08 UTC
From: D
Topic: 29426 Message: 29428

Josey,
I'm only studying for the general now, so take this for what it's worth, but the study elements tell me that you have to ground the radios to prevent electrical buildup on the chassis of your machines. I don't think you can get around this with your 3 prong outlet - your kenwood doesn't have a 3 prong plug, does it?
Reread the sections about safety in the shack.
I'm interested in what the others here have to say as I'm trying to figure out a way to set up my station as well. No drilling allowed :p
Dave
kd0fqx

--- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@...> wrote:
>
> When grounding the station, which at this point is AC powered equipment (Kenwood hybrids), antenna tuner, SWR meter, I have the following options and questions.
>
> Points to consider when addressing my questions:
>
> 1 - I'm new to this, so fire away. Try to be nice, but I can take it either way!
>
> 2 - my plan is to only have the equipment plugged in during use - I'll disconnect the surge protected power strip, when I'm not in the shack. My VFO will most likely be an analog and I don't believe other units, will have issue with being unplugged when not in use.
>
> 3 - My antenna will be indoors (an attic dipole). I'll just be putzing around on 40 meters, until I figure out what the heck I'm doing! Obviously, this could change in time and I would have to address lightning at that point.
>
> Ok, so:
>
> 1 - I have a surge protected power strip connected to a grounded AC outlet. Ground was tested and the power strip indicates good ground as well (for what that's worth). Assuming it is correctly grounded, is this sufficient ground?
>
> 2 - My shack is a converted dining room, shared with the Mrs as a Study, so we have computers, etc., and it's presentable, carpeted, etc. I could drill a small hole in the floor, against the wall, and connect to a cold water pipe in the basement for ground. This is probably the shortest distance to ground (less than a few feet I would guess).
>
> 3 - Just outside the window of my shack, an outlet for our above ground pool filter was installed by an electricion. That outlet is grounded and I wonder about tapping into that with 8 gauge wire. Could be an option, but does involve getting the wire through the wall/window. Distance is maybe 10 to 12 feet.
>

> 4 - My electrical meter is about 30 feet from my operating station, but I could tie directly to the box. Still, that is 30 feet away.
>
> Anyway,thanks for any suggestions.
>

29429. Re: no tx, rx on 20 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 14:57:47 UTC
From: daves@prowirelesscomm.com
Topic: 29375 Message: 29429

This one came off of e-bay, and was listed as an item needing work. As far as I can tell, I am the third owner of this radio. I know everything about the original owner, as the rig came with all the purchase documents, and couple of factory service invoices, the original QST review, and some other fascinating stuff. The second owner I don't know much about, as he didn't seem to really know much about radio. I suspect, but can't prove, it was an estate sale item.

Thanks for the info.
KD0HEW

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Ken,
>
> I agree if the 20 meter heterodyne oscillator coil has been misaligned either by Dave or if Dave is not the original owner, by a previous owner. That is why my initial response stated that Dave should be absolutely sure the 20 meter het crystal is, in fact, the source of the problem and not something else such as broken wires, dirty wafer switch, etc.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ken" <atm_ken_hunter@> wrote:
> >
> > It could also be that the 20 mtr het osc coil is adjusted incorrectly and the osc has "chirped out". Back the slug out to the top of the coil form then slowly turn it clockwise for a peak then back it off a bit as described in the manual.
> >
> > Ken - KB7H
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > If you have access to a RF signal generator that tunes through 22 Mhz, tune the generator to 22.895Mhz. Set the generators' output signal level to a low level and inject the signal at TP3 on the RF Unit. Set the 520s' band switch to 20 meters, and connect an antenna to the 520. You should now hear 20 meter signals.
> > >
> > > If the receiver comes to life on 20 meters then that indicates the 20 meter, 22.895Mhz, het osc crystal is bad.
> > >
> > > Again, as I said before, make sure you have checked and cleaned the band switch wafers before performing this test to ensure the band switch wafer is not the source of the

problem. Also check wiring to the switch wafer to ensure there are no broken wires.
> > >
> > > The above test is easy to do, all you need is a simple RF signal generator. I recommend using a .01ufd 50VDC or .1ufd 50VDC disc capacitor between TP3 and the signal generators' output. This will isolate the generator, "DC wise", from TP3, preventing any DC voltage from being applied to TP3. All you want at TP3 is an RF signal from the generator, no DC voltage.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > >
> > > >
> > > > Thanks for the info.
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Dave,
> > > > >
> > > > > Since the other bands are working, more than likely what has happened is the RF Units' 20 meter heterdyne crystal has failed to oscillate. When this happens both transmit and receive will fail on 20 meters.
> > > > >
> > > > > The 20 meter heterodyne crystal is 22.895Mhz. If it is found to have failed completely, not due to dirty wafer switch contacts or any broken connections at the switch or crystal leads, you can order a replacement from International Crystals in Oklahoma City, OK
> > > > >
> > > > > http://www.icmfg.com/hamradio.html
> > > > >
> > > > > They have an 800 toll free number you can call to place the order.
> > > > >
> > > > > Having said that, make sure the 22.895Mhz 20 meter HET crystal has, in fact, failed. You do not want to order a replacement to find out the problem was a dirty band switch wafer, broken wire/connection to the 20 meter wafer tab on the RF Unit and not an actual crystal failure. So make sure before you order.
> > > > >
> > > > > Typically, a replacement 22.895Mhz crystal will cost around $22 plus approximately $3 USPS shipping. You may have heard that International Crystals is charging "$50" or more for replacement crystals. This is true ONLY for crystals with frequencies of 5Mhz and below, not true for crystals with frequencies above 5Mhz.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > > >

> > > > > > Wow, yeah. I could see why that would help.
> > > > > >
> > > > > > It is a TS-520S
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > > Hello Dave,
> > > > > > >
> > > > > > > What model of hybrid are you having this problem with? You forgot to mention which one.
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, daves@ wrote:
> > > > > > > >
> > > > > > > > Thanks for the great group.
> > > > > > > >
> > > > > > > > Recently, I lost ALC meter movement during tuning on 10 and 20 meters. I replaced the driver tube, all came back. Now, 2 weeks later, I've lost everything on 20 meters. No ALC meter movement during tuning, no power output, but also, nothing on receive. I can't hear a thing.
> > > > > > > >
> > > > > > > > I can have as many conversations on 40 as I wish, but I sure miss 20. Appreciate any suggestions.
> > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
> >
>

29430. Re: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 15:45:04 UTC
From: Joseph Stiles
Topic: 29426 Message: 29430

Josey,

Check out the ARRL' Handbook. Please note: There's a BIG difference
between an ELECTRICAL & RF grounds. Both types of shocks HURT! Trust me on that
:}

73's joe wb7uqu

From: D <dave.phelps@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 21, 2011 4:51:08 AM
Subject: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question

Josey,
I'm only studying for the general now, so take this for what it's worth, but the
study elements tell me that you have to ground the radios to prevent electrical
buildup on the chassis of your machines. I don't think you can get around this
with your 3 prong outlet - your kenwood doesn't have a 3 prong plug, does it?
Reread the sections about safety in the shack.
I'm interested in what the others here have to say as I'm trying to figure out a
way to set up my station as well. No drilling allowed :p
Dave
kd0fqx

--- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@...>
wrote:
>
> When grounding the station, which at this point is AC powered equipment
>(Kenwood hybrids), antenna tuner, SWR meter, I have the following options and
>questions.
>
>
> Points to consider when addressing my questions:
>
> 1 - I'm new to this, so fire away. Try to be nice, but I can take it either
>way!
>
> 2 - my plan is to only have the equipment plugged in during use - I'll
>disconnect the surge protected power strip, when I'm not in the shack. My VFO
>will most likely be an analog and I don't believe other units, will have issue
>with being unplugged when not in use.
>
>
> 3 - My antenna will be indoors (an attic dipole). I'll just be putzing around

>on 40 meters, until I figure out what the heck I'm doing! Obviously, this could
>change in time and I would have to address lightning at that point.
>
> Ok, so:
>
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>Ground was tested and the power strip indicates good ground as well (for what
>that's worth). Assuming it is correctly grounded, is this sufficient ground?
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> 2 - My shack is a converted dining room, shared with the Mrs as a Study, so we
>have computers, etc., and it's presentable, carpeted, etc. I could drill a
>small hole in the floor, against the wall, and connect to a cold water pipe in
>the basement for ground. This is probably the shortest distance to ground (less
>than a few feet I would guess).
>
> 3 - Just outside the window of my shack, an outlet for our above ground pool
>filter was installed by an electricion. That outlet is grounded and I wonder
>about tapping into that with 8 gauge wire. Could be an option, but does involve
>getting the wire through the wall/window. Distance is maybe 10 to 12 feet.
>
> 4 - My electrical meter is about 30 feet from my operating station, but I could
>tie directly to the box. Still, that is 30 feet away.
>
> Anyway,thanks for any suggestions.
>

[Non-text portions of this message have been removed]

29431. Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 17:14:41 UTC
From: silverstone38s
Topic: 29426 Message: 29431

Thanks. I was taking a break from the manual and my electronics manual, figuring I'd look to see where the shack fits best in my house. I hadn't gotten to the point on grounding for RF. Fine! I'll get back to reading...

I do get the bus strategy and that has me thinking now about where to place my shack.

29432. Re: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 17:17:42 UTC
From: Terry Wagoner
Topic: 29426 Message: 29432

I remember simpler Novice days in the 60s when my shack was in the attic and I ran a wire from the back of the Heath DX-20 to the galvanized cold water pipe for a chassis safety ground. Back then I didnt know there was such a thing as an RF ground! Somehow was able to make numerous contacts and had best fun as a ham.

This topic could generate days of myth, misconception and magic on this forum. Probably not right place for this so I apologize, but do sympathize with the beginner. Suggest you go to www.dxzone.com and type in ham station grounding and you will find many good articles on Safety and Surge Protection and Lightning and RF Grounds. Focus on Safety first and then worry about ensuring less than 1/4 wavelength ground cable on highest operating frequency and Ground Loops and RFI and Bonding and Ground Rod cages and ....!
73s Terry K9TW

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 21, 2011 10:45:04 AM
Subject: Re: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question

Josey,

Check out the ARRL' Handbook. Please note: There's a BIG difference between an ELECTRICAL & RF grounds. Both types of shocks HURT! Trust me on that

:}

73's joe wb7uqu

From: D <dave.phelps@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 21, 2011 4:51:08 AM
Subject: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question

Josey,
I'm only studying for the general now, so take this for what it's worth, but the

study elements tell me that you have to ground the radios to prevent electrical buildup on the chassis of your machines. I don't think you can get around this with your 3 prong outlet - your kenwood doesn't have a 3 prong plug, does it?
Reread the sections about safety in the shack.
I'm interested in what the others here have to say as I'm trying to figure out a

way to set up my station as well. No drilling allowed :p
Dave
kd0fqx

--- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@...>
wrote:
>
> When grounding the station, which at this point is AC powered equipment
>(Kenwood hybrids), antenna tuner, SWR meter, I have the following options and
>questions.
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>
> Points to consider when addressing my questions:
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>way!
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> 2 - my plan is to only have the equipment plugged in during use - I'll
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>will most likely be an analog and I don't believe other units, will have issue
>with being unplugged when not in use.
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>
> 3 - My antenna will be indoors (an attic dipole). I'll just be putzing around
>on 40 meters, until I figure out what the heck I'm doing! Obviously, this could

>change in time and I would have to address lightning at that point.
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> Ok, so:
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>small hole in the floor, against the wall, and connect to a cold water pipe in
>the basement for ground. This is probably the shortest distance to ground (less
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>than a few feet I would guess).
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>filter was installed by an electricion. That outlet is grounded and I wonder
>about tapping into that with 8 gauge wire. Could be an option, but does involve
>
>getting the wire through the wall/window. Distance is maybe 10 to 12 feet.
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> 4 - My electrical meter is about 30 feet from my operating station, but I could
>
>tie directly to the box. Still, that is 30 feet away.
>

> Anyway,thanks for any suggestions.
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29433. Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 18:24:29 UTC
From: Jim Yester
Topic: 29426 Message: 29433

There are conflicting opinions on the bus strategy vs. grounding to one point. Keep researching and make your own decision.

[Non-text portions of this message have been removed]

29434. Re: New Shack - grounding Kenwood hybrids question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 19:25:59 UTC
From: w5rkl
Topic: 29426 Message: 29434

I recommend reading W8JIs' webpage on grounding. This will explain quite a bit about safety, lightning, and RF grounds.

http://w8ji.com/ground_systems.htm

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> I remember simpler Novice days in the 60s when my shack was in the attic and I
> ran a wire from the back of the Heath DX-20 to the galvanized cold water pipe
> for a chassis safety ground. Back then I didnt know there was such a thing as an
> RF ground! Somehow was able to make numerous contacts and had best fun as a
> ham.
>
> This topic could generate days of myth, misconception and magic on this forum.
> Probably not right place for this so I apologize, but do sympathize with the
> beginner. Suggest you go to www.dxzone.com and type in ham station grounding and
> you will find many good articles on Safety and Surge Protection and Lightning
> and RF Grounds. Focus on Safety first and then worry about ensuring less than
> 1/4 wavelength ground cable on highest operating frequency and Ground Loops and
> RFI and Bonding and Ground Rod cages and ....!
> 73s Terry K9TW
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, January 21, 2011 10:45:04 AM
> Subject: Re: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids
> question
>
>
> Josey,
>
> Check out the ARRL' Handbook. Please note: There's a BIG difference
> between an ELECTRICAL & RF grounds. Both types of shocks HURT! Trust me on that
>
> :}
>
> 73's joe wb7uqu
>
>

> _____
> From: D <dave.phelps@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, January 21, 2011 4:51:08 AM
> Subject: [TS-520_820_530_830] Re: New Shack - grounding Kenwood hybrids question
>
> Josey,
> I'm only studying for the general now, so take this for what it's worth, but the
>
> study elements tell me that you have to ground the radios to prevent electrical
> buildup on the chassis of your machines. I don't think you can get around this
> with your 3 prong outlet - your kenwood doesn't have a 3 prong plug, does it?
> Reread the sections about safety in the shack.
> I'm interested in what the others here have to say as I'm trying to figure out a
>
> way to set up my station as well. No drilling allowed :p
> Dave
> kd0fqx
>
> --- In TS-520_820_530_830@yahoogroups.com, "silverstone38s" <joseywale@>
> wrote:
> >
> > When grounding the station, which at this point is AC powered equipment
> >(Kenwood hybrids), antenna tuner, SWR meter, I have the following options and
> >questions.
> >
> >
> > Points to consider when addressing my questions:
> >
> > 1 - I'm new to this, so fire away. Try to be nice, but I can take it either
> >way!
> >
> > 2 - my plan is to only have the equipment plugged in during use - I'll
> >disconnect the surge protected power strip, when I'm not in the shack. My VFO
> >will most likely be an analog and I don't believe other units, will have issue
> >with being unplugged when not in use.
> >
> >
> > 3 - My antenna will be indoors (an attic dipole). I'll just be putzing around
> >on 40 meters, until I figure out what the heck I'm doing! Obviously, this could
>
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> > Ok, so:
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> >Ground was tested and the power strip indicates good ground as well (for what
> >that's worth). Assuming it is correctly grounded, is this sufficient ground?
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> >have computers, etc., and it's presentable, carpeted, etc. I could drill a
> >small hole in the floor, against the wall, and connect to a cold water pipe in
> >the basement for ground. This is probably the shortest distance to ground (less
> >
> >than a few feet I would guess).
> >
> > 3 - Just outside the window of my shack, an outlet for our above ground pool
> >filter was installed by an electricion. That outlet is grounded and I wonder
> >about tapping into that with 8 gauge wire. Could be an option, but does involve
> >
> >getting the wire through the wall/window. Distance is maybe 10 to 12 feet.
> >
> > 4 - My electrical meter is about 30 feet from my operating station, but I could
> >
> >tie directly to the box. Still, that is 30 feet away.
> >
> > Anyway,thanks for any suggestions.
> >
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29435. Re: [TS-520_820_530_830] TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 20:14:33 UTC
From: pmarkavage@juno.com
Topic: 29418 Message: 29435

See page 13 of the operating manual and Item 13 - X Verter Connector and Figure 3-3 that shows the connections to the connector.

Pete, wa2cwa

On Thu, 20 Jan 2011 15:21:39 -0500 "rkersey tds.net" <rkersey@...> writes:
> I've been trying to figure out a low cost option for adding 6 meter
> SSB to
> my station when I set up my TS-830S soon. Right now I am thinking
> of a Ten
> Tec 1208 and then maybe a 6 meter amp to boost the output. Since
> the
> transverter only takes 5 watts max and the amp will turn that into
> 100 watts
> and not take more than that, how to I make sure not to overdrive
> both of
> these with the 830? I thought there was a low power switch on the
> 830, but,
> looking at the instruction manual, I don't see it. Any ideas?
>
> 73,
> Roy Kersey
> KI4HAG

29436. TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 20:24:26 UTC
From: rkersey tds.net
Topic: 29418 Message: 29436

I'll accept that you can't get the 830S down to five watts to drive a TenTec 1208 transverter . . . . but I have one other question, then. What would you be able to use to drive one of these? Even the old Heathkits put out 100 watts, so what do you use?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29437. Re: [TS-520_820_530_830] TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 20:54:35 UTC
From: pmarkavage@juno.com
Topic: 29418 Message: 29437

The transverter output on the TS-830S is probably less then 1 watt.
Pete, wa2cwa

On Fri, 21 Jan 2011 15:24:26 -0500 "rkersey tds.net" <rkersey@...>
writes:
> I'll accept that you can't get the 830S down to five watts to drive a
> TenTec
> 1208 transverter . . . . but I have one other question, then. What
> would
> you be able to use to drive one of these? Even the old Heathkits
> put out
> 100 watts, so what do you use?
>
> 73,
> Roy Kersey
> KI4HAG

29438. Re: [TS-520_820_530_830] TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-21 23:57:02 UTC
From: barrie@eos.net
Topic: 29418 Message: 29438

Maybe a Twoer? LOL

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "rkersey tds.net" <rkersey@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 21 Jan 2011 15:24:26
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830S low power for transverter?

I'll accept that you can't get the 830S down to five watts to drive a TenTec
1208 transverter . . . . but I have one other question, then. What would
you be able to use to drive one of these? Even the old Heathkits put out
100 watts, so what do you use?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29439. Re: [TS-520_820_530_830] TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 01:24:43 UTC
From: John Davidson
Topic: 29418 Message: 29439

The kenwood hybrids have a switch on the back that shuts down the final and a low power output to drive thier transverters.

From: rkersey tds.net <rkersey@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, January 21, 2011 3:24:26 PM
Subject: [TS-520_820_530_830] TS-830S low power for transverter?

I'll accept that you can't get the 830S down to five watts to drive a TenTec 1208 transverter . . . . but I have one other question, then. What would you be able to use to drive one of these? Even the old Heathkits put out 100 watts, so what do you use?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29440. Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 06:38:27 UTC
From: Bob
Topic: 1550 Message: 29440

820
Well I took it back off the shelf to see what I could see. I need to find out what kind of issues I would be halving with the 820 IF.... the band switch coupling between the driver stage and the final band switch was not snug or turning the back set of wafers in the final cage? This rig has a white plastic coupler that has let go. All the front wafers of the band switch turn snug and smooth with the front control knob. However the wafers behind the white coupler in the final section do not turn at all.

I can transmit and receive across the room to another rig. It works on upper and lower ssb as well as cw. When I tune it for max output there is no rf output via the meter however as I adjust the driver the output can be peeked using the receiver of the other rig. All audio functions work. Vox, Mic gain Speech Processor etc all work. The CAR control on the front panel also adjusts the output of the driver adjustment and can be seen on the other receiver when it is adjusted.

I tried to find what band it was on when the band switch let go and stopped adjusting the band switch in the final cage. I tried all bands and can not find any band that will tune with any output? I guess it could be on AUX position with out a crystal?

Where can I get a replacement coupler? Gordon N6WK if you have one I could stop by and pick it up and shake your hand again. Then you could give me some tips on the easiest way to get to it. From what I see it looks like you need to take just about everything out of the Final RF cage to get to it and reset the wafer?

I also need the front panel plastic toggle switch that slides onto the Send, VOX, NB, MONI switches. The tabs have broken off and a couple of the switches are hanging there by the skin of there teeth.All the switches work fine but the plastic front has broken.

Bob
KB6KPK

29441. TS-830s Send / Rec switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 06:45:10 UTC
From: Chris Parnell
Topic: 29441 Message: 29441

Hi all.

Very quick question as I don't have the manual but to fit a new send / Rec switch does the front panel have to come off?

I am assuming so.

Thanks
Chris, ZL1CDP

Sent from my iPhone

29442. Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 10:48:51 UTC
From: kf5elo
Topic: 1550 Message: 29442

To get the couplers go to this site, hes has good machined brass couplers this is his site:

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <bmusser4@...> wrote:
>
> 820
> Well I took it back off the shelf to see what I could see. I need to find out what kind of issues I would be halving with the 820 IF.... the band switch coupling between the driver stage and the final band switch was not snug or turning the back set of wafers in the final cage? This rig has a white plastic coupler that has let go. All the front wafers of the band switch turn snug and smooth with the front control knob. However the wafers behind the white coupler in the final section do not turn at all.
>
> I can transmit and receive across the room to another rig. It works on upper and lower ssb as well as cw. When I tune it for max output there is no rf output via the meter however as I adjust the driver the output can be peeked using the receiver of the other rig. All audio functions work. Vox, Mic gain Speech Processor etc all work. The CAR control on the front panel also adjusts the output of the driver adjustment and can be seen on the other receiver when it is adjusted.
>
> I tried to find what band it was on when the band switch let go and stopped adjusting the band switch in the final cage. I tried all bands and can not find any band that will tune with any output? I guess it could be on AUX position with out a crystal?
>
> Where can I get a replacement coupler? Gordon N6WK if you have one I could stop by and pick it up and shake your hand again. Then you could give me some tips on the easiest way to get to it. From what I see it looks like you need to take just about everything out of the Final RF cage to get to it and reset the wafer?
>
> I also need the front panel plastic toggle switch that slides onto the Send, VOX, NB, MONI switches. The tabs have broken off and a couple of the switches are hanging there by the skin of there teeth.All the switches work fine but the plastic front has broken.
>
> Bob
> KB6KPK
>

29443. Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 12:14:42 UTC
From: w5rkl
Topic: 1550 Message: 29443

If the final amplifier band switch wafer coupler is broken then the final amplifier band switch wafer will be out of sync with the other band switch wafers resulting in the symptoms you are experiencing.

Replacement couplers can be obtained from Ken (K4EAA)

www.k4eaa.com

Check Kens' website for further details.

For replacement switches, check with Bob Mansker, ke5ftf at mail.com.

The AUX band switch position is for receive only, no transmit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <bmusser4@...> wrote:
>
> 820
> Well I took it back off the shelf to see what I could see. I need to find out what kind of issues I would be halving with the 820 IF.... the band switch coupling between the driver stage and the final band switch was not snug or turning the back set of wafers in the final cage? This rig has a white plastic coupler that has let go. All the front wafers of the band switch turn snug and smooth with the front control knob. However the wafers behind the white coupler in the final section do not turn at all.
>
> I can transmit and receive across the room to another rig. It works on upper and lower ssb as well as cw. When I tune it for max output there is no rf output via the meter however as I adjust the driver the output can be peeked using the receiver of the other rig. All audio functions work. Vox, Mic gain Speech Processor etc all work. The CAR control on the front panel also adjusts the output of the driver adjustment and can be seen on the other receiver when it is adjusted.
>
> I tried to find what band it was on when the band switch let go and stopped adjusting the band switch in the final cage. I tried all bands and can not find any band that will tune with any output? I guess it could be on AUX position with out a crystal?
>
> Where can I get a replacement coupler? Gordon N6WK if you have one I could stop by and pick it up and shake your hand again. Then you could give me some tips on the easiest way to get to it. From what I see it looks like you need to take just about everything out of the Final RF cage to get to it and reset the wafer?
>
> I also need the front panel plastic toggle switch that slides onto the Send, VOX, NB, MONI switches. The tabs have broken off and a couple of the switches are hanging there by the skin of there teeth.All the switches work fine but the plastic front has broken.

>
> Bob
> KB6KPK
>

29444. Re: TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 12:25:39 UTC
From: w5rkl
Topic: 29418 Message: 29444

The TS-830 has a rear panel Xverter DIN socket. The Xverter DIN socket pin functions are shown in the TS-830S operators' manual on page 13. You can also trace the 830s' internal wiring to the X verter DIN socket, to determine what each pin is connected to and what each pin controls inside the 830, using the high resolution 830 schematic available at Gordons website

www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> I'll accept that you can't get the 830S down to five watts to drive a TenTec
> 1208 transverter . . . . but I have one other question, then. What would
> you be able to use to drive one of these? Even the old Heathkits put out
> 100 watts, so what do you use?
>
> 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

29445. Re: TS-830s Send / Rec switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 12:28:51 UTC
From: w5rkl
Topic: 29441 Message: 29445

Hi Chris,

Unfortunately, it appears the front panel must be removed to replace the SEND switch. Review the 830s' service manuals' disassembly pictorial, page 30, for details.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all.
>
> Very quick question as I don't have the manual but to fit a new send / Rec switch does the front panel have to come off?
>
> I am assuming so.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>

29446. Re: [TS-520_820_530_830] Re: TS-830s Send / Rec switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 12:49:28 UTC
From: Chris Parnell
Topic: 29441 Message: 29446

Thanks Mike☐ Will have to undo it all then :(
Bugger ☐.

Cheers
Chris, ZL1CDP

From: w5rkl <w5rkl@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Sat, 22 Jan 2011 12:28:51 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-830s Send / Rec switch

Hi Chris,

Unfortunately, it appears the front panel must be removed to replace the
SEND switch. Review the 830s' service manuals' disassembly pictorial, page
30, for details.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell
<cparnell1001@...> wrote:
>
> Hi all.
>
> Very quick question as I don't have the manual but to fit a new send / Rec
switch does the front panel have to come off?
>
> I am assuming so.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>

[Non-text portions of this message have been removed]

29447. Re: [TS-520_820_530_830] Re: TS-830s Send / Rec switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 13:05:18 UTC
From: W LEWIS
Topic: 29441 Message: 29447

If you go to Gordon's site (N6WK), in the Kenwood hybrid files section, open the TS-820 service manual. On page 37, figure 18 may provide some insight on removal/installation of the stand by/paddle switch. Be very careful, they are easy to break. If you break it Bob Mansker should have some replacements.
Regards,
Butch Lewis
K0PSA

--- On Sat, 1/22/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Re: TS-830s Send / Rec switch
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, January 22, 2011, 6:49 AM

Thanks MikeŠ Will have to undo it all then :(
Bugger Š.

Cheers
Chris, ZL1CDP

From: w5rkl <w5rkl@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Sat, 22 Jan 2011 12:28:51 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-830s Send / Rec switch

Hi Chris,

Unfortunately, it appears the front panel must be removed to replace the
SEND switch. Review the 830s' service manuals' disassembly pictorial, page
30, for details.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell
<cparnell1001@...> wrote:
>
> Hi all.
>
> Very quick question as I don't have the manual but to fit a new send / Rec
switch does the front panel have to come off?
>
> I am assuming so.

>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29448. Re: TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 14:43:55 UTC
From: james27613
Topic: 29418 Message: 29448

hi Roy,

I have a ts-530 and used the QRP circuit
to reduce power out.

it usees 9v battery and a trim pot to
feed -9v to the alc in pin and ground
on the remote DIN on the rear of the radio.

You need a 270 deg DIN male.

Look in files section for qrp you
will find schematic.

73 james ke4drn

29449. Re: TS-520SE SENSITIVITY QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 15:24:50 UTC
From: Charles
Topic: 29363 Message: 29449

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Charlie,
>
> Glad to hear that "it's alive." If you can, check out the "basic alignment"
> procedure in the operators manual. It's rather easy and, may add some more ears.

Sorry for the delay, Joe. I've been busy with an RFI problem and the utility company, a TS-940 that started acting goofy the other day, and a sick dog. When the dust settles around here, I do intend to go over the alignment steps per the manual.

73
Charlie Shaw
KB3BTO

29450. 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 15:49:38 UTC
From: fjwheeler3
Topic: 29450 Message: 29450

Hi All
My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast.
What is the quickest way to to get back on the air using some sort of antenna that doesn't require standing in the freezing weather for an extended period of time. I have heard of some hams just running wires out the second floor window and tuning it up or using "bed frames" and a tuner to get back on the air. Due to a medical condition the easiest the better.
I have a tuner but don't have any experience using it but will certainly use it if needed. The 20 m dipole did not require it.
Any help would be appreciated.
Once spring shows up I will install a 40/20/10 multiband dipole.

73
Fred
KB1TCY

29451. Re: [TS-520_820_530_830] Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:11:24 UTC
From: n6wk@n6wk.com
Topic: 1550 Message: 29451

Hi Bob,
I am out of couplers but just ordered some Brass ones yesterday from
Ken. I should have them Tuesday or Wednesday.
I'd be happy to sell you one and give you tips on replacement.
73,
Gordon

On 1/21/2011 10:38 PM, Bob wrote:
>
> 820
> Well I took it back off the shelf to see what I could see. I need to
> find out what kind of issues I would be halving with the 820 IF....
> the band switch coupling between the driver stage and the final band
> switch was not snug or turning the back set of wafers in the final
> cage? This rig has a white plastic coupler that has let go. All the
> front wafers of the band switch turn snug and smooth with the front
> control knob. However the wafers behind the white coupler in the final
> section do not turn at all.
>
> I can transmit and receive across the room to another rig. It works on
> upper and lower ssb as well as cw. When I tune it for max output there
> is no rf output via the meter however as I adjust the driver the
> output can be peeked using the receiver of the other rig. All audio
> functions work. Vox, Mic gain Speech Processor etc all work. The CAR
> control on the front panel also adjusts the output of the driver
> adjustment and can be seen on the other receiver when it is adjusted.
>
> I tried to find what band it was on when the band switch let go and
> stopped adjusting the band switch in the final cage. I tried all bands
> and can not find any band that will tune with any output? I guess it
> could be on AUX position with out a crystal?
>
> Where can I get a replacement coupler? Gordon N6WK if you have one I
> could stop by and pick it up and shake your hand again. Then you could
> give me some tips on the easiest way to get to it. From what I see it
> looks like you need to take just about everything out of the Final RF
> cage to get to it and reset the wafer?
>
> I also need the front panel plastic toggle switch that slides onto the
> Send, VOX, NB, MONI switches. The tabs have broken off and a couple of
> the switches are hanging there by the skin of there teeth.All the
> switches work fine but the plastic front has broken.
>
> Bob
> KB6KPK

>
>
>
>

29452. RE: [TS-520_820_530_830] 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:13:41 UTC
From: Lou Bellock
Topic: 29450 Message: 29452

Hello Fred,

My "backup" antenna is a homebrew, multi-band vertical. It is EXTREMELY versatile and weatherproof, with great performance. It is actually less noisy on receive and will give your 100 W signal about 1 S-unit less performance on the receiving transceiver.

If you don't want to homebrew, buy this antenna. It goes up in about 15 minutes and will have excellent performance. You can't beat the price and you'll have it for a long time as your "backup".

http://cgi.ebay.com/S9-Antennas-S9v-31-Multiband-Vertical-Kit-40-6-Mtr-/250567988645?pt=LH_DefaultDomain_0
<http://cgi.ebay.com/S9-Antennas-S9v-31-Multiband-Vertical-Kit-40-6-Mtr-/250567988645?pt=LH_DefaultDomain_0&hash=item3a570415a5> &hash=item3a570415a5

Gud luck and bst 73
Lou N2JPR ...-.-

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of fjwheeler3
Sent: Saturday, January 22, 2011 10:50 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 520se quick and dirty antenna

Hi All
My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast. What is the quickest way to to get back on the air using some sort of antenna that doesn't require standing in the freezing weather for an extended period of time. I have heard of some hams just running wires out the second floor window and tuning it up or using "bed frames" and a tuner to get back on the air. Due to a medical condition the easiest the better. I have a tuner but don't have any experience using it but will certainly use it if needed. The 20 m dipole did not require it.
Any help would be appreciated.
Once spring shows up I will install a 40/20/10 multiband dipole.

73
Fred
KB1TCY

E-mail message checked by Spyware Doctor (7.0.0.514)
Database version: 6.16750

http://www.pctools.com/spyware-doctor-antivirus/
<http://www.pctools.com/en/spyware-doctor-antivirus/>

E-mail message checked by Spyware Doctor (7.0.0.514)
Database version: 6.16750
http://www.pctools.com/en/spyware-doctor-antivirus/

[Non-text portions of this message have been removed]

29453. Re: [TS-520_820_530_830] Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:14:30 UTC
From: n6wk@n6wk.com
Topic: 1550 Message: 29453

Bob,
Contact Bob Mansker. ke5ftf@...
You might be able to buy some good switches or paddles from him.
He has lots of parts and even might have the original plastic coupler.

73,
Gordon
N6WK

On 1/21/2011 10:38 PM, Bob wrote:
>
> 820
> Well I took it back off the shelf to see what I could see. I need to
> find out what kind of issues I would be halving with the 820 IF....
> the band switch coupling between the driver stage and the final band
> switch was not snug or turning the back set of wafers in the final
> cage? This rig has a white plastic coupler that has let go. All the
> front wafers of the band switch turn snug and smooth with the front
> control knob. However the wafers behind the white coupler in the final
> section do not turn at all.
>
> I can transmit and receive across the room to another rig. It works on
> upper and lower ssb as well as cw. When I tune it for max output there
> is no rf output via the meter however as I adjust the driver the
> output can be peeked using the receiver of the other rig. All audio
> functions work. Vox, Mic gain Speech Processor etc all work. The CAR
> control on the front panel also adjusts the output of the driver
> adjustment and can be seen on the other receiver when it is adjusted.
>
> I tried to find what band it was on when the band switch let go and
> stopped adjusting the band switch in the final cage. I tried all bands
> and can not find any band that will tune with any output? I guess it
> could be on AUX position with out a crystal?
>
> Where can I get a replacement coupler? Gordon N6WK if you have one I
> could stop by and pick it up and shake your hand again. Then you could
> give me some tips on the easiest way to get to it. From what I see it
> looks like you need to take just about everything out of the Final RF
> cage to get to it and reset the wafer?
>
> I also need the front panel plastic toggle switch that slides onto the
> Send, VOX, NB, MONI switches. The tabs have broken off and a couple of
> the switches are hanging there by the skin of there teeth.All the
> switches work fine but the plastic front has broken.
>

> Bob
> KB6KPK
>
>
>
>

29454. Re: [TS-520_820_530_830] 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:32:38 UTC
From: barrie@eos.net
Topic: 29450 Message: 29454

This IS prime antenna season. -12 today in Madeira OH.
Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "fjwheeler3" <fjwheeler3@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 22 Jan 2011 15:49:38
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 520se quick and dirty antenna

Hi All
My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast.
What is the quickest way to to get back on the air using some sort of antenna that doesn't require standing in the freezing weather for an extended period of time. I have heard of some hams just running wires out the second floor window and tuning it up or using "bed frames" and a tuner to get back on the air. Due to a medical condition the easiest the better.
I have a tuner but don't have any experience using it but will certainly use it if needed. The 20 m dipole did not require it.
Any help would be appreciated.
Once spring shows up I will install a 40/20/10 multiband dipole.

73
Fred
KB1TCY

[Non-text portions of this message have been removed]

29455. Re: [TS-520_820_530_830] TS-830s Send / Rec switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:06:22 UTC
From: n6wk@n6wk.com
Topic: 29441 Message: 29455

Hi Chris,
Yes it does.

73,
Gordon
N6WK

On 1/21/2011 10:45 PM, Chris Parnell wrote:
>
> Hi all.
>
> Very quick question as I don't have the manual but to fit a new send /
> Rec switch does the front panel have to come off?
>
> I am assuming so.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>
>

29456. Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:39:59 UTC
From: Bob
Topic: 1550 Message: 29456

Thank You for all the reply's. I really love this 820 and miss it on the desk. So Ken I will get a hold of you later in the week to see if the couplers are in and we can set up a convenient time for you, so I can stop by and pick one up.

I am trying to remember if the last time I had the rig on and working if I changed the band switch to WWV? If the back part of the band switch got stuck on WWV then it would make sense that none of the bands would tune at all. Who knows. I have a hard time remembering the simple things from day to day.

The thing that is the bugger is that I was looking for electronic parts/component failure on and off for hours. Testing voltage, pin connection, relays, etc. I found nothing that made any sense. The back set of band wafer switches are tucked in behind and under a bunch of other components and with my old eyes looking in the rig you can not see the switch easily.I took a high intensity flash light and started to look for anything at all that did not look right. cold solder connections, broken or melted wires, etc.

I should have looked at the band switch much sooner and saved many hours of looking. Now that I have taken and cleaned just about every plug switch and connection on the unit I have the worry that I created more issues with the rig than I fixed. I will let you know if the band wafer alignment and coupler repair takes care of all my operation issues.

And thank you for the toggle switch replacement information. At least I don't have to take the entire front panel off this 820 to pop on a new toggle on the switch.

Everyone have a great weekend.
Best Wishes
Bob Musser
KB6KPK
Orange, Ca.

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Hi Bob,
> I am out of couplers but just ordered some Brass ones yesterday from
> Ken. I should have them Tuesday or Wednesday.
> I'd be happy to sell you one and give you tips on replacement.
> 73,
> Gordon
>
> On 1/21/2011 10:38 PM, Bob wrote:
> >
> > 820
> > Well I took it back off the shelf to see what I could see. I need to
> > find out what kind of issues I would be halving with the 820 IF....
> > the band switch coupling between the driver stage and the final band
> > switch was not snug or turning the back set of wafers in the final

> > cage? This rig has a white plastic coupler that has let go. All the
> > front wafers of the band switch turn snug and smooth with the front
> > control knob. However the wafers behind the white coupler in the final
> > section do not turn at all.
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> > I can transmit and receive across the room to another rig. It works on
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> > is no rf output via the meter however as I adjust the driver the
> > output can be peeked using the receiver of the other rig. All audio
> > functions work. Vox, Mic gain Speech Processor etc all work. The CAR
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> > could stop by and pick it up and shake your hand again. Then you could
> > give me some tips on the easiest way to get to it. From what I see it
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> > Send, VOX, NB, MONI switches. The tabs have broken off and a couple of
> > the switches are hanging there by the skin of there teeth.All the
> > switches work fine but the plastic front has broken.
> >
> > Bob
> > KB6KPK
> >
> >
> >
> >
>

29457. Re: [TS-520_820_530_830] 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:41:26 UTC
From: Karl R Reed
Topic: 29450 Message: 29457

-- Sent from my Palm Pixi
On Jan 22, 2011 11:35 AM, barrie@... <barrie@...> wrote:

?

This IS prime antenna season. -12 today in Madeira OH.

Jim

WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----

From: "fjwheeler3" <fjwheeler3@...>

Sender: TS-520_820_530_830@yahoogroups.com

Date: Sat, 22 Jan 2011 15:49:38

To: <TS-520_820_530_830@yahoogroups.com>

Reply-To: TS-520_820_530_830@yahoogroups.com

Subject: [TS-520_820_530_830] 520se quick and dirty antenna

Hi All

My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast.

What is the quickest way to to get back on the air using some sort of antenna that doesn't require standing in the freezing weather for an extended period of time. I have heard of some hams just running wires out the second floor window and tuning it up or using "bed frames" and a tuner to get back on the air. Due to a medical condition the easiest the better.

I have a tuner but don't have any experience using it but will certainly use it if needed. The 20 m dipole did not require it.

Any help would be appreciated.

Once spring shows up I will install a 40/20/10 multiband dipole.

73

Fred

KB1TCY

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29458. TS-820S Capacitor Replacment.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 16:48:13 UTC
From: zapvss
Topic: 29458 Message: 29458

Hi All,
I've owned a TS-820S since the mid 80s and its been in storage for 20 years. Recently I've had the bug to get this rig back on the air so I got it out of the mothballs and powered it up. It sounded really bad and was not as sensitive as it use to be. It also had an AC hum on the audio, the electrolytics have dried out and/or changed capacitance.

For the past week I've been replacing all of the Electrolytic capacitors. While I was under the hood I cleaned all of the connectors and switches. Well I got the radio completed making sure all the cables were connected properly and well seated then I flipped on the power switch, no explosions or smoke. Tuning around it wouldn't receive anything, just a bunch of hissing. I took the boards back out and checked the polarity of each replaced cap. Everything was good, holy cow I ruined my radio, I turned it into a piece of wood.

In the rebuild process I had to flip the radio around alot to get to the boards. Well I also flipped the the 6m xverter switch on the back of the radio to the "ON" position. Doing so routes the anntena signal through a converter if I had one. This morning I noticed the position of the switch and turned it OFF and the radio came to life. What a good feeling.

Everything works great, the small hum I use to have is gone and the receiver is much more sensitive, signals are coming in like gang busters. I have yet to try the transmitter. For that I will bring it to a friends house because I don't have my antenna up yet, spring project.

The last thing to do is construct a new cable to connect my VFO-820 to the rig.

For those of you needing to perform repairs on the TS-820S, use a good temperature controled soldering pencil dialed to about 650F or just enough to melt the solder. The foil on the boards will come up very easily, I had to repair one pad when I used ~700F temp. I also cleaned the pads with 91% Isopropyl Alcohol before de-soldering, that helped alot.

73s
Denis - KB9CHF

29459. Re: [TS-520_820_530_830] 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 17:37:11 UTC
From: Steve
Topic: 29450 Message: 29459

I operated for many years with an end fed insulated wire about 100 feet long out my bedroom window down to the back yard fence and then along the top of the fence. If you have a tuner you can do very well with a random length wire on all bands

Steve W4IMF
.
----- Original Message -----
From: fjwheeler3
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 22, 2011 10:49 AM
Subject: [TS-520_820_530_830] 520se quick and dirty antenna

Hi All
My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast.
What is the quickest way to to get back on the air using some sort of antenna that doesn't require standing in the freezing weather for an extended period of time. I have heard of some hams just running wires out the second floor window and tuning it up or using "bed frames" and a tuner to get back on the air. Due to a medical condition the easiest the better.
I have a tuner but don't have any experience using it but will certainly use it if needed. The 20 m dipole did not require it.
Any help would be appreciated.
Once spring shows up I will install a 40/20/10 multiband dipole.

73
Fred
KB1TCY

[Non-text portions of this message have been removed]

29460. Re: [TS-520_820_530_830] 520se quick and dirty antenna

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 17:40:36 UTC
From: Karl R Reed
Topic: 29450 Message: 29460

-- Sent from my Palm Pixi
On Jan 22, 2011 12:39 PM, Steve <w4imf@bellsouth.net> wrote:

?

I operated for many years with an end fed insulated wire about 100 feet long out my bedroom window down to the back yard fence and then along the top of the fence. If you have a tuner you can do very well with a random length wire on all bands

Steve W4IMF

.

----- Original Message -----

From: fjwheeler3

To: TS-520_820_530_830@yahoogroups.com

Sent: Saturday, January 22, 2011 10:49 AM

Subject: [TS-520_820_530_830] 520se quick and dirty antenna

Hi All

My 20 m dipole fell during the recent Massachusetts snow storms and is buried under the snow with no chance of raising it back up until spring. I have been licensed for a year running 100w in a 520se and having a blast.

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Fred

KB1TCY

[Non-text portions of this message have been removed]

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29461. Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 17:49:56 UTC
From: Bob
Topic: 1550 Message: 29461

Gordon
Thank You, do you think it is better to replace the coupler with the original part? Or is the brass stronger and more durable? Once I put the new coupler in I would prefer not to have to replace it again. If the metal or brass coupler is a little stronger and is a more permanent fix than that would be better. I will drop Bob Mansker a note and ask him if he has any plastic paddles for the switch replacement.
Thanks Again
Bob Musser
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Bob,
> Contact Bob Mansker. ke5ftf@...
> You might be able to buy some good switches or paddles from him.
> He has lots of parts and even might have the original plastic coupler.
>
> 73,
> Gordon
> N6WK
>
> On 1/21/2011 10:38 PM, Bob wrote:
> >
> > 820
> > Well I took it back off the shelf to see what I could see. I need to
> > find out what kind of issues I would be halving with the 820 IF....
> > the band switch coupling between the driver stage and the final band
> > switch was not snug or turning the back set of wafers in the final
> > cage? This rig has a white plastic coupler that has let go. All the
> > front wafers of the band switch turn snug and smooth with the front
> > control knob. However the wafers behind the white coupler in the final
> > section do not turn at all.
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> > I can transmit and receive across the room to another rig. It works on
> > upper and lower ssb as well as cw. When I tune it for max output there
> > is no rf output via the meter however as I adjust the driver the
> > output can be peeked using the receiver of the other rig. All audio
> > functions work. Vox, Mic gain Speech Processor etc all work. The CAR
> > control on the front panel also adjusts the output of the driver
> > adjustment and can be seen on the other receiver when it is adjusted.
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> > I tried to find what band it was on when the band switch let go and
> > stopped adjusting the band switch in the final cage. I tried all bands
> > and can not find any band that will tune with any output? I guess it
> > could be on AUX position with out a crystal?

> >
> > Where can I get a replacement coupler? Gordon N6WK if you have one I
> > could stop by and pick it up and shake your hand again. Then you could
> > give me some tips on the easiest way to get to it. From what I see it
> > looks like you need to take just about everything out of the Final RF
> > cage to get to it and reset the wafer?
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> > I also need the front panel plastic toggle switch that slides onto the
> > Send, VOX, NB, MONI switches. The tabs have broken off and a couple of
> > the switches are hanging there by the skin of there teeth.All the
> > switches work fine but the plastic front has broken.
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> > Bob
> > KB6KPK
> >
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> >
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>

29462. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 18:15:07 UTC
From: n6wk@n6wk.com
Topic: 1550 Message: 29462

The Brass ones should last forever !
Gordon

On 1/22/2011 9:49 AM, Bob wrote:
>
> Gordon
> Thank You, do you think it is better to replace the coupler with the
> original part? Or is the brass stronger and more durable? Once I put
> the new coupler in I would prefer not to have to replace it again. If
> the metal or brass coupler is a little stronger and is a more
> permanent fix than that would be better. I will drop Bob Mansker a
> note and ask him if he has any plastic paddles for the switch
> replacement.
> Thanks Again
> Bob Musser
> KB6KPK
>
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Bob,
> > Contact Bob Mansker. ke5ftf@...
> > You might be able to buy some good switches or paddles from him.
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29463. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 18:43:27 UTC
From: Joseph Stiles
Topic: 1550 Message: 29463

Bob,

The brass couplers from Gordon (via k4eaa) are great. They are brass, very
well machined, and have 4 set screws. The only problem you might have is finding
a long enough "allen" type wrench to get all the way in. I have replaced
...oh...maybe about 25...so far. The plastic ones were fine for awhile...but
screws and nylon in a tension/rotational setting...most times just don't mix!
Use the brass...you won't have to worry about it again. Good
luck.................

73's joe wb7uqu

_____
From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 22, 2011 10:15:07 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

The Brass ones should last forever !
Gordon

On 1/22/2011 9:49 AM, Bob wrote:
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

29464. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 19:23:53 UTC
From: Ruben Echevarria KA2HHB
Topic: 1550 Message: 29464

You can find an extra long L wrench at Home Depot or stop a Snap On truck he'll sell you one ...
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 22, 2011 1:43 PM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

Bob,

The brass couplers from Gordon (via k4eaa) are great. They are brass, very well machined, and have 4 set screws. The only problem you might have is finding a long enough "allen" type wrench to get all the way in. I have replaced ...oh...maybe about 25...so far. The plastic ones were fine for awhile...but screws and nylon in a tension/rotational setting...most times just don't mix! Use the brass...you won't have to worry about it again. Good luck.....

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 22, 2011 10:15:07 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

The Brass ones should last forever !
Gordon

On 1/22/2011 9:49 AM, Bob wrote:
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

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29465. Re: TS-830S low power for transverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 20:14:27 UTC
From: rkersey tds.net
Topic: 29465 Message: 29465

I am still a little confused . . . . I understand using the transverter connections on the back of the TS-830S. I took a look at the instructions for the Kenwood TV-506 and it outputs 8 watts, but there's no mention of what the input is. The TenTec 1208 takes a 5 watt input and will output 8 watts. Does the TS-830S really only put out 1 watt through the transverter output? If I used the 1208, that would only give me about 3 watts, right?

Does anybody have any experience connecting a 1208 to the TS-830S?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29466. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 21:03:06 UTC
From: bmusser4@msn.com
Topic: 1550 Message: 29466

Gordon
Is there any issue with the metal or brass not isolating the drive from the final sections of the rig?
Bob
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: n6wk@n6wk.com
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 22 Jan 2011 10:15:07
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

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> > >
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Yahoo! Groups Links

29467. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 22:13:22 UTC
From: n6wk@n6wk.com
Topic: 1550 Message: 29467

No, not at all.

73,
Gordon

On 1/22/2011 1:03 PM, bmusser4@... wrote:
>
> Gordon
> Is there any issue with the metal or brass not isolating the drive
> from the final sections of the rig?
> Bob
> Sent from my Verizon Wireless BlackBerry
>
> -----Original Message-----
> From: n6wk@... <mailto:n6wk%40n6wk.com>
> Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Sat, 22 Jan 2011 10:15:07
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood 820
>
> The Brass ones should last forever !
> Gordon
>
> On 1/22/2011 9:49 AM, Bob wrote:
> >
> > Gordon
> > Thank You, do you think it is better to replace the coupler with the
> > original part? Or is the brass stronger and more durable? Once I put
> > the new coupler in I would prefer not to have to replace it again. If
> > the metal or brass coupler is a little stronger and is a more
> > permanent fix than that would be better. I will drop Bob Mansker a
> > note and ask him if he has any plastic paddles for the switch
> > replacement.
> > Thanks Again
> > Bob Musser
> > KB6KPK
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:

> > >
> > > Bob,
> > > Contact Bob Mansker. ke5ftf@...
> > > You might be able to buy some good switches or paddles from him.
> > > He has lots of parts and even might have the original plastic
> coupler.
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > On 1/21/2011 10:38 PM, Bob wrote:
> > > >
> > > > 820
> > > > Well I took it back off the shelf to see what I could see. I
> need to
> > > > find out what kind of issues I would be halving with the 820 IF....
> > > > the band switch coupling between the driver stage and the final
> band
> > > > switch was not snug or turning the back set of wafers in the final
> > > > cage? This rig has a white plastic coupler that has let go. All the
> > > > front wafers of the band switch turn snug and smooth with the front
> > > > control knob. However the wafers behind the white coupler in the
> > final
> > > > section do not turn at all.
> > > >
> > > > I can transmit and receive across the room to another rig. It
> > works on
> > > > upper and lower ssb as well as cw. When I tune it for max output
> > there
> > > > is no rf output via the meter however as I adjust the driver the
> > > > output can be peeked using the receiver of the other rig. All audio
> > > > functions work. Vox, Mic gain Speech Processor etc all work. The
> CAR
> > > > control on the front panel also adjusts the output of the driver
> > > > adjustment and can be seen on the other receiver when it is
> adjusted.
> > > >
> > > > I tried to find what band it was on when the band switch let go and
> > > > stopped adjusting the band switch in the final cage. I tried all
> > bands
> > > > and can not find any band that will tune with any output? I
> guess it
> > > > could be on AUX position with out a crystal?
> > > >
> > > > Where can I get a replacement coupler? Gordon N6WK if you have
> one I
> > > > could stop by and pick it up and shake your hand again. Then you
> > could
> > > > give me some tips on the easiest way to get to it. From what I

> see it
> > > > looks like you need to take just about everything out of the
> Final RF
> > > > cage to get to it and reset the wafer?
> > > >
> > > > I also need the front panel plastic toggle switch that slides onto
> > the
> > > > Send, VOX, NB, MONI switches. The tabs have broken off and a
> > couple of
> > > > the switches are hanging there by the skin of there teeth.All the
> > > > switches work fine but the plastic front has broken.
> > > >
> > > > Bob
> > > > KB6KPK
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> Yahoo! Groups Links
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29468. Re: TS-830S low power for transverter?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 22:53:32 UTC
From: jon_g4fut
Topic: 29418 Message: 29468

the FT101zd has a 1 watt (or less) output socket for transverters. My old FTdx401 had a half watt output socket. Great for QRP fun with locals :-)
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, barrie@... wrote:
>
> Maybe a Twoer? LOL
>
> Sent via BlackBerry from T-Mobile
>
> -----Original Message-----
> From: "rkersey tds.net" <rkersey@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Fri, 21 Jan 2011 15:24:26
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] TS-830S low power for transverter?
>
> I'll accept that you can't get the 830S down to five watts to drive a TenTec
> 1208 transverter . . . . but I have one other question, then. What would
> you be able to use to drive one of these? Even the old Heathkits put out
> 100 watts, so what do you use?
>
> 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>
>
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>
> [Non-text portions of this message have been removed]
>

29469. Re: [TS-520_820_530_830] Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-22 23:00:26 UTC
From: Joseph Stiles
Topic: 1550 Message: 29469

GROUP,

In regards to the correct size "allen type" wrenches.. I forgot to mention in the prior post....I bought a complete set from on-line "hobby store." It was a complete set of 7. On KW's you'll only use 2.....on my motorcycle I can use 3 others..... but they were inexpensive, good quality...and cheaper and longer than ones I tried to find at Lowe's/Home Depot. They have shafts about 3.5" long and are color coded. They will fit the small "allen type" screw on the factory coupler(s) and also...the later model rig using the "allen type" screws on the knobs up front. Or you could check with your local hobby store/shop.....good luck

73's joe wb7uqu

_____
From: Ruben Echevarria KA2HHB <ka2hhb_2000@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 22, 2011 11:23:53 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

You can find an extra long L wrench at Home Depot or stop a Snap On truck he'll sell you one ...

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, January 22, 2011 1:43 PM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

Bob,

The brass couplers from Gordon (via k4eaa) are great. They are brass, very well machined, and have 4 set screws. The only problem you might have is finding

a long enough "allen" type wrench to get all the way in. I have replaced ...oh...maybe about 25...so far. The plastic ones were fine for awhile...but screws and nylon in a tension/rotational setting...most times just don't mix! Use the brass...you won't have to worry about it again. Good luck.................

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 22, 2011 10:15:07 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood 820

The Brass ones should last forever !
Gordon

On 1/22/2011 9:49 AM, Bob wrote:
>
> Gordon
> Thank You, do you think it is better to replace the coupler with the
> original part? Or is the brass stronger and more durable? Once I put
> the new coupler in I would prefer not to have to replace it again. If
> the metal or brass coupler is a little stronger and is a more
> permanent fix than that would be better. I will drop Bob Mansker a
> note and ask him if he has any plastic paddles for the switch
> replacement.
> Thanks Again
> Bob Musser
> KB6KPK
>
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Bob,
> > Contact Bob Mansker. ke5ftf@...
> > You might be able to buy some good switches or paddles from him.
> > He has lots of parts and even might have the original plastic coupler.
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 1/21/2011 10:38 PM, Bob wrote:
> > >
> > > 820
> > > Well I took it back off the shelf to see what I could see. I need to
> > > find out what kind of issues I would be halving with the 820 IF....
> > > the band switch coupling between the driver stage and the final band
> > > switch was not snug or turning the back set of wafers in the final
> > > cage? This rig has a white plastic coupler that has let go. All the
> > > front wafers of the band switch turn snug and smooth with the front
> > > control knob. However the wafers behind the white coupler in the
> final
> > > section do not turn at all.
> > >
> > > I can transmit and receive across the room to another rig. It
> works on
> > > upper and lower ssb as well as cw. When I tune it for max output

> there
> > > is no rf output via the meter however as I adjust the driver the
> > > output can be peeked using the receiver of the other rig. All audio
> > > functions work. Vox, Mic gain Speech Processor etc all work. The CAR
> > > control on the front panel also adjusts the output of the driver
> > > adjustment and can be seen on the other receiver when it is adjusted.
> > >
> > > I tried to find what band it was on when the band switch let go and
> > > stopped adjusting the band switch in the final cage. I tried all
> bands
> > > and can not find any band that will tune with any output? I guess it
> > > could be on AUX position with out a crystal?
> > >
> > > Where can I get a replacement coupler? Gordon N6WK if you have one I
> > > could stop by and pick it up and shake your hand again. Then you
> could
> > > give me some tips on the easiest way to get to it. From what I see it
> > > looks like you need to take just about everything out of the Final RF
> > > cage to get to it and reset the wafer?
> > >
> > > I also need the front panel plastic toggle switch that slides onto
> the
> > > Send, VOX, NB, MONI switches. The tabs have broken off and a
> couple of
> > > the switches are hanging there by the skin of there teeth.All the
> > > switches work fine but the plastic front has broken.
> > >
> > > Bob
> > > KB6KPK
> > >
> > >
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>

Yahoo! Groups Links

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[Non-text portions of this message have been removed]

29470. Re: Kenwood 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 00:34:36 UTC
From: bnhall_2000
Topic: 1550 Message: 29470

Ken K4EEA sells the shaft couplers...check his site under "parts." Ask him about the toggle switches too. He doesn't advertise them, but I'd be willing to bet he has a couple available.

In regard to no RF output indication, check the RF volt potentiometer on the back panel and adjust it for 2/3 scale reading w/ the meter switch in RF. It's not a calibrated function and is only supposed to provide a relative indication of output.

Brian AC7NA

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <bmusser4@...> wrote:
>
> 820
> Well I took it back off the shelf to see what I could see. I need to find out what kind of issues I would be halving with the 820 IF.... the band switch coupling between the driver stage and the final band switch was not snug or turning the back set of wafers in the final cage? This rig has a white plastic coupler that has let go. All the front wafers of the band switch turn snug and smooth with the front control knob. However the wafers behind the white coupler in the final section do not turn at all.
>
> I can transmit and receive across the room to another rig. It works on upper and lower ssb as well as cw. When I tune it for max output there is no rf output via the meter however as I adjust the driver the output can be peeked using the receiver of the other rig. All audio functions work. Vox, Mic gain Speech Processor etc all work. The CAR control on the front panel also adjusts the output of the driver adjustment and can be seen on the other receiver when it is adjusted.
>
> I tried to find what band it was on when the band switch let go and stopped adjusting the band switch in the final cage. I tried all bands and can not find any band that will tune with any output? I guess it could be on AUX position with out a crystal?
>
> Where can I get a replacement coupler? Gordon N6WK if you have one I could stop by and pick it up and shake your hand again. Then you could give me some tips on the easiest way to get to it. From what I see it looks like you need to take just about everything out of the Final RF cage to get to it and reset the wafer?
>
> I also need the front panel plastic toggle switch that slides onto the Send, VOX, NB, MONI switches. The tabs have broken off and a couple of the switches are hanging there by the skin of there teeth.All the switches work fine but the plastic front has broken.
>
> Bob
> KB6KPK
>

29471. Re: [TS-520_820_530_830] Re: TS-830S low power for transverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 00:54:45 UTC
From: pmarkavage@juno.com
Topic: 29465 Message: 29471

Somewhere I read, maybe on the Ten Tec site, you can diddle with some resistor(s) on the input side of the 1208 so that 1/2 watt will drive the 1208 to full output. When in doubt, give Ten Tec a call or drop them an e-mail with your questions. Here you might get a dozen different answers. Go to the source.

Just found this on the internet for the 1208 so it must be correct: "However with a simple resistor change your input can vary between a 1/2w and 10watts input".

I use my TS-830S to drive a SSB Electronics 6 meter transverter which takes about 1/2 watt to drive it. Works great.

Pete, wa2cwa

On Sat, 22 Jan 2011 15:14:27 -0500 "rkersey tds.net" <rkersey@...> writes:
> I am still a little confused . . . . I understand using the
> transverter
> connections on the back of the TS-830S. I took a look at the
> instructions
> for the Kenwood TV-506 and it outputs 8 watts, but there's no
> mention of
> what the input is. The TenTec 1208 takes a 5 watt input and will
> output 8
> watts. Does the TS-830S really only put out 1 watt through the
> transverter
> output? If I used the 1208, that would only give me about 3 watts,
> right?
>
> Does anybody have any experience connecting a 1208 to the TS-830S?
>
> 73,
> Roy Kersey
> KI4HAG

[Non-text portions of this message have been removed]

29472. Re: [TS-520_820_530_830] Re: TS-830S low power for transverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 16:36:07 UTC
From: kay Groß
Topic: 29465 Message: 29472

Hello to all,

please remember it is a transverter not an amplifier.
The output of the rig is brought down to milliwatts
or less than mixed up and amplified again.
If your input from shortwave side is to high you
kill your transverter nothing else.Your output will
not be higher.

73 Kay DL5OAQ
----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, January 23, 2011 1:54 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S low power for transverter

Somewhere I read, maybe on the Ten Tec site, you can diddle with some
resistor(s) on the input side of the 1208 so that 1/2 watt will drive the
1208 to full output. When in doubt, give Ten Tec a call or drop them an
e-mail with your questions. Here you might get a dozen different answers.
Go to the source.

Just found this on the internet for the 1208 so it must be correct:
"However with a simple resistor change your input can vary between a 1/2w
and 10watts input".

I use my TS-830S to drive a SSB Electronics 6 meter transverter which
takes about 1/2 watt to drive it. Works great.

Pete, wa2cwa

On Sat, 22 Jan 2011 15:14:27 -0500 "rkersey tds.net" <rkersey@...>
writes:
> I am still a little confused . . . . I understand using the
> transverter
> connections on the back of the TS-830S. I took a look at the
> instructions
> for the Kenwood TV-506 and it outputs 8 watts, but there's no
> mention of
> what the input is. The TenTec 1208 takes a 5 watt input and will
> output 8
> watts. Does the TS-830S really only put out 1 watt through the
> transverter
> output? If I used the 1208, that would only give me about 3 watts,
> right?
>
> Does anybody have any experience connecting a 1208 to the TS-830S?

>
> 73,
> Roy Kersey
> KI4HAG

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[Non-text portions of this message have been removed]

29473. Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 20:36:11 UTC
From: kd8hmo
Topic: 29473 Message: 29473

Hello,

Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.

29474. Re: Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 21:05:24 UTC
From: roberteleazer@rocketmail.com
Topic: 29473 Message: 29474

Check to see if the VFO cables got unplugged. If there was some damage inside it would be easy for them to get loosened. It does not take much.

Good Luck!

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Hello,
>
> Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.
>

29475. Re: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 21:06:48 UTC
From: Joseph Stiles
Topic: 29473 Message: 29475

kd8hmo,

I do know that Ken/k4eaa is real busy...and if you do contact him..he will give you a "send it to me date" which right now is probably around May+ . I can recommend two guys that have done work for me in the past. "GOOGLE" AVVid - Clif Holland, he's in Texas. Another one..he is quite good, through, and inexpensive is "Affordable Radio Repair".... Mike/N0BXE he's in Colorado.

God luck & 73's

joe wb7uqu

From: kd8hmo <delta5_oh@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 23, 2011 12:36:11 PM
Subject: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Hello,

Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.

[Non-text portions of this message have been removed]

29476. Re: Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 21:15:41 UTC
From: n6wk_skcc3
Topic: 29473 Message: 29476

I also repair the 530/830's

Thanks,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Hello,
>
> Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.
>

29477. Re: [TS-520_820_530_830] Re: Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 21:29:27 UTC
From: Joseph Stiles
Topic: 29473 Message: 29477

Hey Gordon...I was just about to add to my post...stating you and possibly Mike...but I did not really know if you took in "outside work." Sorry about that.

Hope you are still feelin' great!

73's joe wb7uqu

From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 23, 2011 1:15:41 PM
Subject: [TS-520_820_530_830] Re: Basket-Case TS-530S Restoration

I also repair the 530/830's

Thanks,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Hello,
>
> Can anyone here reccomend a good repair shop that would be interested in
>working on a TS-530S that I rescued from someones garage? Supposedly, the
>bandswitch coupler broke and caused some damage. It has been sitting in a garage
>for a long time. It appears to be complete, and the face should clean up nicely.
>The covers also need painting. When I turn it on, the digital display does come
>on, but the freq readout doesnt change when you spin the dial knob. I was also
>given several 6146 tubes that test good with the radio. This radio needs major
>work like K4EAA does, but he doesnt seem to be answering e-mails right now. I
>was given this radio for free, so I think its worth spending 2 or three hundred
>dollars to bring back to life.
>

[Non-text portions of this message have been removed]

29478. Re: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 20:44:25 UTC
From: n6wk@n6wk.com
Topic: 29473 Message: 29478

I repair them if you are willing to ship to California.

Thanks,
Gordon
N6WK

On 1/23/2011 12:36 PM, kd8hmo wrote:
>
> Hello,
>
> Can anyone here reccomend a good repair shop that would be interested
> in working on a TS-530S that I rescued from someones garage?
> Supposedly, the bandswitch coupler broke and caused some damage. It
> has been sitting in a garage for a long time. It appears to be
> complete, and the face should clean up nicely. The covers also need
> painting. When I turn it on, the digital display does come on, but the
> freq readout doesnt change when you spin the dial knob. I was also
> given several 6146 tubes that test good with the radio. This radio
> needs major work like K4EAA does, but he doesnt seem to be answering
> e-mails right now. I was given this radio for free, so I think its
> worth spending 2 or three hundred dollars to bring back to life.
>
>

29479. Re: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-23 22:12:50 UTC
From: barrie@eos.net
Topic: 29473 Message: 29479

Gordon N6WK is very good. Would be worth the shipment to CA.
Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "kd8hmo" <delta5_oh@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sun, 23 Jan 2011 20:36:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Hello,

Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.

[Non-text portions of this message have been removed]

29480. Re: [TS-520_820_530_830] Re: Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-24 00:20:13 UTC
From: george dumond
Topic: 29473 Message: 29480

Joe Gorden would do you a good job at a decent price and you would have as good as new radio.
Georghe K0GWD

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 23, 2011 3:29:27 PM
Subject: Re: [TS-520_820_530_830] Re: Basket-Case TS-530S Restoration

Hey Gordon...I was just about to add to my post...stating you and possibly Mike...but I did not really know if you took in "outside work." Sorry about that.

Hope you are still feelin' great!

73's joe wb7uqu

From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, January 23, 2011 1:15:41 PM
Subject: [TS-520_820_530_830] Re: Basket-Case TS-530S Restoration

I also repair the 530/830's

Thanks,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Hello,
>
> Can anyone here reccomend a good repair shop that would be interested in
>working on a TS-530S that I rescued from someones garage? Supposedly, the
>bandswitch coupler broke and caused some damage. It has been sitting in a garage
>
>for a long time. It appears to be complete, and the face should clean up nicely.
>
>The covers also need painting. When I turn it on, the digital display does come

>on, but the freq readout doesnt change when you spin the dial knob. I was also
>given several 6146 tubes that test good with the radio. This radio needs major
>work like K4EAA does, but he doesnt seem to be answering e-mails right now. I
>was given this radio for free, so I think its worth spending 2 or three hundred

>dollars to bring back to life.
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29481. Re: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-24 02:27:46 UTC
From: Jerry Keller (K3BZ)
Topic: 29473 Message: 29481

?Gordon was a big help to me when I was repairing my TS520. He's helped a lot of people here. He knows his stuff, and he's a good guy.

73, Jerry K3BZ

-----Original Message-----
From: barrie@...
Sent: Sunday, January 23, 2011 5:12 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Gordon N6WK is very good. Would be worth the shipment to CA.
Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "kd8hmo" <delta5_oh@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sun, 23 Jan 2011 20:36:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Basket-Case TS-530S Restoration

Hello,

Can anyone here reccomend a good repair shop that would be interested in working on a TS-530S that I rescued from someones garage? Supposedly, the bandswitch coupler broke and caused some damage. It has been sitting in a garage for a long time. It appears to be complete, and the face should clean up nicely. The covers also need painting. When I turn it on, the digital display does come on, but the freq readout doesnt change when you spin the dial knob. I was also given several 6146 tubes that test good with the radio. This radio needs major work like K4EAA does, but he doesnt seem to be answering e-mails right now. I was given this radio for free, so I think its worth spending 2 or three hundred dollars to bring back to life.

[Non-text portions of this message have been removed]

Yahoo! Groups Links

29482. TS 820(s) wiring

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-24 17:07:58 UTC
From: Joseph Stiles
Topic: 29482 Message: 29482

Greetings Group!

Well..thought I was done fixin' a "CB" hack job on an 820(s)..got the PLL/PD unit replaced with spare from parts bin. Other things should have indicated to me something else was wrong, Someone had put in 2 watt carbon.comp "R's" on the final board for the cathodes, these were burned/discolored. Replace with correct value/wattage metal film as were the screen "R's."

Well to make it short. Fired it up..good.... no smoke..then "tuned-up" on 20 meters..50W @ 200mA..well turned up "CAR" control..it went to 100W..but "Ip" went to 300mA+ and "pop - pop." There goes the new cathode "R's." Took a look around and found something odd. One of the wires from the "final board" PD2 terminal was changed from the "210" terminal on the "HV" board to the "300B" terminal on the rectifier board. Was this some kind of "QRO" mod? I have not completed the repair...so I don't know if all is well..yet...

73's joe wb7uqu

[Non-text portions of this message have been removed]

29483. wiring/voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-24 22:51:59 UTC
From: Joseph Stiles
Topic: 29483 Message: 29483

I keep making typos...I do think that I get confused between the "Screen" & the "Cathode" schematic tracing for the tubes on the "schematic." But none the less..it's fixed.

joe wb7uqu

[Non-text portions of this message have been removed]

29484. Ken Kempski K4EAA

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 01:42:53 UTC
From: wagstw46
Topic: 29484 Message: 29484

Gang--There has been recent post about inability to contact Ken Kempski K4EAA at Sarasota. I can assure you he is alive and well. I visited his home today and we had a very nice chat. We talked shop and looked at a rig on the bench undergoing refurb. If UPS and FED Ex boxes stacked like cord wood is any indication, he is very busy. I did not ask him when he would be accepting rigs again and I can not speak for him. Just wanted to let everyone know he is OK.

73s Terry K9TW

29485. vfo skirt

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 11:53:12 UTC
From: churchguy_12901
Topic: 29485 Message: 29485

Hello, would anyone know where I can get a vfo "skirt" for a recently purchased ts 530s. I have seen mixed reviews on the one gentlemen that has alot of parts for Kenwood hybrids. Thanks,Mike w2waw

29486. Re: [TS-520_820_530_830] vfo skirt

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 12:27:14 UTC
From: Terry Wagoner
Topic: 29485 Message: 29486

Mike --I am not sure why the mixed reviews. I have purchased multiple times from him and all of my experience has been very positive. Quick response to email query, fast ship, quick delivery, well packed and several times extra parts thrown in (knobs, hardware etc). I use Pay Pal "personal" for the transactions. Do you just need the skirt? Do you have the 2 washers and the spring? Just one customers opinion. Terry K9TW

From: churchguy_12901 <churchguy_12901@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 25, 2011 6:53:12 AM
Subject: [TS-520_820_530_830] vfo skirt

Hello, would anyone know where I can get a vfo "skirt" for a recently purchased ts 530s. I have seen mixed reviews on the one gentlemen that has alot of parts for Kenwood hybrids. Thanks,Mike w2waw

[Non-text portions of this message have been removed]

29487. Re: Ken Kempski K4EAA

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 14:40:18 UTC
From: Tom
Topic: 29484 Message: 29487

Terry,

Thanks for the message, it reminded me to post the results
I had in getting in touch with Ken.

Here are a few notes from our conversation;

As Terry mentioned, Ken is just plain out of storage room.
If you anticipate sending a rig to him, call first, this will put you into his que. At that time he will give you a date to send the rig. IOW, you store the rig until he's ready for it.

When you ship the rig, send him an email and he will respond with an approx. completion date. He said right now the completion dates are about 2 weeks from receipt of rig, if he wants your rig earlier than that he will contact you.

Be sure to fill out the form on his web site with all the pertanant info. He said you would be suprised at the number of radios he receives without ANY info on the boxes. He has rigs right now and he has no idea who owns them !!!

I remember, I think it was last year, that he was contimplating hiring some help so I asked him about that and he simply said that didn't work out, so it's just he and his wife.

We had a great conversation about some of our common interests, he is a super guy.

Tom
W4TMW

ps; to give you an idea of the backlog, my ship date to him is mid-May.

> Gang--There has been recent post about inability to contact Ken Kempski K4EAA at Sarasota. I can assure you he is alive and well. I visited his home today and we had a very nice chat. We talked shop and looked at a rig on the bench undergoing refurb. If UPS and FED Ex boxes stacked like cord wood is any indication, he is very busy. I did not ask him when he would be accepting rigs again and I can not speak for him. Just wanted to let everyone know he is OK.
>
> 73s Terry K9TW
>

29488. Re: vfo skirt

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 20:47:10 UTC
From: churchguy_12901
Topic: 29485 Message: 29488

Terry, Thanks, I was hoping for a positive response and got one. I just need the skirt, I will drop him an email. Thanks again, Mike
--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Mike --I am not sure why the mixed reviews. I have purchased multiple times
> from him and all of my experience has been very positive. Quick response to
> email query, fast ship, quick delivery, well packed and several times extra
> parts thrown in (knobs, hardware etc). I use Pay Pal "personal" for the
> transactions. Do you just need the skirt? Do you have the 2 washers and the
> spring? Just one customers opinion. Terry K9TW
>
>
>
> _____
> From: churchguy_12901 <churchguy_12901@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, January 25, 2011 6:53:12 AM
> Subject: [TS-520_820_530_830] vfo skirt
>
>
> Hello, would anyone know where I can get a vfo "skirt" for a recently purchased
> ts 530s. I have seen mixed reviews on the one gentlemen that has alot of parts
> for Kenwood hybrids. Thanks,Mike w2waw
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29489. TS-820(S) CB/Free band hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-25 23:10:56 UTC
From: wb7uqu
Topic: 29489 Message: 29489

Greetings Group,

Well..finally got the "hack" job fixed, thanks to a spare PLL unit. Another thing I found...AFTER I popped the new cathode "R's".. was that the/a prior owner along the the crystal change, moved the PD2 wire from the HV board 210 post to the rectifier board 300B post...no wonder there was 300+mA Ip on the finals before they popped the cathode "R's." All is now fixed and workin' as it should...Now onto that 520 with no audio...

73's joe wb7uqu

29490. Re: TS-820(S) CB/Free band hack

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 00:41:04 UTC
From: w5rkl
Topic: 29489 Message: 29490

If the wire from HV "210" wire was moved to the Rectifier Units' 300B terminal, the final tube screen voltage would be approximately 350VDC in standby, slightly lower in transmit. The typical final tube screen voltage is 255VDC in standby and 210VDC in transmit.

Increasing the screen voltage to 350VDC easily exceeds the 6146B maximum screen (Grid #2) voltage of 250VDC by "100VDC". While the person who thought this would be a good idea, it's quite obvious he/she did not pay attention to the 6146Bs maximum grid #2 levels.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wb7uqu" <stilesjoseph@...> wrote:
>
> Greetings Group,
>
> Well..finally got the "hack" job fixed, thanks to a spare PLL unit. Another thing I found...AFTER I popped the new cathode "R's".. was that the/a prior owner along the the crystal change, moved the PD2 wire from the HV board 210 post to the rectifier board 300B post...no wonder there was 300+mA Ip on the finals before they popped the cathode "R's." All is now fixed and workin' as it should...Now onto that 520 with no audio...
>
> 73's joe wb7uqu
>

29491. tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 03:49:16 UTC
From: robert
Topic: 29491 Message: 29491

I need some tubes where would be the best place for them 6146 thanks Robert

29492. Re: [TS-520_820_530_830] tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 04:24:01 UTC
From: Joseph Stiles
Topic: 29491 Message: 29492

Robert,

Check out RF PARTS they have new, made by Taylor 6146B for $22.00/ea

---
From: robert <ke4dyg@hotmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 25, 2011 7:49:16 PM
Subject: [TS-520_820_530_830] tubes

I need some tubes where would be the best place for them 6146 thanks Robert

[Non-text portions of this message have been removed]

29493. Re: [TS-520_820_530_830] tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 05:45:29 UTC
From: Bob
Topic: 29491 Message: 29493

Yup. they've actually had those for awhile now. Looks like some good tubes.

--- On Tue, 1/25/11, Joseph Stiles <stilesjoseph@...> wrote:

Robert,

Check out RF PARTS they have new, made by Taylor 6146B for $22.00/ea

[Non-text portions of this message have been removed]

29494. Re: tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 10:15:32 UTC
From: w5rkl
Topic: 29491 Message: 29494

Another source is

http://www.vacuumtubes.net/?source=google&gclid=CMStvMybj6YCFddA2godTAqtZA

6146 = $20
6146A = $22
6146B = $32
6146W = $25
6146B-CH = $20 (Chinese)

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "robert" <ke4dyg@...> wrote:
>
> I need some tubes where would be the best place for them 6146 thanks Robert
>

29495. Re: [TS-520_820_530_830] tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 11:44:16 UTC
From: john lawson
Topic: 29491 Message: 29495

Those of you that have purchased the Taylor 6146B's from RF Parts, how good have they been as far as life expectancy? I wonder how good those tubes, as well as other today's brands are compared to the RCA, GE, etc that was made "back in the day" when they were manufactured for transmitting as well as consumer equipment that didn't require as high of voltage ratings as transmitting tubes did.....John

--- On Tue, 1/25/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] tubes
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, January 25, 2011, 11:24 PM

Robert,

Check out RF PARTS they have new, made by Taylor 6146B for $22.00/ea

---
From: robert <ke4dyg@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, January 25, 2011 7:49:16 PM
Subject: [TS-520_820_530_830] tubes

I need some tubes where would be the best place for them 6146 thanks Robert

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29496. RE: [TS-520_820_530_830] tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 11:57:14 UTC
From: Jan
Topic: 29491 Message: 29496

I have bought several 6146 RCA tubes from <http://myworld.ebay.com/ak6r/> ak6r on Ebay. They have all been very good

Jan- LA2XSA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of john lawson
Sent: Wednesday, January 26, 2011 12:44 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] tubes

Those of you that have purchased the Taylor 6146B's from RF Parts, how good have they been as far as life expectancy? I wonder how good those tubes, as well as other today's brands are compared to the RCA, GE, etc that was made "back in the day" when they were manufactured for transmitting as well as consumer equipment that didn't require as high of voltage ratings as transmitting tubes did.....John

--- On Tue, 1/25/11, Joseph Stiles <stilesjoseph@... <mailto:stilesjoseph%40yahoo.com> > wrote:

From: Joseph Stiles <stilesjoseph@... <mailto:stilesjoseph%40yahoo.com> >
Subject: Re: [TS-520_820_530_830] tubes
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Tuesday, January 25, 2011, 11:24 PM

Robert,

Check out RF PARTS they have new, made by Taylor 6146B for $22.00/ea

_____
From: robert <ke4dyg@hotmail.com <mailto:ke4dyg%40hotmail.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Tue, January 25, 2011 7:49:16 PM
Subject: [TS-520_820_530_830] tubes

I need some tubes where would be the best place for them 6146 thanks Robert

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29497. Re: Ken Kempski K4EAA

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 12:21:52 UTC
From: D
Topic: 29484 Message: 29497

My date to ship to him is... now :)
He's always been able to respond pretty quickly to my email queries, even the stupid ones.
hi.
Dave

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <mtnest@...> wrote:
>
>
> Terry,
>
> Thanks for the message, it reminded me to post the results
> I had in getting in touch with Ken.
>
> Here are a few notes from our conversation;
>
> As Terry mentioned, Ken is just plain out of storage room.
> If you anticipate sending a rig to him, call first, this will put you into his que. At that time he will give you a date to send the rig. IOW, you store the rig until he's ready for it.
>
> When you ship the rig, send him an email and he will respond with an approx. completion date. He said right now the completion dates are about 2 weeks from receipt of rig, if he wants your rig earlier than that he will contact you.
>
> Be sure to fill out the form on his web site with all the pertanant info. He said you would be suprised at the number of radios he receives without ANY info on the boxes. He has rigs right now and he has no idea who owns them !!!
>
> I remember, I think it was last year, that he was contimplating hiring some help so I asked him about that and he simply said that didn't work out, so it's just he and his wife.
>
> We had a great conversation about some of our common interests, he is a super guy.
>
> Tom
> W4TMW
>
> ps; to give you an idea of the backlog, my ship date to him is mid-May.
>
> --
>
>
> > Gang--There has been recent post about inability to contact Ken Kempski K4EAA at Sarasota. I can assure you he is alive and well. I visited his home today and we had a very nice chat. We talked shop and looked at a rig on the bench undergoing refurb. If UPS and FED Ex boxes stacked like cord wood is any indication, he is very busy. I did not ask him

when he would be accepting rigs again and I can not speak for him. Just wanted to let everyone know he is OK.
> >
> > 73s Terry K9TW
> >
>

29498. Re: Ken Kempski K4EAA

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 15:32:37 UTC
From: ki4ax
Topic: 29484 Message: 29498

What a learning oportuntiy that would be.... to work for someone like Ken.

--- In TS-520_820_530_830@yahoogroups.com, "D" <dave.phelps@...> wrote:
>
> My date to ship to him is... now :)
> He's always been able to respond pretty quickly to my email queries, even the stupid ones. hi.
> Dave
>
> --- In TS-520_820_530_830@yahoogroups.com, "Tom" <mtnest@> wrote:
> >
> >
> > Terry,
> >
> > Thanks for the message, it reminded me to post the results
> > I had in getting in touch with Ken.
> >
> > Here are a few notes from our conversation;
> >
> > As Terry mentioned, Ken is just plain out of storage room.
> > If you anticipate sending a rig to him, call first, this will put you into his que. At that time he will give you a date to send the rig. IOW, you store the rig until he's ready for it.
> >
> > When you ship the rig, send him an email and he will respond with an approx. completion date. He said right now the completion dates are about 2 weeks from receipt of rig, if he wants your rig earlier than that he will contact you.
> >
> > Be sure to fill out the form on his web site with all the pertanant info. He said you would be suprised at the number of radios he receives without ANY info on the boxes. He has rigs right now and he has no idea who owns them !!!
> >
> > I remember, I think it was last year, that he was contimplating hiring some help so I asked him about that and he simply said that didn't work out, so it's just he and his wife.
> >
> > We had a great conversation about some of our common interests, he is a super guy.
> >
> > Tom
> > W4TMW
> >
> > ps; to give you an idea of the backlog, my ship date to him is mid-May.
> >
> > --
> >
> >

> > > Gang--There has been recent post about inability to contact Ken Kempski K4EAA at Sarasota. I can assure you he is alive and well. I visited his home today and we had a very nice chat. We talked shop and looked at a rig on the bench undergoing refurb. If UPS and FED Ex boxes stacked like cord wood is any indication, he is very busy. I did not ask him when he would be accepting rigs again and I can not speak for him. Just wanted to let everyone know he is OK.
> > >
> > > 73s Terry K9TW
> > >
> >
>

29499. Re: vfo skirt

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 16:10:50 UTC
From: larry shorthill
Topic: 29485 Message: 29499

I recently bought a VFO for an 830 from this gentleman. His communications were quick, his responses positive, his description accurate, his prices reasonable, and his shipping very well done.

My experience may vary from some others, though I have heard nothing bad, and I would not hesitate to buy from him again.

Larry, KS7J

[Non-text portions of this message have been removed]

29500. Re: [TS-520_820_530_830] tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 16:20:23 UTC
From: Bob
Topic: 29491 Message: 29500

I currently have 2 of 'em in my TS-520S and they've worked great so far.

Bob, KD5MHQ

--- On Wed, 1/26/11, john lawson <jmlcs2000@...> wrote:

Those of you that have purchased the Taylor 6146B's from RF Parts, how good have they been as far as life expectancy? I wonder how good those tubes, as well as other today's brands are compared to the RCA, GE, etc that was made "back in the day" when they were manufactured for transmitting as well as consumer equipment that didn't require as high of voltage ratings as transmitting tubes did.....John

29501. external vfo plug on ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 19:02:53 UTC
From: dingmantom
Topic: 29501 Message: 29501

I hope you can hekp me. I have a 530 with the vfo plug totally removed and find vary hard to know where each wire goes. radio will not operate
without connections.. Can you tell me these connection for a start
tom

29502. Re: [TS-520_820_530_830] external vfo plug on ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 21:01:58 UTC
From: Joseph Stiles
Topic: 29501 Message: 29502

I would be most helpful to you if you had a clear schematic...it would take sometime to find/trace the wires..but I think it would be easier than trying to explain it. You can find a schematic in the back of the operators manual..or you can download it from N6WK 's web site.....good luck

73's joe wb7uqu

From: dingmantom <dingmantom@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 26, 2011 11:02:53 AM
Subject: [TS-520_820_530_830] external vfo plug on ts-520s

I hope you can hekp me. I have a 530 with the vfo plug totally removed and find vary hard to know where each wire goes. radio will not operate without connections.. Can you tell me these connection for a start
tom

[Non-text portions of this message have been removed]

29503. Re: external vfo plug on ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 21:41:44 UTC
From: w5rkl
Topic: 29501 Message: 29503

Tom,

The internal VFO operates from "9VDC". There is one wire that goes to pin "9" on the rear panel VFO socket that has "9VDC" on it. The 9VDC is present on this wire when the Function switch is in the following positions

VFO
25Khz
RMT
FIX

With the 520 turned OFF, pull the 2 pin plug from the rear of the VFO. The "large" pin is the power pin for the VFO. The smaller pin is the "RIT" pin.

Make sure none of the wires are shorting together and none touching the chassis or rear panel.

Set the Function switch to "VFO".

Connect an ohm meter lead to the large pin and the other lead to each wire from the remote VFO socket. One of the wires will show continuity. When found mark this wire as pin "8".

Connect a DC voltage meter set to measure 20VDC. Connect the black negative meter lead to the chassis. Power up the 520 and connect the other volt meter lead to each remaining wire until the volt meter displays "9VDC". This wire is the VFOs 9VDC source voltage. To be sure you have the right wire, switch the Function switch to "VFO R", the meter should no longer display 9VDC but rather close to zero VDC. Set the Function switch back to VFO and the volt meter should display 9VDC again. Mark this wire pin "9".

The shielded wire is the VFO's Output. Mark the shield as pin "2" and the center conductor as pin "1".

With the 520 still powered up, leave the voltage meter negative lead connected to the chassis and touch the other lead to the other wires until you find 12VAC. Notice I said "AC" and NOT "DC". Once you find that wire mark that wire as pin "4".

Set the Function switch to "RMT" and touch the other wires until you the volt meter reads "9VDC". To be sure you have the right wire, move the Function switch to FIX and the volt meter should display zero VDC. Rotate the Function switch to RMT and the volt meter should display 9VDC. Mark this wire as pin "6".

At this point you should have only 1 wire left that is unmarked and untested. Mark this wire as pin "5". This wire is the remote VFOs "relay" voltage and is only energized when the 520 is placed in transmit. The voltage is approximately 12VDC to 14VDC, again, ONLY when the 520 is energized and switched to transmit.

Pin 3 of the 9 pin remote VFO socket is "ground".

Pin 7 of the 9 pin remote VFO socket is "open", nothing connected.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> I would be most helpful to you if you had a clear schematic...it would take
> sometime to find/trace the wires..but I think it would be easier than trying to
> explain it. You can find a schematic in the back of the operators manual..or you
> can download it from N6WK 's web site.............good luck
>
> 73's joe wb7uqu
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> _____
> From: dingmantom <dingmantom@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 26, 2011 11:02:53 AM
> Subject: [TS-520_820_530_830] external vfo plug on ts-520s
>
>
> I hope you can hekp me. I have a 530 with the vfo plug totally removed and find
> vary hard to know where each wire goes. radio will not operate
> without connections.. Can you tell me these connection for a start
> tom
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> [Non-text portions of this message have been removed]
>

29504. Re: external vfo plug on ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 21:48:40 UTC
From: w5rkl
Topic: 29501 Message: 29504

You can order a replacement 9 pin socket from Radio Daze

www.radiodaze.com

The new socket will have the pins numbered on the terminal side of the socket. Look closely when you make wire connections to the socket to ensure the correct wires are connected to the correct socket terminals.

Once you get the new 9 pin socket wired correctly, mount the socket so the wider space between the pins is at "6 o'clock".

Check your wiring against the 520s' schematic.

Make sure the 2 prong plug is inserted into the rear of the internal VFO and the RCA plug is fully seated/inserted into the RCA socket on the rear of the internal VFO. The 2 prong plug will only go in "one way" so don't try to force it.

To operate the 520 without the external VFO, a jumper wire must be connected between pins "8" and "9". This jumper provide power to the internal VFO.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "dingmantom" <dingmantom@...> wrote:
>
> I hope you can hekp me. I have a 530 with the vfo plug totally removed and find vary hard to know where each wire goes. radio will not operate
> without connections.. Can you tell me these connection for a start
> tom
>

29505. Re: tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 22:03:24 UTC
From: james27613
Topic: 29491 Message: 29505

Hi,

GE JAN USA circa 1985 new in box $18 each,
no need for 'matched pair' in our kenwoods.
GE Driver 12BY7A also available $10

http://www.surplussales.com/Tubes-Sock-Acc/TubeSpecials.html

I believe the Taylor tubes are made in China at RF Parts.

73 james

29506. Re: tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 22:13:28 UTC
From: Greg Anders
Topic: 29491 Message: 29506

I called RF Parts several months ago and spoke to them about 6146W's. They told me the Phillips/ECG are OK in Kenwoods, the GS 6146W isn't.
Also, their Taylor 6146B's are "screened and tested" Chinese 6146B's.

FYI,

Greg
KG6YV

[Non-text portions of this message have been removed]

29507. Re: [TS-520_820_530_830] Re: external vfo plug on ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 22:34:18 UTC
From: Joseph Stiles
Topic: 29501 Message: 29507

Got a bit simplistic...I though the "socket" was totally removed...not the "plug." sorry 'bout that

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 26, 2011 1:41:44 PM
Subject: [TS-520_820_530_830] Re: external vfo plug on ts-520s

Tom,

The internal VFO operates from "9VDC". There is one wire that goes to pin "9" on the rear panel VFO socket that has "9VDC" on it. The 9VDC is present on this wire when the Function switch is in the following positions

VFO
25Khz
RMT
FIX

With the 520 turned OFF, pull the 2 pin plug from the rear of the VFO. The "large" pin is the power pin for the VFO. The smaller pin is the "RIT" pin.

Make sure none of the wires are shorting together and none touching the chassis or rear panel.

Set the Function switch to "VFO".

Connect an ohm meter lead to the large pin and the other lead to each wire from the remote VFO socket. One of the wires will show continuity. When found mark this wire as pin "8".

Connect a DC voltage meter set to measure 20VDC. Connect the black negative meter lead to the chassis. Power up the 520 and connect the other volt meter lead to each remaining wire until the volt meter displays "9VDC". This wire is the VFOs 9VDC source voltage. To be sure you have the right wire, switch the Function switch to "VFO R", the meter should no longer display 9VDC but rather close to zero VDC. Set the Function switch back to VFO and the volt meter should display 9VDC again. Mark this wire pin "9".

The shielded wire is the VFO's Output. Mark the shield as pin "2" and the center conductor as pin "1".

With the 520 still powered up, leave the voltage meter negative lead connected to the chassis and touch the other lead to the other wires until you find 12VAC. Notice I said "AC" and NOT "DC". Once you find that wire mark that wire as pin

"4".

Set the Function switch to "RMT" and touch the other wires until you the volt meter reads "9VDC". To be sure you have the right wire, move the Function switch to FIX and the volt meter should display zero VDC. Rotate the Function switch to RMT and the volt meter should display 9VDC. Mark this wire as pin "6".

At this point you should have only 1 wire left that is unmarked and untested. Mark this wire as pin "5". This wire is the remote VFOs "relay" voltage and is only energized when the 520 is placed in transmit. The voltage is approximately 12VDC to 14VDC, again, ONLY when the 520 is energized and switched to transmit.

Pin 3 of the 9 pin remote VFO socket is "ground".

Pin 7 of the 9 pin remote VFO socket is "open", nothing connected.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> I would be most helpful to you if you had a clear schematic...it would take

> sometime to find/trace the wires..but I think it would be easier than trying to
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> explain it. You can find a schematic in the back of the operators manual..or
>you
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> can download it from N6WK 's web site.............good luck
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> 73's joe wb7uqu
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> _____
> From: dingmantom <dingmantom@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, January 26, 2011 11:02:53 AM
> Subject: [TS-520_820_530_830] external vfo plug on ts-520s
>
>
> I hope you can hekp me. I have a 530 with the vfo plug totally removed and find
>
> vary hard to know where each wire goes. radio will not operate
> without connections.. Can you tell me these connection for a start
> tom
>

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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

29508. TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 23:41:12 UTC
From: Jim
Topic: 29508 Message: 29508

I decided it was time to replace the tubes in an old TS-820 I purchased last year. It had been in storage for a number of years and required cleaning and some DeoxIT applied to the switches... It has been working fairly well for several months but always had some jitters in the drive current. I decided after reading the Kenwood service bulletins and knowing nothing about the age or history of the tubes to purchase replacements. They came today and I installed them. Within a few seconds of turning the heater on I saw a flash in the cage and heard a noticeable pop. There is nothing visually obvious to identify but the cathode resistors now read 4 ohms and .7 ohms. So I guess my question is are the tubes the cause or just a coincidence? I did not hit the send switch... just turned on the heater. very strange to me.
Anyone ever have a similar experience?
Jim KD8UT

29509. Re: [TS-520_820_530_830] TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-26 23:56:39 UTC
From: n6wk@n6wk.com
Topic: 29508 Message: 29509

Your new tubes Flashed over. Are they the Chinese ones?
You need to send them back to the seller.

Gordon
N6WK

On 1/26/2011 3:41 PM, Jim wrote:
>
> I decided it was time to replace the tubes in an old TS-820 I
> purchased last year. It had been in storage for a number of years and
> required cleaning and some DeoxIT applied to the switches... It has
> been working fairly well for several months but always had some
> jitters in the drive current. I decided after reading the Kenwood
> service bulletins and knowing nothing about the age or history of the
> tubes to purchase replacements. They came today and I installed them.
> Within a few seconds of turning the heater on I saw a flash in the
> cage and heard a noticeable pop. There is nothing visually obvious to
> identify but the cathode resistors now read 4 ohms and .7 ohms. So I
> guess my question is are the tubes the cause or just a coincidence? I
> did not hit the send switch... just turned on the heater. very strange
> to me.
> Anyone ever have a similar experience?
> Jim KD8UT
>
>

29510. RE: [TS-520_820_530_830] TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 00:00:51 UTC
From: Greg Anders
Topic: 29508 Message: 29510

You probably also need to replace the cathode resistors....
DON'T put higher wattage resistors in to replace them, they also act as fuses as spec'd.

Greg

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n6wk@...
Sent: Wednesday, January 26, 2011 3:57 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820 Final Flash and Pop

Your new tubes Flashed over. Are they the Chinese ones?
You need to send them back to the seller.

Gordon
N6WK

On 1/26/2011 3:41 PM, Jim wrote:
>
> I decided it was time to replace the tubes in an old TS-820 I
> purchased last year. It had been in storage for a number of years and
> required cleaning and some DeoxIT applied to the switches... It has
> been working fairly well for several months but always had some
> jitters in the drive current. I decided after reading the Kenwood
> service bulletins and knowing nothing about the age or history of the
> tubes to purchase replacements. They came today and I installed them.
> Within a few seconds of turning the heater on I saw a flash in the
> cage and heard a noticeable pop. There is nothing visually obvious to
> identify but the cathode resistors now read 4 ohms and .7 ohms. So I
> guess my question is are the tubes the cause or just a coincidence? I
> did not hit the send switch... just turned on the heater. very strange
> to me.
> Anyone ever have a similar experience?
> Jim KD8UT
>
>

Yahoo! Groups Links

29511. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 00:13:11 UTC
From: Jim
Topic: 29508 Message: 29511

Gordon... thanks for the reply. Yes, Chinese made purchased from VacuumTubes.net I left that part of the story out on purpose. I had heard/read that they should be OK... Is this a fairly common issue?
I have an email out to K4EAA, Ken, for one of his resistor kits.
Thanks again,
Jim KD8UT

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Your new tubes Flashed over. Are they the Chinese ones?
> You need to send them back to the seller.
>
> Gordon
> N6WK
>
> On 1/26/2011 3:41 PM, Jim wrote:
> >
> > I decided it was time to replace the tubes in an old TS-820 I
> > purchased last year. It had been in storage for a number of years and
> > required cleaning and some DeoxIT applied to the switches... It has
> > been working fairly well for several months but always had some
> > jitters in the drive current. I decided after reading the Kenwood
> > service bulletins and knowing nothing about the age or history of the
> > tubes to purchase replacements. They came today and I installed them.
> > Within a few seconds of turning the heater on I saw a flash in the
> > cage and heard a noticeable pop. There is nothing visually obvious to
> > identify but the cathode resistors now read 4 ohms and .7 ohms. So I
> > guess my question is are the tubes the cause or just a coincidence? I
> > did not hit the send switch... just turned on the heater. very strange
> > to me.
> > Anyone ever have a similar experience?
> > Jim KD8UT
> >
> >
>

29512. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:07:04 UTC
From: Ken
Topic: 29508 Message: 29512

It seems that several folks are replacing the driver and final tubes "just because" and having problems. Might cause one to consider replacing tubes only when actually needed.

Just my thoughts...

Ken - KB7H

29513. RE: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:14:09 UTC
From: NJ3D - Loren
Topic: 29508 Message: 29513

So I'm new to the Kenwood hybrid, or any tube radio for that matter. So, mine is working perfectly, how do I know when I need new tubes, and how long do they last?

Loren Shirk

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
Sent: Wednesday, January 26, 2011 7:07 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

It seems that several folks are replacing the driver and final tubes "just because" and having problems. Might cause one to consider replacing tubes only when actually needed.

Just my thoughts...

Ken - KB7H

[Non-text portions of this message have been removed]

29514. RE: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:29:04 UTC
From: Troy Craig
Topic: 29508 Message: 29514

In my experiences don't replace the tubes unless performance or diligent trouble shooting demands it.

I have yet to replace a tube and had that fix my problems.

These tubes are pretty robust.

73's

Tcraig

KC9RRV

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of NJ3D - Loren
Sent: Wednesday, January 26, 2011 8:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

So I'm new to the Kenwood hybrid, or any tube radio for that matter. So, mine is working perfectly, how do I know when I need new tubes, and how long do they last?

Loren Shirk

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Ken
Sent: Wednesday, January 26, 2011 7:07 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

It seems that several folks are replacing the driver and final tubes "just because" and having problems. Might cause one to consider replacing tubes only when actually needed.

Just my thoughts...

Ken - KB7H

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29515. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:35:17 UTC
From: Jim
Topic: 29508 Message: 29515

Hi Ken,
I agree... if it ain't broke don't fix it! I have had a problem with grid drive and alc readings being a bit jittery since I received this radio. A 1977 Service Bulletin indicted that this could be caused by a bad 6146. Given my lack of history with the radio I didn't think new tubes could hurt anything and it might correct a problem... I WAS WRONG! It just created more problems. Oh well, that's what makes life interesting. Thanks for your observation. It is probably good advice.
Jim

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <atm_ken_hunter@...> wrote:
>
> It seems that several folks are replacing the driver and final tubes "just because" and having problems. Might cause one to consider replacing tubes only when actually needed.
>
> Just my thoughts...
>
> Ken - KB7H
>

29516. Re: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop CO2KK recommends procedures to save tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:24:35 UTC
From: Prof. Arnaldo Coro Antich
Topic: 29508 Message: 29516

Hi amigos !

My long time experience with broadcast equipment that used vacuum tubes led to the following
procedures to be adopted:
NEVER change a tube before the parameters have not changed below the 75 to 80 percent mark !

Keep the filament contacts clean (bad filament contacts may lead to low output and even
be the cause of a short tube life)

Handle glass tubes very carefully... don't remove them from the sockets when they are still hot !

Avoid excessive handling of the tubes when they are removed for purposes such as cleaning the
transmitter, checking the state of the sockets .

Measure the filament voltage right at the tubes pins of connectors, and be sure that it is within
the allowed tolerances

In the case of tetrodes and pentodes power tubes, it is extremely important to check the screen
grid voltages and also the state of the bypass capacitors connected to those tube electrodes

Periodically check the overload protection circuits for the plate current , and also for the
screen current in tetrodes and pentodes.

If a tube produces an instantaneous flashover , remove it from service ASAP, and don't use
it again. A tube flashing between screen and plate, for example, can cause a lot of damage if
the short circuit created by the flashover results in permanent short circuit paths !

Keep a record of the dates when the tubes are installed, and if possible, keep also a record
of the number of hours that it is in service.

In general it is NOT a good idea to keep power tubes with just filament voltage applied for
long periods of time... If you have to keep a transmitter in standby

mode, keep at least
a third of the total high voltage applied to the plate, and keep the
screen at ground potential.

Monitoring the filament voltage, and if possible regulating it to plus
or minus 5 percent
is extremely important to prolong the life of high power tubes !

Maybe some other list participants will add some more recommendations to
optimize
the care of the wonderful electronic devices that we know as vacuum
tubes in the Americas
and valves in Europe !!!

73 and DX
Arnie Coro
CO2KK
On 01/26/2011 08:07 PM, Ken wrote:
>
> It seems that several folks are replacing the driver and final tubes
> "just because" and having problems. Might cause one to consider
> replacing tubes only when actually needed.
>
> Just my thoughts...
>
> Ken - KB7H
>
>

[Non-text portions of this message have been removed]

29517. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 01:58:34 UTC
From: Bob
Topic: 29508 Message: 29517

Loren
Welcome to the group. I have had the original tubes in a Kenwood T599 last until just this last year. So that was close to 35 years? They went south only because a rubber belt split and the tune and load was not tuning and loading so the the transmitter was not correctly tuned for the band change that took place. If the rubber belt had not broken I am sure the tubes would still be in there working to this day. So It all depends on the operation set up. Desk layout, cooling space of the equipment and of course the tuning of the equipment running it into a resonant antenna. Keying the radio only when it it connected to an antenna and so on. If it isn't broken leave it alone and enjoy it.
Bob
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@...> wrote:
>
> So I'm new to the Kenwood hybrid, or any tube radio for that matter. So,
> mine is working perfectly, how do I know when I need new tubes, and how long
> do they last?
>
>
>
> Loren Shirk
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
> Sent: Wednesday, January 26, 2011 7:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop
>
>
>
>
>
> It seems that several folks are replacing the driver and final tubes "just
> because" and having problems. Might cause one to consider replacing tubes
> only when actually needed.
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> Just my thoughts...
>
> Ken - KB7H
>
>
>
>

>
> [Non-text portions of this message have been removed]
>

29518. Re: [TS-520_820_530_830] TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 02:31:28 UTC
From: Joseph Stiles
Topic: 29508 Message: 29518

Jim,

If I remember right the "cathode" resistors on the 820(S) are 10 ohms each...and in parallel ...so they should measure about 5 ohms to ground...and not more than about 5.7 ohms. As Greg stated...DO NOT use higher wattage resistors! I use metal film replacements. The screens are 100 ohms each.. check those also. REMEMBER..if plan on working in that area make sure ALL the high voltage is gone...or you might end up as an SK... good luck

73's joe wb7uqu

From: Greg Anders <greg.anders@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, January 26, 2011 4:00:51 PM
Subject: RE: [TS-520_820_530_830] TS-820 Final Flash and Pop

You probably also need to replace the cathode resistors....
DON'T put higher wattage resistors in to replace them, they also act as fuses as spec'd.

Greg

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n6wk@...
Sent: Wednesday, January 26, 2011 3:57 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-820 Final Flash and Pop

Your new tubes Flashed over. Are they the Chinese ones?
You need to send them back to the seller.

Gordon
N6WK

On 1/26/2011 3:41 PM, Jim wrote:
>
> I decided it was time to replace the tubes in an old TS-820 I
> purchased last year. It had been in storage for a number of years and
> required cleaning and some DeoxIT applied to the switches... It has
> been working fairly well for several months but always had some
> jitters in the drive current. I decided after reading the Kenwood
> service bulletins and knowing nothing about the age or history of the
> tubes to purchase replacements. They came today and I installed them.
> Within a few seconds of turning the heater on I saw a flash in the
> cage and heard a noticeable pop. There is nothing visually obvious to

> identify but the cathode resistors now read 4 ohms and .7 ohms. So I
> guess my question is are the tubes the cause or just a coincidence? I
> did not hit the send switch... just turned on the heater. very strange
> to me.
> Anyone ever have a similar experience?
> Jim KD8UT
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

29519. Re: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 02:40:52 UTC
From: Joseph Stiles
Topic: 29508 Message: 29519

Loren,

Welcome to the group. As Bob stated, origninal tubes can and do last a long time. I have an 820S with the original S2001's...still going strong. Keep your "tune-up time" short. Take a look at K4EAA's web site..some good stuff if you are new/newer to "tube" type finals. A good thing to watch is..after your all tuned up...key down..and see if the Ip (plate current) goes up...then starts to drop..usually a sign that the finals are getting tired. Make sure meter switch is set to "IP" Usually testing these types of tubes in a tube tester is unreliable..unless it can test them for RF output. I have seen tubes that test good in the tester...but hardly worked in actual use. Good luck......

73's joe wb7uqu

From: Bob <bmusser4@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, January 26, 2011 5:58:34 PM
Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop

Loren
Welcome to the group. I have had the original tubes in a Kenwood T599 last until just this last year. So that was close to 35 years? They went south only because a rubber belt split and the tune and load was not tuning and loading so the the transmitter was not correctly tuned for the band change that took place. If the rubber belt had not broken I am sure the tubes would still be in there working to this day. So It all depends on the operation set up. Desk layout, cooling space of the equipment and of course the tuning of the equipment running it into a resonant antenna. Keying the radio only when it it connected to an antenna and so on. If it isn't broken leave it alone and enjoy it.

Bob
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@...> wrote:
>
> So I'm new to the Kenwood hybrid, or any tube radio for that matter. So,
> mine is working perfectly, how do I know when I need new tubes, and how long
> do they last?
>
>
>
> Loren Shirk
>
>
>

> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
> Sent: Wednesday, January 26, 2011 7:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop
>
>
>
>
>
> It seems that several folks are replacing the driver and final tubes "just
> because" and having problems. Might cause one to consider replacing tubes
> only when actually needed.
>
> Just my thoughts...
>
> Ken - KB7H
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

29520. Kenwood filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 02:48:15 UTC
From: Peter Carter
Topic: 29520 Message: 29520

I have a quick filter question....

I have a TS-820S with a YG-88C CW filter and want to know if I can use it in my TS-830S.

Thanks

29521. Re: tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 03:59:42 UTC
From: james27613
Topic: 29491 Message: 29521

hi Greg,

Perhaps they are going by the tube specs to make that conclusion?
I prefer to use a US made tube over a China import give the
trouble they have caused members of this group due to defects.

http://www.nj7p.org/Tube4.php?tube=6146

http://www.nj7p.org/Tube4.php?tube=6146b

http://www.nj7p.org/Tube4.php?tube=6146w

I use the 6146W circa 1985 GE JAN in my 520 and 530.

73 james ke4drn

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> I called RF Parts several months ago and spoke to them about 6146W's. They told me the Phillips/ECG are OK in Kenwoods, the GS 6146W isn't.
> Also, their Taylor 6146B's are "screened and tested" Chinese 6146B's.
>
> FYI,
>
> Greg
> KG6YV

29522. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 04:12:10 UTC
From: james27613
Topic: 29508 Message: 29522

hi Greg,

I also thought the cathode resistors were for fusing from reading about them on K4EAA website http://www.k4eaa.com/supersize.htm

Turns out the resistors are bypassed for RF, and are used for metering the cathode current. They have no other function.

There is a long discussion about the cathode resistors on Eham.net

http://www.eham.net/ehamforum/smf/index.php/topic,44291.0.html

73 james ke4drn

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> You probably also need to replace the cathode resistors....
> DON'T put higher wattage resistors in to replace them, they also act as fuses as spec'd.
>
> Greg

29523. 6883B (12 volt filament conversion)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 15:48:06 UTC
From: wagstw46
Topic: 29523 Message: 29523

With the recent finals discussion it reminded me that I have couple of NOS sets of 6883B finals. I have looked at the TS-830s schematic and it looks like a very easy mod for 12 volt filament operations.

My question: Is there any need to change or add any additional bypass capacitors?

I am currently running a pair of 6146Ws purchased from RF Parts and no real operational issues to warrant the mod. At my age with proper operation probably last another 30 years. I guess I just need a winter project and hate to let the 6883s end up in my SK estate sale!

Thanks
Terry-K9TW

29524. Re: 6883B (12 volt filament conversion)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 16:09:17 UTC
From: Bob
Topic: 29523 Message: 29524

Terry

The 6883 B is a 12 volt replacement for the 6146 in a final application. But what really would be fun is to use them to build a class B Modulator for use on AM. They would be great to drive a modulation transformer. There just are not enough on 3870 operating AM.
Bob
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> With the recent finals discussion it reminded me that I have couple of NOS sets of 6883B finals. I have looked at the TS-830s schematic and it looks like a very easy mod for 12 volt filament operations.
>
> My question: Is there any need to change or add any additional bypass capacitors?
>
> I am currently running a pair of 6146Ws purchased from RF Parts and no real operational issues to warrant the mod. At my age with proper operation probably last another 30 years. I guess I just need a winter project and hate to let the 6883s end up in my SK estate sale!
>
> Thanks
> Terry-K9TW
>

29525. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 16:29:22 UTC
From: Joe McGerald
Topic: 29508 Message: 29525

Nope - different filters.

73.

Joe

AF6NI

[Non-text portions of this message have been removed]

29526. Re: [TS-520_820_530_830] Re: 6883B (12 volt filament conversion)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 16:58:32 UTC
From: Terry Wagoner
Topic: 29523 Message: 29526

Bob- I ran AM years ago as teenager with DX-100 and later with Apache until I could afford SB-10 adapter. Today the modulation transformers would be the bigger expense and at my current QTH no room for dipole on 80. I guess I could put up random wire and use a tuner. Something to think about.
Terry

From: Bob <bmusser4@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, January 27, 2011 11:09:17 AM
Subject: [TS-520_820_530_830] Re: 6883B (12 volt filament conversion)

Terry

The 6883 B is a 12 volt replacement for the 6146 in a final application. But what really would be fun is to use them to build a class B Modulator for use on AM. They would be great to drive a modulation transformer. There just are not enough on 3870 operating AM.

Bob
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> With the recent finals discussion it reminded me that I have couple of NOS sets
>of 6883B finals. I have looked at the TS-830s schematic and it looks like a very
>easy mod for 12 volt filament operations.
>
>
> My question: Is there any need to change or add any additional bypass
>capacitors?
>
>
> I am currently running a pair of 6146Ws purchased from RF Parts and no real
>operational issues to warrant the mod. At my age with proper operation probably
>last another 30 years. I guess I just need a winter project and hate to let the
>6883s end up in my SK estate sale!
>
> Thanks
> Terry-K9TW
>

[Non-text portions of this message have been removed]

29527. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 17:38:17 UTC
From: PGA
Topic: 29508 Message: 29527

If it works, never mind.
I never, never understand some people that change everything because some other fellow who has even less experience, says so, be it tubes, condensers and more. It is very normal that a 30-40 year old set has some issues, mostly bad contacts in connectors, switches, relays and print boards.

DON'T FIX IT WHEN IT IS NOT BROKEN.

My experience in 50 years of hamming and repairing: Most problems occur when good sets are mishandled by people who don't know how things work in the first place.
That kind of sets are landing all the time on my workbench with all kinds of obscure man-made problems AND I AM TIRED OF IT.

My 2 cts.

73 ;) Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@...> wrote:
>
> So I'm new to the Kenwood hybrid, or any tube radio for that matter. So,
> mine is working perfectly, how do I know when I need new tubes, and how long
> do they last?
>
>
>
> Loren Shirk
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
> Sent: Wednesday, January 26, 2011 7:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop
>
>
>
>
>
> It seems that several folks are replacing the driver and final tubes "just
> because" and having problems. Might cause one to consider replacing tubes
> only when actually needed.
>
> Just my thoughts...
>
> Ken - KB7H

>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29528. New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 20:02:05 UTC
From: kd8hmo
Topic: 29528 Message: 29528

Just posted some pics of my freebie, basket-case TS-530S. I cant beleive that someone would let this radio deteriorate like this. I remember back in the late 70's when I was a kid, I used to drool over the ads for these radios...

29529. Re: New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 20:56:32 UTC
From: w5rkl
Topic: 29528 Message: 29529

Is it possible that 530 was in a flood? If that is the case the owner would have no control over the 530s current condition.

Just a thought.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Just posted some pics of my freebie, basket-case TS-530S. I cant beleive that someone would let this radio deteriorate like this. I remember back in the late 70's when I was a kid, I used to drool over the ads for these radios...
>

29530. Re: New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 21:25:02 UTC
From: PGA
Topic: 29528 Message: 29530

Take haert OM, I have seen them far worse, and after some elbow grease and replacing some components you can not believe it is the same set.
I find it even more rewarding to fix such a set, than buying new.....

You are right: I was in the seventies yust as you drooling when I saw ads of the fine pieces of equipment, that were way out of reach.
That is why I love this older sets now, and the fine thing is that it now will not cost you an arm or a leg to have them.

Good luck with the resurrection of your basket case.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Just posted some pics of my freebie, basket-case TS-530S. I cant beleive that someone would let this radio deteriorate like this. I remember back in the late 70's when I was a kid, I used to drool over the ads for these radios...
>

29531. leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 21:48:01 UTC
From: Loren
Topic: 29531 Message: 29531

hey guys,

I'm in the shack all day, and want to be able to pickup and talk when I feel like it... so I have not been turning off the heater unless I'm leaving for an extended period of time. Is this a problem?

Loren, NJ3D

29532. Re: [TS-520_820_530_830] Re: New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 22:35:02 UTC
From: David Rust
Topic: 29528 Message: 29532

PGA, I'm glad you were able to save the old Kenwood.

I remember in my younger days of Ham Radio I would get a catalog from Longs Electronics, a folded paper catalog with maybe 50 pages, featuring the 520s 820s 530s and 830s on the front page. I always told myself I hoped someday I could afford at least the 520s. You know what.....I'm still thinking that same thing and that was in about the 1970s.

73 Dave W0DLR

[Non-text portions of this message have been removed]

29533. Re: [TS-520_820_530_830] New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 22:41:13 UTC
From: Charlie , W5COV
Topic: 29528 Message: 29533

A little elbow grease will help make a world of difference in cosmetic appearance .

Some careful time spent cleaning the inside will resolve some of the issues . But it really does need to be a very thorough cleaning with the proper electronic cleaners and lubricants , as well as proper chemicals or pads etc. Don't take any shortcuts .

It looks much better than many rigs that I have brought back to life . Just a lot of time and patience .

Take a LOT of photos BEFORE you begin . They can be extremely useful , even if you have a lot of experience and especially if you are not extremely well versed in servicing to a component level this particular model , a TS-530S .

If you know you are at a point that you are getting in over your head , STOP and post to the list here . There are people that know these radios both inside and out , even without looking in the manual .

Keep us posted on your progress and a picture update in your step by step approach could prove useful to someone in the future .

Best wishes on your endeavor .

Charlie , W5COV

[Non-text portions of this message have been removed]

29534. DS-1A DC cable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-27 23:52:07 UTC
From: D
Topic: 29534 Message: 29534

I've got a DS-1A on my TS-520S, but I have no DC power cable to use with it. No problem, I'll go over to Mouser to grab a new plug and make one.
BUT I can't find the part # for the plug in my 520 manual or the DS manual. Anyone have that handy?
Thanks,
Dave
kd0fqx

29535. Re: [TS-520_820_530_830] DS-1A DC cable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 00:00:45 UTC
From: Ruben Echevarria KA2HHB
Topic: 29534 Message: 29535

Contact N6WK Gordon, he'll probably be able to help you with that ... http://www.n6wk.com/
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: D
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 27, 2011 6:52 PM
Subject: [TS-520_820_530_830] DS-1A DC cable

I've got a DS-1A on my TS-520S, but I have no DC power cable to use with it. No problem, I'll go over to Mouser to grab a new plug and make one.
BUT I can't find the part # for the plug in my 520 manual or the DS manual. Anyone have that handy?
Thanks,
Dave
kd0fqx

[Non-text portions of this message have been removed]

29536. Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 02:37:54 UTC
From: w5rkl
Topic: 29531 Message: 29536

Hi Loren,

No it's not a problem. You can turn main power OFF but leave the Heater switch ON. Now don't be confused into believing that if main power is OFF but the Heater switch is ON means the driver and both final tube filaments are still ON because that's not true. The main power switch control the AC power applied to the radio. The Heater switch simply controls the driver and both final tubes filament voltage from the 12VAC secondary filament winding on the power transformer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Loren" <nj3d@...> wrote:
>
> hey guys,
>
> I'm in the shack all day, and want to be able to pickup and talk when I feel like it... so I have not been turning off the heater unless I'm leaving for an extended period of time. Is this a problem?
>
> Loren, NJ3D
>

29537. Re: [TS-520_820_530_830] Re: New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 03:38:06 UTC
From: Joseph Stiles
Topic: 29528 Message: 29537

kd8hmo,

actually it doesn't really look that bad..but the plate choke looks to have
been severely overheated. Good luck and keep us posted.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, January 27, 2011 12:56:32 PM
Subject: [TS-520_820_530_830] Re: New Photo Album

Is it possible that 530 was in a flood? If that is the case the owner would have
no control over the 530s current condition.

Just a thought.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Just posted some pics of my freebie, basket-case TS-530S. I cant beleive that
>someone would let this radio deteriorate like this. I remember back in the late
>70's when I was a kid, I used to drool over the ads for these radios...
>

[Non-text portions of this message have been removed]

29538. RE: [TS-520_820_530_830] Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 04:47:43 UTC
From: NJ3D - Loren
Topic: 29531 Message: 29538

That I understand. is it bad for the transmit section to leave the heater switch on with the main power on all day?

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Thursday, January 27, 2011 8:38 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: leaving the tube heater on

Hi Loren,

No it's not a problem. You can turn main power OFF but leave the Heater switch ON. Now don't be confused into believing that if main power is OFF but the Heater switch is ON means the driver and both final tube filaments are still ON because that's not true. The main power switch control the AC power applied to the radio. The Heater switch simply controls the driver and both final tubes filament voltage from the 12VAC secondary filament winding on the power transformer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@...> wrote:
>
> hey guys,
>
> I'm in the shack all day, and want to be able to pickup and talk when I feel like it... so I have not been turning off the heater unless I'm leaving for an extended period of time. Is this a problem?
>
> Loren, NJ3D
>

[Non-text portions of this message have been removed]

29539. Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 12:44:29 UTC
From: w5rkl
Topic: 29531 Message: 29539

No.

Why would you think leaving the heater switch turned on would be a problem?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@...> wrote:
>
> That I understand. is it bad for the transmit section to leave the heater
> switch on with the main power on all day?
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
> Sent: Thursday, January 27, 2011 8:38 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: leaving the tube heater on
>
>
>
>
>
> Hi Loren,
>
> No it's not a problem. You can turn main power OFF but leave the Heater
> switch ON. Now don't be confused into believing that if main power is OFF
> but the Heater switch is ON means the driver and both final tube filaments
> are still ON because that's not true. The main power switch control the AC
> power applied to the radio. The Heater switch simply controls the driver and
> both final tubes filament voltage from the 12VAC secondary filament winding
> on the power transformer.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@> wrote:
> >
> > hey guys,
> >
> > I'm in the shack all day, and want to be able to pickup and talk when I
> feel like it... so I have not been turning off the heater unless I'm leaving

> for an extended period of time. Is this a problem?
> >
> > Loren, NJ3D
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29540. Re: New Photo Album

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 14:00:06 UTC
From: w5rkl
Topic: 29528 Message: 29540

The final amplifier plate choke can be rewound with new enamel wire. I don't recall what the wire gauge is.

If you do not feel like rewinding the choke you might be able to find a replacement from Bob Mansker KE5FTF. Bob has a big collection of TS-520 to TS-830 rigs. Drop him an e-mail at ke5ftf at mail.com. He also may have other parts you may need. Make sure you tell him the RF choke is the single layer choke, same as the one in your radio. Send him a picture of the choke.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> kd8hmo,
>
> actually it doesn't really look that bad..but the plate choke looks to have
> been severely overheated. Good luck and keep us posted.
>
> 73's joe wb7uqu
>
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, January 27, 2011 12:56:32 PM
> Subject: [TS-520_820_530_830] Re: New Photo Album
>
>
>
> Is it possible that 530 was in a flood? If that is the case the owner would have
> no control over the 530s current condition.
>
> Just a thought.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@> wrote:
> >
> > Just posted some pics of my freebie, basket-case TS-530S. I cant beleive that
> >someone would let this radio deteriorate like this. I remember back in the late

> >70's when I was a kid, I used to drool over the ads for these radios...
> >
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29541. Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 14:05:58 UTC
From: w5rkl
Topic: 29531 Message: 29541

One additional comment.

In receive the transmit circuits that are not associated with receive, are biased to cut off (turned OFF), even the driver and both final tubes. In receive the driver and both final tubes do not conduct, only the filaments are glowing/lit, no current flowing in the tubes.

There are a few "common" circuits, circuits that work in both transmit and receive such as the VFO, carrier generator oscillator, IF stages, and power supplies. Those circuits will remain on but none of them are not controlled by the Heater switch. As I said earlier the only thing the heater switch controls is the driver and both final tubes filament voltage, nothing more.

I would not recommend leaving the radio on 24/7 365 days a year but letting it be powered on and sit idling during the day while you do other things will not harm the radio.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> No.
>
> Why would you think leaving the heater switch turned on would be a problem?
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@> wrote:
> >
> > That I understand. is it bad for the transmit section to leave the heater
> > switch on with the main power on all day?
> >
> >
> >
> > From: TS-520_820_530_830@yahoogroups.com
> > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
> > Sent: Thursday, January 27, 2011 8:38 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: leaving the tube heater on
> >
> >
> >
> >

> >
> > Hi Loren,
> >
> > No it's not a problem. You can turn main power OFF but leave the Heater
> > switch ON. Now don't be confused into believing that if main power is OFF
> > but the Heater switch is ON means the driver and both final tube filaments
> > are still ON because that's not true. The main power switch control the AC
> > power applied to the radio. The Heater switch simply controls the driver and
> > both final tubes filament voltage from the 12VAC secondary filament winding
> > on the power transformer.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@> wrote:
> > >
> > > hey guys,
> > >
> > > I'm in the shack all day, and want to be able to pickup and talk when I
> > > feel like it... so I have not been turning off the heater unless I'm leaving
> > > for an extended period of time. Is this a problem?
> > >
> > > Loren, NJ3D
> > >
> >
> >
> >
> >
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> >
> > [Non-text portions of this message have been removed]
> >
>

29542. Re: [TS-520_820_530_830] Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 11:33:56 UTC
From: W8HW
Topic: 29531 Message: 29542

When I first got into the two way radio repair business in 1971, a lot of customer base stations still used 6146 tubes. The base stations were on 24-7-52. It will cost you electricity as filaments are not cheep, but the tubes will take it, they lasted for years. Filament life was never an issue. What is hard on filaments are turning 0n then Off a lot (the surge). Bottom line, any choice you make is okay, both methods have their own advantages. You will notice more heat in the shack.

-- Buy and/or Repair Broke (or not broke) 2-way radios --

Commercial 2-way-Marine-Ham-CB-Broadcast

w8hw@...

http://www.qrz.com/callsign/W8HW

----- Original Message -----
From: NJ3D - Loren
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, January 27, 2011 11:47 PM
Subject: RE: [TS-520_820_530_830] Re: leaving the tube heater on

That I understand. is it bad for the transmit section to leave the heater switch on with the main power on all day?

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Thursday, January 27, 2011 8:38 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: leaving the tube heater on

Hi Loren,

No it's not a problem. You can turn main power OFF but leave the Heater switch ON. Now don't be confused into believing that if main power is OFF but the Heater switch is ON means the driver and both final tube filaments are still ON because that's not true. The main power switch control the AC power applied to the radio. The Heater switch simply controls the driver and both final tubes filament voltage from the 12VAC secondary filament winding on the power transformer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@...> wrote:
>
> hey guys,

>
> I'm in the shack all day, and want to be able to pickup and talk when I feel like it... so I have not been turning off the heater unless I'm leaving for an extended period of time. Is this a problem?
>
> Loren, NJ3D
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29543. Re: [TS-520_820_530_830] Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 19:40:21 UTC
From: Leslie Smith
Topic: 29531 Message: 29543

Hello Group,
In the mid 70's I subscribed to the magazine "Ham Radio". The editor, Jim Fisk, wrote of a set he had that had been running since the end of WWII (as I recall). He made two points. (1) He never turned the filaments off, because the real damage to a set occurred from metal to glass expansion as the two materials heated/cooled. With sets that were always on the heating and cooling cycle was reduced, giving longer life. (2) He fitted a switch to turn the B+ supply off - reducing stress on HV capacitors.

In my memory the set (his set) had been running in that state for 25+ years.

Les

----- Original Message -----
From: "w5rkl"
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: leaving the tube heater on
Date: Fri, 28 Jan 2011 14:05:58 -0000

One additional comment.

In receive the transmit circuits that are not associated with receive, are biased to cut off (turned OFF), even the driver and both final tubes. In receive the driver and both final tubes do not conduct, only the filaments are glowing/lit, no current flowing in the tubes.

There are a few "common" circuits, circuits that work in both transmit and receive such as the VFO, carrier generator oscillator, IF stages, and power supplies. Those circuits will remain on but none of them are not controlled by the Heater switch. As I said earlier the only thing the heater switch controls is the driver and both final tubes filament voltage, nothing more.

I would not recommend leaving the radio on 24/7 365 days a year but letting it be powered on and sit idling during the day while you do other things will not harm the radio.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> No.

>
> Why would you think leaving the heater switch turned on would be a
problem?
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@>
wrote:
> >
> > That I understand. is it bad for the transmit section to leave
the heater
> > switch on with the main power on all day?
> >
> >
> >
> > From: TS-520_820_530_830@yahoogroups.com
> > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
> > Sent: Thursday, January 27, 2011 8:38 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: leaving the tube heater on
> >
> >
> >
> >
> >
> > Hi Loren,
> >
> > No it's not a problem. You can turn main power OFF but leave the
Heater
> > switch ON. Now don't be confused into believing that if main
power is OFF
> > but the Heater switch is ON means the driver and both final tube
filaments
> > are still ON because that's not true. The main power switch
control the AC
> > power applied to the radio. The Heater switch simply controls the
driver and
> > both final tubes filament voltage from the 12VAC secondary
filament winding
> > on the power transformer.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@>
wrote:

> > >
> > > hey guys,
> > >
> > > I'm in the shack all day, and want to be able to pickup and
talk when I
> > feel like it... so I have not been turning off the heater unless
I'm leaving
> > for an extended period of time. Is this a problem?
> > >
> > > Loren, NJ3D
> > >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

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_____
Surf the Web in a faster, safer and easier way:
Download Opera 9 at http://www.opera.com

[Non-text portions of this message have been removed]

29544. Re: TS-820 Final Flash and Pop

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 20:03:41 UTC
From: jon_g4fut
Topic: 29508 Message: 29544

Hi Loren,
Welcome. I have had the same tubes on my TS530sp and TS830s since 1982...they will last a very long time as long as you tune the PA correctly and dont drive them at the limit every time. I seldom run more than 80watts.
Jon G4FUT
--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren" <nj3d@...> wrote:
>
> So I'm new to the Kenwood hybrid, or any tube radio for that matter. So,
> mine is working perfectly, how do I know when I need new tubes, and how long
> do they last?
>
>
>
> Loren Shirk
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
> Sent: Wednesday, January 26, 2011 7:07 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-820 Final Flash and Pop
>
>
>
>
>
> It seems that several folks are replacing the driver and final tubes "just
> because" and having problems. Might cause one to consider replacing tubes
> only when actually needed.
>
> Just my thoughts...
>
> Ken - KB7H
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29545. 6146 Tubes For Sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 20:52:50 UTC
From: kd8hmo
Topic: 29545 Message: 29545

I have three 6146 tubes for sale if anyone needs some. My friend at Fair Radio Sales tested them for me the other day, and they all tested very strong on their good tester. If someone wants them, just shoot me an e-mail or Yahoo pm.

29546. Re: [TS-520_820_530_830] Kenwood filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-28 21:34:35 UTC
From: Pedro Carlos Pocciotti
Topic: 29520 Message: 29546

Dear Peter,

The YG(Golf)-88C does not match for the TS-830S, only in the TS-820S.
For your TS-830S use the YK(Kilo)-88C - 500 Hz.

Please look this link:

http://www.dl2au.de/html/kenwood_filter.html

73's Pedro (as Peter, hi)
PY2HH

==========

On Thu, Jan 27, 2011 at 12:48 AM, Peter Carter <ve3pcd@...> wrote:

>
>
> I have a quick filter question....
>
> I have a TS-820S with a YG-88C CW filter and want to know if I can use it
> in my TS-830S.
>
> Thanks
>
>
>

--
PY2HH - Pedro Carlos Pocciotti
Ex: PY4ACB, PY4HH, PT2AC e PY2OK

[Non-text portions of this message have been removed]

29547. Re: [TS-520_820_530_830] Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 01:47:48 UTC
From: tony
Topic: 29531 Message: 29547

hello Les, I think your correct on that .

Anthony ve4akf

29548. Re: Kenwood filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 15:44:15 UTC
From: w5rkl
Topic: 29520 Message: 29548

The TS-820 and TS-830 have the same "8.83Mhz" IF frequency. Whether an 820 8.83Mhz filter will "physically" fit and install in the 830s 8.83Mhz slot, I don't know. The same goes for the 8.83Mhz 820 CW filter.

The TS-830 is a 'dual conversion' transceiver where as the TS-820 is a 'single conversion' transceiver. What does that mean? It means the TS-830 has "2" sideband filters, one at 8.83Mhz and the other at 455Khz. The same goes for CW, one for 8.83Mhz and the other for 455Khz. When changing filters in the TS-830 it is wise to change both the 8.83Mhz AND the 455Khz filters so they match in bandwidth.

Personally, even if the 820 filters fit in the 830, I wouldn't do that. If you have a TS-830 and it is lacking a CW filter, my advice is to purchase the 2 CW filters, 8.83Mhz and 455Khz, for the 830 and not mess around with mixing different filter bandwidths etc.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Pedro Carlos Pocciotti <py2hh.pedro@...> wrote:
>
> Dear Peter,
>
>
> The YG(Golf)-88C does not match for the TS-830S, only in the TS-820S.
> For your TS-830S use the YK(Kilo)-88C - 500 Hz.
>
> Please look this link:
>
> http://www.dl2au.de/html/kenwood_filter.html
>
> 73's Pedro (as Peter, hi)
> PY2HH
>
> ==
>
>
> On Thu, Jan 27, 2011 at 12:48 AM, Peter Carter <ve3pcd@...> wrote:
>
> > >
> > >
> > > I have a quick filter question....
> > >
> > > I have a TS-820S with a YG-88C CW filter and want to know if I can use it
> > > in my TS-830S.
> > >
> > > Thanks

> >
> >
> >
>
>
>
> --
> PY2HH - Pedro Carlos Pocciotti
> Ex: PY4ACB, PY4HH, PT2AC e PY2OK
>
>
> [Non-text portions of this message have been removed]
>

29549. RE: [TS-520_820_530_830] Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 16:21:59 UTC
From: NJ3D - Loren Shirk
Topic: 29531 Message: 29549

Thanks for all the feedback. I'm new to tubes and appreciate the help. I'm a computer guy by trade, and have machines that have been running years and only are cycled for updates. I've always preferred to leave electronics on.

Thanks for the help!

One additional comment.

In receive the transmit circuits that are not associated with receive, are biased to cut off (turned OFF), even the driver and both final tubes. In receive the driver and both final tubes do not conduct, only the filaments are glowing/lit, no current flowing in the tubes.

There are a few "common" circuits, circuits that work in both transmit and receive such as the VFO, carrier generator oscillator, IF stages, and power supplies. Those circuits will remain on but none of them are not controlled by the Heater switch. As I said earlier the only thing the heater switch controls is the driver and both final tubes filament voltage, nothing more.

I would not recommend leaving the radio on 24/7 365 days a year but letting it be powered on and sit idling during the day while you do other things will not harm the radio.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "w5rkl" <w5rkl@...> wrote:
>
> No.
>
> Why would you think leaving the heater switch turned on would be a problem?
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "NJ3D - Loren" <nj3d@> wrote:
> >
> > That I understand. is it bad for the transmit section to leave the heater
> > switch on with the main power on all day?
> >

> >
> >
> > From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of w5rkl
> > Sent: Thursday, January 27, 2011 8:38 PM
> > To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: leaving the tube heater on
> >
> >
> >
> >
> >
> > Hi Loren,
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> > No it's not a problem. You can turn main power OFF but leave the Heater
> > switch ON. Now don't be confused into believing that if main power is
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> > but the Heater switch is ON means the driver and both final tube
filaments
> > are still ON because that's not true. The main power switch control the
AC
> > power applied to the radio. The Heater switch simply controls the driver
and
> > both final tubes filament voltage from the 12VAC secondary filament
winding
> > on the power transformer.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@> wrote:
> > >
> > > hey guys,
> > >
> > > I'm in the shack all day, and want to be able to pickup and talk when
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> > feel like it... so I have not been turning off the heater unless I'm
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> > for an extended period of time. Is this a problem?
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> > > Loren, NJ3D
> > >
> >
> >

> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

29550. TS-530S display flickers with bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 14:23:02 UTC
From: Philip Hahn
Topic: 29550 Message: 29550

My TS-530S's digital display flickers on/off with the bandswitch rotation. At some positions the display is dead, at others it comes back on. Sometimes at a single band position, if the switch is wiggled a little, it will flicker and come back on.

Any ideas where I should begin my search?

thank you,

philip hahn, KI4VUP

29551. Ts 820s needs help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 16:16:50 UTC
From: wynger99
Topic: 29551 Message: 29551

Hello to the group
I am a new poster to this group, but have been following this site for quite some time. I have learned many things from this group, and I thank you all.

I have a ts820s that needs to be saved. I have surveyed the unit repeatedly to find changes that may have been made over the years.

The findings I can see are the digital display and 5 volt power board have been removed.

The DC to DC converter has been removed.

Everything else looks very normal. The radio powered up and only heard white noise.
I then found both relays and the contacts looked very good almost new but the base terminals were grungy. I cleaned all the terminals and sockets with deox. Also cleaned the contacts inside.

Now the radio receives only strong stations with 80 mtrs being the best and deteriating on all other bands.

S meter only reads abt 3 on signals showing 10 to 20 over 9 on my ts440s.

The marker system works although not registering on s meter.
WWV I don't hear
I did some basic voltage checks the 3.3 volt is Ok at points that it should be. 9 volt also is good.
However I have a problem with the 14 volt line it only shows 12.5 volts. The 4 diodes all look visibly to be intact, no cracks but at the output it is only 12.5 vts.

So that is the current situation and I am hoping to learn more about these great radios.
Any ideas to further investigate would be appreciated.
Thanks to all. Dale WN0WWY

29552. Re: [TS-520_820_530_830] TS-530S display flickers with bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 17:03:40 UTC
From: Joseph Stiles
Topic: 29550 Message: 29552

Phil,

More than likely the "wafer switch" contacts/wipers are dirty...try some DE-OXIT. Make sure also that the bandswitch coupler is not partly broken/loose. This is in the final cage area and connected to the end of the bandswitch. There are 4 small allen screws to hold it in position...very common to have one or more of the set screws crack the plastic coupler. Just make sure..if you go into the final area to make sure ALL THE VOLTAGE IS GONE..there's a lot of HV in there. Rotate the bandswitch back and forth and watch the coupler. It is usually obvious if there is/are cracks around the screws..use lots of light..you might also see the cracks... good luck

73's joe wb7uqu

From: Philip Hahn <ki4vup@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 29, 2011 6:23:02 AM
Subject: [TS-520_820_530_830] TS-530S display flickers with bandswitch

My TS-530S's digital display flickers on/off with the bandswitch rotation. At some positions the display is dead, at others it comes back on. Sometimes at a single band position, if the switch is wiggled a little, it will flicker and come back on.

Any ideas where I should begin my search?

thank you,

philip hahn, KI4VUP

[Non-text portions of this message have been removed]

29553. Re: Ts 820s needs help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 18:44:01 UTC
From: roberteleazer@rocketmail.com
Topic: 29551 Message: 29553

Dale:

12.5 VDC on the 14 VDC line is not a problem. My TS-820 is that way and I even blew out some of the rectifier diodes in the process of trying to figure out why the voltage was "low." Replacing the diodes just brought it back up to 12.5 V.

The most likely problem with the receive section is a poor alignment. You should align the carrier frequencies (especially of the received SSB signals sound unintelligable or even just not quite right) and then peak the coil pack for each band. There are three sections of the coil pack for each band.

It is better to use a signal generator as an input to peak the coil pack but it can be done using the built in calibrator. You must exercise great care in tuning the coil cores. For adjusting the smallest cores do the following:

Take a 3/16 in wooden dowel and file the end down so it is pointed like a chisel, flat on two sides. Then cut each side of the chisel point off so it is only just wide enough to fit the smallest coil forms. Then cut the very tip down so it is a bit blunt.

You can file the other end of the dowel down to a chisel point too and then cut the very tip off. It will be useful for the larger coil cores.

Then, preferably, dip the whole thing in a varnish and let it dry.

A slightly larger diameter dowel can be filed down to a blunt chisel shape as well in a similar mannner and will be useful for tuning the neutralization screw in the final amp. You can get a whole bag of assorted dowels at Wal Mart for about $1.50.

Follow the procedure in the TS-820 manual for peaking the coils. It is basically very simple. Exercise care since there are high voltages exposed on the RF Driver board that sits 90 deg to and above the coil pack.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "wynger99" <wynger99@...> wrote:
>
> Hello to the group
> I am a new poster to this group, but have been following this site for quite some time. I have learned many things from this group, and I thank you all.
>
> I have a ts820s that needs to be saved. I have surveyed the unit repeatedly to find changes that may have been made over the years.
>
> The findings I can see are the digital display and 5 volt power board have been removed.
>

> The DC to DC converter has been removed.
>
> Everything else looks very normal. The radio powered up and only heard white noise.
> I then found both relays and the contacts looked very good almost new but the base terminals were grungy. I cleaned all the terminals and sockets with deox. Also cleaned the contacts inside.
>
> Now the radio receives only strong stations with 80 mtrs being the best and deteriating on all other bands.
>
> S meter only reads abt 3 on signals showing 10 to 20 over 9 on my ts440s.
>
> The marker system works although not registering on s meter.
> WWV I don't hear
> I did some basic voltage checks the 3.3 volt is Ok at points that it should be. 9 volt also is good.
> However I have a problem with the 14 volt line it only shows 12.5 volts. The 4 diodes all look visibly to be intact, no cracks but at the output it is only 12.5 vts.
>
> So that is the current situation and I am hoping to learn more about these great radios. Any ideas to further investigate would be appreciated.
> Thanks to all. Dale WN0WWY
>

29554. function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 19:03:14 UTC
From: Joseph Stiles
Topic: 29554 Message: 29554

Greetings group,

Can anyone tell me what is the function of the transformer located on the underside of the 520 back by the "carrier board" It is stenciled "L15-0002-15." This is the same rig that had a CB hack..which was removed...and now has no audio..except on WWV/JJY. I had it turned on and after about 2-3 minutes, noticed a "burning smell." Turned off rig, removed covers, and located the source....it was so hot...it took about 10 minutes before it could be touched. What does this item do? Oh, Mike(w5rkl) this is the one I was working on before.

73's joe wb7uqu

[Non-text portions of this message have been removed]

29555. Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 19:41:13 UTC
From: w5rkl
Topic: 29554 Message: 29555

Joe,

That is the 14VDC supply filter "CHoke". It is labled "CH" on the 520 schematics.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> Can anyone tell me what is the function of the transformer located on the
> underside of the 520 back by the "carrier board" It is stenciled "L15-0002-15."
> This is the same rig that had a CB hack..which was removed...and now has no
> audio..except on WWV/JJY. I had it turned on and after about 2-3 minutes,
> noticed a "burning smell." Turned off rig, removed covers, and located the
> source....it was so hot...it took about 10 minutes before it could be touched.
> What does this item do? Oh, Mike(w5rkl) this is the one I was working on before.
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29556. Re: [TS-520_820_530_830] Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 20:15:47 UTC
From: Joseph Stiles
Topic: 29554 Message: 29556

Mike,

TNX Mike....but...should it get that hot? It has stunk up the whole shack.
Or should I get out the magnifying glass..and trace some wires? This rig is
driving me nuts...mostly because..my skills are somewhat to be desired..as is my
equipment....anyway...off to the schematic.............................

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 29, 2011 11:41:13 AM
Subject: [TS-520_820_530_830] Re: function of part in TS-520

Joe,

That is the 14VDC supply filter "CHoke". It is labled "CH" on the 520
schematics.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Greetings group,
>
> Can anyone tell me what is the function of the transformer located on the
> underside of the 520 back by the "carrier board" It is stenciled
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> This is the same rig that had a CB hack..which was removed...and now has no
> audio..except on WWV/JJY. I had it turned on and after about 2-3 minutes,
> noticed a "burning smell." Turned off rig, removed covers, and located the
> source....it was so hot...it took about 10 minutes before it could be touched.

> What does this item do? Oh, Mike(w5rkl) this is the one I was working on
>before.
>
> 73's joe wb7uqu
>
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29557. Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 20:34:09 UTC
From: w5rkl
Topic: 29554 Message: 29557

Joe,

The current flow through the CH choke is quite low except during transmit when the 2 relays are energized. Even then the current level is low.

If the CH Choke runs "hot" then it's possible one or more of the following is at fault

1. Short in CH Choke windings
2. Faulty filter capacitor C33 (high internal leakage current)
3. One or more circuits pulling too much current from the 14VDC supply

The CH choke should not run "hot"!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> TNX Mike....but...should it get that hot? It has stunk up the whole shack.
> Or should I get out the magnifying glass..and trace some wires? This rig is
> driving me nuts...mostly because..my skills are somewhat to be desired..as is my
> equipment....anyway...off to the schematic.............................
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, January 29, 2011 11:41:13 AM
> Subject: [TS-520_820_530_830] Re: function of part in TS-520
>
>
>
> Joe,
>
> That is the 14VDC supply filter "CHoke". It is labled "CH" on the 520
> schematics.
>
> 73s
> Mike

> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Greetings group,
> >
> > Can anyone tell me what is the function of the transformer located on the
> > underside of the 520 back by the "carrier board" It is stenciled
> >"L15-0002-15."
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> > This is the same rig that had a CB hack..which was removed...and now has no
> > audio..except on WWV/JJY. I had it turned on and after about 2-3 minutes,
> > noticed a "burning smell." Turned off rig, removed covers, and located the
> > source....it was so hot...it took about 10 minutes before it could be touched.
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29558. Re: [TS-520_820_530_830] Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 20:35:43 UTC
From: Steve Bontempo
Topic: 29554 Message: 29558

Hey Joe, it sounds like yours is doing what mine is getting ready to do. Mine isn't at the point of burning up yet, but it is dropping almost 3 volts so my "14V" supply is actually reading about 10.8. Coils can become more resistive as they age and the higher internal resistance they have the more of a voltage drop they will have.

You'll probably have your 14V on your Rectifier unit and your Vox unit, but I'll bet your input voltages to your AF Unit, Carrier Unit, NB Unit, FIX CH AVR Unit, RF Unit and your IF Unit all have lower input voltages because the voltage being dropped across your Choke. This could also be why you're not getting any audio output.

I found this on my 520 recently and ordered a replacement Choke to hopefully correct it. Even with the 3 volt drop across it, my Choke doesn't get hot and yours shouldn't either.

Also, there are 2 electrylytic capacitors C33 and C34 wired to either side of that choke and I suppose if C33 were to short then you would have a direct short to ground and no 14V to the boards mentioned above and you would see about a 14V drop across the Choke which I am sure would make it really hot! So you might want to replace both C33 and C34 or at least check them out. I replaced mine which is how I ended up blaming the Choke itself for the voltage drop.

Hope this helps.

Steve
KU4BY

On Sat, Jan 29, 2011 at 2:41 PM, w5rkl <w5rkl@...> wrote:

>
>
> Joe,
>
> That is the 14VDC supply filter "CHoke". It is labled "CH" on the 520
> schematics.
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> 73s
> Mike
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>
> --- In TS-520_820_530_830@...m<TS-520_820_530_830%40yahoogroups.com>,
> Joseph Stiles <stilesjoseph@...> wrote:
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> > Greetings group,

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> > Can anyone tell me what is the function of the transformer located on the
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> > audio..except on WWV/JJY. I had it turned on and after about 2-3 minutes,
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29559. Re: [TS-520_820_530_830] Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 21:06:43 UTC
From: Joseph Stiles
Topic: 29554 Message: 29559

Mike & Steve,

TNX for the insight! As I have stated before...I'm NOT the sharpest pencil in the "diagnostic box." This is rather a clean rig...and I want to get it back to its original "glory." I like old things...that's why I also live in a 110 year old house....old things may take lotsa TLC...but they are worth it...ask the XYL...oh dang...she saw that...we're only 6 months apart...but trying to explain XYL to non a ham...gets lost in the translation..but ya gotta love 'em. Let you know what I find.....Oh... Steve...from whom did you order your choke...and what part #.....

73's joe wb7uqu

From: Steve Bontempo <sbontempo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 29, 2011 12:35:43 PM
Subject: Re: [TS-520_820_530_830] Re: function of part in TS-520

Hey Joe, it sounds like yours is doing what mine is getting ready to do. Mine isn't at the point of burning up yet, but it is dropping almost 3 volts so my "14V" supply is actually reading about 10.8. Coils can become more resistive as they age and the higher internal resistance they have the more of a voltage drop they will have.

You'll probably have your 14V on your Rectifier unit and your Vox unit, but I'll bet your input voltages to your AF Unit, Carrier Unit, NB Unit, FIX CH AVR Unit, RF Unit and your IF Unit all have lower input voltages because the voltage being dropped across your Choke. This could also be why you're not getting any audio output.

I found this on my 520 recently and ordered a replacement Choke to hopefully correct it. Even with the 3 volt drop across it, my Choke doesn't get hot and yours shouldn't either.

Also, there are 2 electrylytic capacitors C33 and C34 wired to either side of that choke and I suppose if C33 were to short then you would have a direct short to ground and no 14V to the boards mentioned above and you would see about a 14V drop across the Choke which I am sure would make it really hot! So you might want to replace both C33 and C34 or at least check them out. I replaced mine which is how I ended up blaming the Choke itself for the voltage drop.

Hope this helps.

Steve
KU4BY

On Sat, Jan 29, 2011 at 2:41 PM, w5rkl <w5rkl@...> wrote:

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> Joe,
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> That is the 14VDC supply filter "CHoke". It is labled "CH" on the 520
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> 73s
> Mike
> W5RKL
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> --- In
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> > underside of the 520 back by the "carrier board" It is stenciled
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> > This is the same rig that had a CB hack..which was removed...and now has
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> > noticed a "burning smell." Turned off rig, removed covers, and located
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Yahoo! Groups Links

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29560. Re: [TS-520_820_530_830] Re: Ts 820s needs help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 19:43:42 UTC
From: wynger99@yahoo.com
Topic: 29551 Message: 29560

Thanks Robert for the input I will pursue the alignment procedure. I was sure curious about the 14 vt line Thanks again.

Dale WN0WWY

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, January 29, 2011 12:44:01 PM
Subject: [TS-520_820_530_830] Re: Ts 820s needs help

Dale:

12.5 VDC on the 14 VDC line is not a problem. My TS-820 is that way and I even blew out some of the rectifier diodes in the process of trying to figure out why the voltage was "low." Replacing the diodes just brought it back up to 12.5 V.

The most likely problem with the receive section is a poor alignment. You should align the carrier frequencies (especially of the received SSB signals sound unintelligable or even just not quite right) and then peak the coil pack for each band. There are three sections of the coil pack for each band.

It is better to use a signal generator as an input to peak the coil pack but it can be done using the built in calibrator. You must exercise great care in tuning the coil cores. For adjusting the smallest cores do the following:

Take a 3/16 in wooden dowel and file the end down so it is pointed like a chisel, flat on two sides. Then cut each side of the chisel point off so it is only just wide enough to fit the smallest coil forms. Then cut the very tip down so it is a bit blunt.

You can file the other end of the dowel down to a chisel point too and then cut the very tip off. It will be useful for the larger coil cores.

Then, preferably, dip the whole thing in a varnish and let it dry.

A slightly larger diameter dowel can be filed down to a blunt chisel shape as well in a similar mannner and will be useful for tuning the neutralization screw in the final amp. You can get a whole bag of assorted dowels at Wal Mart for about $1.50.

Follow the procedure in the TS-820 manual for peaking the coils. It is basically very simple. Exercise care since there are high voltages exposed on the RF Driver board that sits 90 deg to and above the coil pack.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "wynger99" <wynger99@...> wrote:
>
> Hello to the group
> I am a new poster to this group, but have been following this site for quite
>some time. I have learned many things from this group, and I thank you all.
>
> I have a ts820s that needs to be saved. I have surveyed the unit repeatedly to
>find changes that may have been made over the years.
>
> The findings I can see are the digital display and 5 volt power board have been
>removed.
>
> The DC to DC converter has been removed.
>
> Everything else looks very normal. The radio powered up and only heard white
>noise.
> I then found both relays and the contacts looked very good almost new but the
>base terminals were grungy. I cleaned all the terminals and sockets with deox.
>Also cleaned the contacts inside.
>
> Now the radio receives only strong stations with 80 mtrs being the best and
>deteriating on all other bands.
>
> S meter only reads abt 3 on signals showing 10 to 20 over 9 on my ts440s.
>
> The marker system works although not registering on s meter.
> WWV I don't hear
> I did some basic voltage checks the 3.3 volt is Ok at points that it should be.
>9 volt also is good.
> However I have a problem with the 14 volt line it only shows 12.5 volts. The 4
>diodes all look visibly to be intact, no cracks but at the output it is only
>12.5 vts.
>
> So that is the current situation and I am hoping to learn more about these
>great radios. Any ideas to further investigate would be appreciated.
> Thanks to all. Dale WN0WWY
>

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29561. Re: [TS-520_820_530_830] Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-29 22:07:20 UTC
From: Steve Bontempo
Topic: 29554 Message: 29561

Hey Joe,

I ordered the Choke from Bob Mansker KE5FTF. His e-mail is ke5ftf@....
It's a used but fully functional part and only cost me 8 bucks before a very reasonable shipping charge. I believe Mike was the one who suggested him to me a while back and after contacting him I can see why. He says he has about 50 of these rigs and he's parting them out. If you are looking to replace C33 and C34, (2200uf 25V electrolytics) I got mine from Mouser Electronics who always seems to have the discrete components that I need. Shipping to me here on the Right Coast Priority Mail takes about 3 days.

And don't worry about not being too familiar with the 520's innards. It comes with time. I'm still learning all the time thanks to Mike W5RKL. I've been working on mine off and on for the last month or so and can't wait to get it back on the air as well!

And Mike, in case you see this, I ordered a spare Antenna Coil Unit from Bob as well so if my problem does end up being my ACU then I'll just replace it instead of re-wrapping L1 all over again! hehe

73's

Steve KU4BY

On Sat, Jan 29, 2011 at 4:06 PM, Joseph Stiles <stilesjoseph@...>wrote:

>
>
> Mike & Steve,
>
> TNX for the insight! As I have stated before...I'm NOT the sharpest pencil
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> the "diagnostic box." This is rather a clean rig...and I want to get it
> back to
> its original "glory." I like old things...that's why I also live in a 110
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> old house....old things may take lotsa TLC...but they are worth it...ask
> the
> XYL...oh dang...she saw that...we're only 6 months apart...but trying to
> explain
> XYL to non a ham...gets lost in the translation..but ya gotta love 'em. Let
>
> you know what I find.................Oh... Steve...from whom did you order
> your
> choke...and what part #.........................
>
> 73's joe wb7uqu

>
> _____
> From: Steve Bontempo <sbontempo@... <sbontempo%40gmail.com>>
>
> To: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, January 29, 2011 12:35:43 PM
> Subject: Re: [TS-520_820_530_830] Re: function of part in TS-520
>
>
> Hey Joe, it sounds like yours is doing what mine is getting ready to do.
> Mine isn't at the point of burning up yet, but it is dropping almost 3
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> so my "14V" supply is actually reading about 10.8. Coils can become more
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> of a voltage drop they will have.
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> You'll probably have your 14V on your Rectifier unit and your Vox unit, but
> I'll bet your input voltages to your AF Unit, Carrier Unit, NB Unit, FIX CH
> AVR Unit, RF Unit and your IF Unit all have lower input voltages because
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> voltage being dropped across your Choke. This could also be why you're not
> getting any audio output.
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> I found this on my 520 recently and ordered a replacement Choke to
> hopefully
> correct it. Even with the 3 volt drop across it, my Choke doesn't get hot
> and yours shouldn't either.
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> Also, there are 2 electrylytic capacitors C33 and C34 wired to either side
> of that choke and I suppose if C33 were to short then you would have a
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> would see about a 14V drop across the Choke which I am sure would make it
> really hot! So you might want to replace both C33 and C34 or at least check
> them out. I replaced mine which is how I ended up blaming the Choke itself
> for the voltage drop.
>
> Hope this helps.
>
> Steve
> KU4BY
>
> On Sat, Jan 29, 2011 at 2:41 PM, w5rkl <w5rkl@...<w5rkl%40yahoo.com>>
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> > > Joe,
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> > 73s
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29562. Re: function of part in TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-30 04:55:25 UTC
From: w5rkl
Topic: 29554 Message: 29562

The 14VDC filter is a capacitive input filter with a choke.

A failure in C34, the capacitor before the choke, will not cause the choke to overheat. C33, however, if it shorts internally or has high internal leakage current, will cause higher current to flow through the choke which can result in the choke running warmer/hotter.

Before you replace the CH choke, determine what is causing the choke to overheat. I do not recommend operating the 520 until you determine what is causing the CH choke to overheat. Further overheating can permanently damage the choke. While overheating a choke can result in shorted windings, a short duration of overheating may not always destroy the choke. When a transformer, choke, or other coils overheat due to excessive current flowing through the coils/windings, the long term heat melts the insulating enamel coating on the winding wire. When this occurs the windings short to the transformer or choke metal core. In RF transformers, the insulating enamel coating causes the windings to short resulting in a short to ground to RF, if the coil is grounded at one end. If the coil is not grounded, the inductance of the coil significantly changes resulting, quite often, in the coil no longer resonating on the desired frequency.

I agree to replacing C33 and C34, both 2200ufd 25VDC electrolytic capacitors. The important capacitor is C33 the output filter capacitor. Since you do not know the physical and electrical state of either capacitor, it makes good sense to replace both.

It's important to understand that simply replacing both capacitors should not be considered the fix to the overheating of the CH choke. Troubleshooting the 14VDC supply and circuits connected to it will determine what is causing the CH choke to overheat.

73s
Mike
W5RKL

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>
> Hey Joe,
>
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> And don't worry about not being too familiar with the 520's innards. It
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> > _________________________________
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> > To: TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sat, January 29, 2011 12:35:43 PM
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> > > Yahoo! Groups Links
> > >
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> > > [Non-text portions of this message have been removed]
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> >

29563. Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-30 16:07:38 UTC
From: davidbeet
Topic: 29531 Message: 29563

Not wanting to prolong this thread when all wise advice has been given, but my understanding has always been that the switch to turn the heaters off was provided to save battery power when working with the optional 12V converter.

73
David
M0WAM

--- In TS-520_820_530_830@yahoogroups.com, "NJ3D - Loren Shirk" <nj3d@...> wrote:
>
> Thanks for all the feedback. I'm new to tubes and appreciate the help. I'm
> a computer guy by trade, and have machines that have been running years and
> only are cycled for updates. I've always preferred to leave electronics on.
>
>
>
> Thanks for the help!
>
>
>
> One additional comment.
>
> In receive the transmit circuits that are not associated with receive, are
> biased to cut off (turned OFF), even the driver and both final tubes. In
> receive the driver and both final tubes do not conduct, only the filaments
> are glowing/lit, no current flowing in the tubes.
>
> There are a few "common" circuits, circuits that work in both transmit and
> receive such as the VFO, carrier generator oscillator, IF stages, and power
> supplies. Those circuits will remain on but none of them are not controlled
> by the Heater switch. As I said earlier the only thing the heater switch
> controls is the driver and both final tubes filament voltage, nothing more.
>
> I would not recommend leaving the radio on 24/7 365 days a year but letting
> it be powered on and sit idling during the day while you do other things
> will not harm the radio.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "w5rkl" <w5rkl@> wrote:
> >
> > No.

> >
> > Why would you think leaving the heater switch turned on would be a
> problem?
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "NJ3D - Loren" <nj3d@>
> wrote:
> > >
> > > That I understand. is it bad for the transmit section to leave the
> heater
> > > switch on with the main power on all day?
> > >
> > >
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of w5rkl
> > > Sent: Thursday, January 27, 2011 8:38 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: leaving the tube heater on
> > >
> > >
> > >
> > >
> > >
> > > Hi Loren,
> > >
> > > No it's not a problem. You can turn main power OFF but leave the Heater
> > > switch ON. Now don't be confused into believing that if main power is
> OFF
> > > but the Heater switch is ON means the driver and both final tube
> filaments
> > > are still ON because that's not true. The main power switch control the
> AC
> > > power applied to the radio. The Heater switch simply controls the driver
> and
> > > both final tubes filament voltage from the 12VAC secondary filament
> winding
> > > on the power transformer.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >

> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Loren" <nj3d@> wrote:
> > > >
> > > > hey guys,
> > > >
> > > > I'm in the shack all day, and want to be able to pickup and talk when
> I
> > > feel like it... so I have not been turning off the heater unless I'm
> leaving
> > > for an extended period of time. Is this a problem?
> > > >
> > > > Loren, NJ3D
> > > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29564. Re: leaving the tube heater on

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 00:38:18 UTC
From: K8MCN
Topic: 29531 Message: 29564

and thats what i was always told---just a throwback to the days when you were using the rig on battery power or mobile and wanted to save a little on the power consumption......

--- In TS-520_820_530_830@yahoogroups.com, "davidbeet" <david@...> wrote:
>
> Not wanting to prolong this thread when all wise advice has been given, but my understanding has always been that the switch to turn the heaters off was provided to save battery power when working with the optional 12V converter.
>
> 73
> David
> M0WAM
>
>

29565. 520 face plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 05:17:33 UTC
From: kevin
Topic: 29565 Message: 29565

I am looking for a nice faceplate for my 520. reach me offline at
kmx888@aol.com
Kevin
KD0ILM

29566. Burned Resistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 05:23:55 UTC
From: kevin
Topic: 29566 Message: 29566

I was cleaning up my 520 and wish I hadn't looked inside. While the rig works pretty well it looks like heck inside. I found 4 resistors near the transformer that look burned. I have put pictures in a folder called KD0ILM in the pictures of this forum. I wonder if one of you fine fellows can tell me what they are.
Best Kevin
KD0ILM

29567. Re: Burned Resistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 12:55:14 UTC
From: ki4ax
Topic: 29566 Message: 29567

The photos, you have provided, in the folder appear to be the High Voltage Board. R5 and R6 on the HV board, the two that appear burnt, are the resistors that drop the voltage down for use in the "TUNE" mode. Are you having problems with the TUNE mode not working. Are you able to use the TUNE mode during tune up?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I was cleaning up my 520 and wish I hadn't looked inside. While the rig works pretty well it looks like heck inside. I found 4 resistors near the transformer that look burned. I have put pictures in a folder called KD0ILM in the pictures of this forum. I wonder if one of you fine fellows can tell me what they are.
> Best Kevin
> KD0ILM
>

29568. Re: Burned Resistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 13:30:11 UTC
From: w5rkl
Topic: 29566 Message: 29568

Kevin,

Did you remove the mounting screws holding the HV Unit board to the chassis or is this how you found it?

Not all resistor that looks like the one in your picture are bad. Some discoloration occurs due to the environment. There does not appear to be any physical damage, cracking, blistering, or out right burnt/overheated bodies of these resistors. The only way you can determine if these resistors are bad is to measure them with an ohm meter. Don't guess whether they are good or bad, check them to be sure.

If you do not have the manuals then I recommend downloading them from Gordons' website

www.n6wk.com/kenwood/

You can also determine whether the resistors are bad or not is by measuring the voltage at the destination point, final tube screens. If the resistors are bad then the voltage at the destination will be less.

Carbon resistors tend to "increase" in value (resistance) by just sitting around.

Carbon resistors tend to "decrease" in value (resistance) when they overheat due to circuit failure.

Do not assume these resistors are bad. Always check the component first and never replace a component simply because it's old. That's very poor troubleshooting techniques, not to mention wasteful and can easily lead to additional problems the radio didn't have.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I was cleaning up my 520 and wish I hadn't looked inside. While the rig works pretty well it looks like heck inside. I found 4 resistors near the transformer that look burned. I have put pictures in a folder called KD0ILM in the pictures of this forum. I wonder if one of you fine fellows can tell me what they are.
> Best Kevin
> KD0ILM
>

29569. Messages

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 07:03:48 UTC
From: LeoB
Topic: 29569 Message: 29569

I have signed up to receive email for Special Notices from the group moderator. It seems like I have been receiving much more. Any comment?
73, Leo, KG6JMH

29570. TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 19:48:27 UTC
From: Chris Parnell
Topic: 29570 Message: 29570

Hi Everyone,

Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF Voltmeter etc. All aligned really well and on-spec.

The only issue I have is that on transmit, (monitoring on my FT-990), on USB I am slightly low on frequency and on LSB I am slightly high on transmit frequency.

Any ideas?

Thanks, Chris ZL1CDP

Sent from my iPhone

29571. RE: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:04:32 UTC
From: Greg Anders
Topic: 29570 Message: 29571

Yes sir Chris,

It sounds like your carrier frequencies are off slightly but then again perhaps you already set them to spec....

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 11:48 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830s alignment question.

Hi Everyone,

Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF Voltmeter etc. All aligned really well and on-spec.

The only issue I have is that on transmit, (monitoring on my FT-990), on USB I am slightly low on frequency and on LSB I am slightly high on transmit frequency.

Any ideas?

Thanks, Chris ZL1CDP

Sent from my iPhone

[Non-text portions of this message have been removed]

29572. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:06:00 UTC
From: Chris Parnell
Topic: 29570 Message: 29572

Hi Greg, not in front of the service manual right now (at work)☐ Are you referring to the adjustment on the PLL board (TC2, TC3, VR2 and VR3)? (from memory)

Cheers
Chris

From: Greg Anders <greg.anders@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Mon, 31 Jan 2011 13:04:32 -0800
To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
Subject: RE: [TS-520_820_530_830] TS-830s alignment question.

Yes sir Chris,

It sounds like your carrier frequencies are off slightly but then again perhaps you already set them to spec....

Greg

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 11:48 AM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] TS-830s alignment question.

Hi Everyone,

Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF Voltmeter etc. All aligned really well and on-spec.

The only issue I have is that on transmit, (monitoring on my FT-990), on USB I am slightly low on frequency and on LSB I am slightly high on transmit frequency.

Any ideas?

Thanks, Chris ZL1CDP

Sent from my iPhone

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29573. RE: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:20:07 UTC
From: Greg Anders
Topic: 29570 Message: 29573

Hi Chris,

I can't really say, I had three 830's but sold them all. I do remember an adjustment for CW,USB and LSB carriers to center them in the filter passband. It made a significant Difference as all three units I bought needed tweaking for USB/LSB. If you switch between USB/LSB on a clear frequency the pitch of the noise should be roughly the same for both USB and LSB. I believe the manual states what the frequencies for each should be, I used a frequency counter to monitor the adjustment.

Greg
KG6YV

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 1:06 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s alignment question.

Hi Greg, not in front of the service manual right now (at work)? Are you referring to the adjustment on the PLL board (TC2, TC3, VR2 and VR3)? (from memory)

Cheers
Chris

From: Greg Anders <greg.anders@...<mailto:greg.anders%40synopsys.com>>
Reply-To: <TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>>
Date: Mon, 31 Jan 2011 13:04:32 -0800
To: "TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>" <TS-520_820_530_830@...m<mailto:TS-520_820_530_830%40yahoogroups.com>>
Subject: RE: [TS-520_820_530_830] TS-830s alignment question.

Yes sir Chris,

It sounds like your carrier frequencies are off slightly but then again perhaps you already set them to spec....

Greg

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com> [mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 11:48 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com>

Subject: [TS-520_820_530_830] TS-830s alignment question.

Hi Everyone,

Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF Voltmeter etc. All aligned really well and on-spec.

The only issue I have is that on transmit, (monitoring on my FT-990), on USB I am slightly low on frequency and on LSB I am slightly high on transmit frequency.

Any ideas?

Thanks, Chris ZL1CDP

Sent from my iPhone

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29574. RE: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:28:23 UTC
From: Greg Anders
Topic: 29570 Message: 29574

Hi Chris,

I just looked at the 830S service manual and the adjustments you mention are the ones for the carrier adjustments from page 33.

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 1:06 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s alignment question.

Hi Greg, not in front of the service manual right now (at work)? Are you referring to the adjustment on the PLL board (TC2, TC3, VR2 and VR3)? (from memory)

Cheers
Chris

From: Greg Anders <greg.anders@...<mailto:greg.anders%40synopsys.com>>
Reply-To: <TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>>
Date: Mon, 31 Jan 2011 13:04:32 -0800
To: "TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>" <TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>>
Subject: RE: [TS-520_820_530_830] TS-830s alignment question.

Yes sir Chris,

It sounds like your carrier frequencies are off slightly but then again perhaps you already set them to spec....

Greg

From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com> [mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 11:48 AM
To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com> <mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] TS-830s alignment question.

Hi Everyone,

Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF Voltmeter etc. All aligned really well and on-spec.

The only issue I have is that on transmit, (monitoring on my FT-990), on USB I am slightly low on frequency and on LSB I am slightly high on transmit frequency.

Any ideas?

Thanks, Chris ZL1CDP

Sent from my iPhone

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[Non-text portions of this message have been removed]

29575. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:37:05 UTC
From: Chris Parnell
Topic: 29570 Message: 29575

Sounds like what I am referring to Greg... The frequency counter reads absolutely correct for what page 33 of the SM states, so I was wondering if there was anything else that adjusted the frequency slightly.

Cheers
Chris

On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@...> wrote:

>Hi Chris,
>
>I can't really say, I had three 830's but sold them all. I do remember
>an adjustment for CW,USB and LSB carriers to center them in the filter
>passband. It made a significant
>Difference as all three units I bought needed tweaking for USB/LSB. If
>you switch between USB/LSB on a clear frequency the pitch of the noise
>should be roughly the same for both USB and LSB. I believe the manual
>states what the frequencies for each should be, I used a frequency
>counter to monitor the adjustment.
>
>Greg
>KG6YV
>
>From: TS-520_820_530_830@yahoogroups.com
>[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
>Sent: Monday, January 31, 2011 1:06 PM
>To: TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] TS-830s alignment question.
>
>
>
>Hi Greg, not in front of the service manual right now (at work)© Are you
>referring to the adjustment on the PLL board (TC2, TC3, VR2 and VR3)?
>(from
>memory)
>
>Cheers
>Chris
>
>From: Greg Anders
><greg.anders@...<mailto:greg.anders%40synopsys.com>>
>Reply-To:
><TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroup
>s.com>>
>Date: Mon, 31 Jan 2011 13:04:32 -0800
>To:

>"TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroup
>s.com>"
><TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroup
>s.com>>
>Subject: RE: [TS-520_820_530_830] TS-830s alignment question.
>
>Yes sir Chris,
>
>It sounds like your carrier frequencies are off slightly but then again
>perhaps you already set them to spec....
>
>Greg
>
>From:
>TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups
>.com>
><mailto:TS-520_820_530_830%40yahoogroups.com>
>[mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yah
>oogroups.com>
><mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
>Sent: Monday, January 31, 2011 11:48 AM
>To:
>TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups
>.com>
><mailto:TS-520_820_530_830%40yahoogroups.com>
>Subject: [TS-520_820_530_830] TS-830s alignment question.
>
>Hi Everyone,
>
>Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
>Voltmeter
>etc. All aligned really well and on-spec.
>
>The only issue I have is that on transmit, (monitoring on my FT-990), on
>USB
>I am slightly low on frequency and on LSB I am slightly high on transmit
>frequency.
>
>Any ideas?
>
>Thanks, Chris ZL1CDP
>
>Sent from my iPhone
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29576. RE: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:45:14 UTC
From: Greg Anders
Topic: 29570 Message: 29576

No sir, I am not aware of any other adjustments but hopefully someone with more current knowledge of the 830 will respond.

If the frequencies are correct it is possible that the crystal filter in your radio has aged and shifted its band pass. I have seen this on a couple of older radios.
In that case I set one so that receive sounded balanced audio frequency wise, then I tweaked the other sideband crystal so that background noise sounded similar.

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Monday, January 31, 2011 1:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-830s alignment question.

Sounds like what I am referring to Greg... The frequency counter reads absolutely correct for what page 33 of the SM states, so I was wondering if there was anything else that adjusted the frequency slightly.

Cheers
Chris

On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@...<mailto:greg.anders%40synopsys.com>> wrote:

>Hi Chris,
>
>I can't really say, I had three 830's but sold them all. I do remember
>an adjustment for CW,USB and LSB carriers to center them in the filter
>passband. It made a significant
>Difference as all three units I bought needed tweaking for USB/LSB. If
>you switch between USB/LSB on a clear frequency the pitch of the noise
>should be roughly the same for both USB and LSB. I believe the manual
>states what the frequencies for each should be, I used a frequency
>counter to monitor the adjustment.
>
>Greg
>KG6YV
>
>From: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
>[mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>]
On Behalf Of Chris Parnell
>Sent: Monday, January 31, 2011 1:06 PM
>To: TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com>
>Subject: Re: [TS-520_820_530_830] TS-830s alignment question.
>

>
>
>Hi Greg, not in front of the service manual right now (at work)(c) Are you
>referring to the adjustment on the PLL board (TC2, TC3, VR2 and VR3)?
>(from
>memory)
>
>Cheers
>Chris
>
>From: Greg Anders
><greg.anders@...<mailto:greg.anders%40synopsys.com><mailto:greg.anders%40synopsys.com>>
>Reply-To:
><TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto:T
S-520_820_530_830%40yahoogroup
>s.com>>
>Date: Mon, 31 Jan 2011 13:04:32 -0800
>To:
>"TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto:T
S-520_820_530_830%40yahoogroup
>s.com>"
><TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto:T
S-520_820_530_830%40yahoogroup
>s.com>>
>Subject: RE: [TS-520_820_530_830] TS-830s alignment question.
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>Yes sir Chris,
>
>It sounds like your carrier frequencies are off slightly but then again
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>Greg
>
>From:
>TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS
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>[mailto:TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><m
ailto:TS-520_820_530_830%40yah
>oogroups.com>
><mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
>Sent: Monday, January 31, 2011 11:48 AM
>To:
>TS-520_820_530_830@yahoogroups.com<mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS
-520_820_530_830%40yahoogroups
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>Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
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29577. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 21:48:24 UTC
From: n6wk@n6wk.com
Topic: 29570 Message: 29577

Chris,
Be sure to check that the LSB Rec and TX frequency is the same as in
step 3 of the service manual.
If not, you adjust VR2 until it is in LSB. Once that is set, then you
adjust the TC2 LSB and TC3 USB for the proper frequency.
For CW you adjust VR3 to get the correct offset. all these are on the
PLL board
Is master Osc at 10.00000 ?

73,
Gordon

On 1/31/2011 1:37 PM, Chris Parnell wrote:
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> absolutely correct for what page 33 of the SM states, so I was wondering
> if there was anything else that adjusted the frequency slightly.
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> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@...
> <mailto:greg.anders%40synopsys.com>> wrote:
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> >an adjustment for CW,USB and LSB carriers to center them in the filter
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> >you switch between USB/LSB on a clear frequency the pitch of the noise
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> >[mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
> >Sent: Monday, January 31, 2011 1:06 PM
> >To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> >Subject: Re: [TS-520_820_530_830] TS-830s alignment question.
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> >s.com>>
> >Date: Mon, 31 Jan 2011 13:04:32 -0800
> >To:
> >"TS-520_820_530_830@yahoogroups.com
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29578. Sad News in Norman, Oklahoma

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 22:38:19 UTC
From: Allan C
Topic: 29578 Message: 29578

With sadness I post this report of one of our own here in Norman, Oklahoma.

We received word that Duane Olinger, KD5IOS, passed away from viral pneumonia on the evening of January 13th. Our condolences go out to his life partner, DeAnn, and son, Scott. Duane was an active ham, and though a retired aerospace engineer, he kept himself busy working in the community in many different pursuits. SCARS and the entire community will miss him.

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29579. TS 520 NOT!!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-01-31 22:45:58 UTC
From: Jeb Brygider
Topic: 29579 Message: 29579

I hate to break this to you Kevin, but according to the pictures, this is not a 520! LOL It's a 530, much different animal. I know I'm being a pain of a stickler, but we all seem to lump the 520 -830 series in a group and many of us, (myself included) sometimes call them all 520 series radios. I know in my case that it's just old age creeping upon me. If you hadn't posted the pics, I'm sure many of us would be mentally trying to troubleshoot a 520, while we should have been thinking about a 530! As we used to say back in Maine : "It's the same, but different!"
Carry on the good quest! It deserves to be brought back to it's original glory! Good luck, and listen to the good advice from the group!
Jeb Brygider KE7LIU (only been doing this since 1959, and learning new stuff every day!)
Maker of fine solder smoke since 1952!

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29580. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 03:28:03 UTC
From: Chris Parnell
Topic: 29570 Message: 29580

Hi Gordon, thanks for the response.

Yes, as per the service manual, LSB TX/RX is the same frequency and the CW offset is correct too.
Master Osc at 10.0000? - Not sure... Where do I check for that?

Cheers
Chris

On 1/02/11 10:48 AM, "n6wk@..." <n6wk@...> wrote:

>Chris,
>Be sure to check that the LSB Rec and TX frequency is the same as in
>step 3 of the service manual.
>If not, you adjust VR2 until it is in LSB. Once that is set, then you
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>For CW you adjust VR3 to get the correct offset. all these are on the
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>Is master Osc at 10.00000 ?
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>73,
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>> if there was anything else that adjusted the frequency slightly.
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>> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@...
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>> >you switch between USB/LSB on a clear frequency the pitch of the noise
>> >should be roughly the same for both USB and LSB. I believe the manual
>> >states what the frequencies for each should be, I used a frequency
>> >counter to monitor the adjustment.
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>> >Greg
>> >KG6YV
>> >
>> >From: TS-520_820_530_830@yahoogroups.com
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>> >Yahoo! Groups Links
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29581. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 04:18:04 UTC
From: n6wk@n6wk.com
Topic: 29570 Message: 29581

Hi Chris,
Connect your freq counter to TP2 on the PLL board. It should be 10.0000,
if not adjustTC1 on the PLL board until it is.
If your LSB TX and Rx are the same, then your receive and TX freq should
also be the same unless you have a problem on the RIT circuit.
Make sure the RIT stays the same when at zero, whether button in or out.
If not, then adjust VR2 on the AF board until it is.

73,
Gordon

On 1/31/2011 7:28 PM, Chris Parnell wrote:
>
> Hi Gordon, thanks for the response.
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> Yes, as per the service manual, LSB TX/RX is the same frequency and the CW
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> Chris
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29582. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 04:21:42 UTC
From: Chris Parnell
Topic: 29570 Message: 29582

Hi Gordon, appreciate your help.

I will check the 10Mhz Master oscillator readout in about an hour when I
get home from work.
The RIT checks out the same when in and out (frequency wise).

Thanks again, I would love to get her working well!!

Chris

On 1/02/11 5:18 PM, "n6wk@..." <n6wk@...m> wrote:

>Hi Chris,
>Connect your freq counter to TP2 on the PLL board. It should be 10.0000,
>if not adjustTC1 on the PLL board until it is.
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29583. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 05:25:21 UTC
From: Chris Parnell
Topic: 29570 Message: 29583

Hi Gordon. Yea measures 10Mhz.

Ta
Chris

Sent from my iPhone

On 1/02/2011, at 5:18 PM, n6wk@... wrote:

> Hi Chris,
> Connect your freq counter to TP2 on the PLL board. It should be 10.0000,
> if not adjustTC1 on the PLL board until it is.
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> also be the same unless you have a problem on the RIT circuit.
> Make sure the RIT stays the same when at zero, whether button in or out.
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29584. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 05:48:58 UTC
From: n6wk@n6wk.com
Topic: 29570 Message: 29584

Hi Chris,
That is very strange that the TX and RX frequencies don't match then.
Have you checked the output with a freq counter and a loop around the
coax? Does it match the Digital display on the 830?
Never TX into the counter directly however :-)
Maybe The only thing you could do is tweak the caps on the PLL board for
USB and LSB to get them to be on, or maybe the 990 is off?
How far off does your 990 show the 830 is?
I have never had this issue in any of the 830's I have aligned.

73,
Gordon

On 1/31/2011 9:25 PM, Chris Parnell wrote:
>
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29585. Re: [TS-520_820_530_830] TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 07:05:10 UTC
From: Chris Parnell
Topic: 29570 Message: 29585

Gordon I will mail you directly, take it off the reflector bandwidth if thats ok with you.

Thanks
Chris

Sent from my iPhone

On 1/02/2011, at 6:48 PM, n6wk@... wrote:

> Hi Chris,
> That is very strange that the TX and RX frequencies don't match then.
> Have you checked the output with a freq counter and a loop around the
> coax? Does it match the Digital display on the 830?
> Never TX into the counter directly however :-)
> Maybe The only thing you could do is tweak the caps on the PLL board for
> USB and LSB to get them to be on, or maybe the 990 is off?
> How far off does your 990 show the 830 is?
> I have never had this issue in any of the 830's I have aligned.
>
> 73,
> Gordon
>
>
> On 1/31/2011 9:25 PM, Chris Parnell wrote:
>>
>> Hi Gordon. Yea measures 10Mhz.
>>
>> Ta
>> Chris
>>
>> Sent from my iPhone
>>
>> On 1/02/2011, at 5:18 PM, n6wk@... <mailto:n6wk%40n6wk.com> wrote:
>>
>>> Hi Chris,
>>> Connect your freq counter to TP2 on the PLL board. It should be
>> 10.0000,
>>> if not adjustTC1 on the PLL board until it is.
>>> If your LSB TX and Rx are the same, then your receive and TX freq
>> should
>>> also be the same unless you have a problem on the RIT circuit.
>>> Make sure the RIT stays the same when at zero, whether button in or
>> out.
>>> If not, then adjust VR2 on the AF board until it is.
>>>
>>> 73,

>>> Gordon
>>>
>>> On 1/31/2011 7:28 PM, Chris Parnell wrote:
>>>>
>>>> Hi Gordon, thanks for the response.
>>>>
>>>> Yes, as per the service manual, LSB TX/RX is the same frequency and
>> the CW
>>>> offset is correct too.
>>>> Master Osc at 10.0000? - Not sure... Where do I check for that?
>>>>
>>>> Cheers
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>> wrote:
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>>>>> Chris,
>>>>> Be sure to check that the LSB Rec and TX frequency is the same as in
>>>>> step 3 of the service manual.
>>>>> If not, you adjust VR2 until it is in LSB. Once that is set, then you
>>>>> adjust the TC2 LSB and TC3 USB for the proper frequency.
>>>>> For CW you adjust VR3 to get the correct offset. all these are on the
>>>>> PLL board
>>>>> Is master Osc at 10.00000 ?
>>>>>
>>>>> 73,
>>>>> Gordon
>>>>>
>>>>> On 1/31/2011 1:37 PM, Chris Parnell wrote:
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>>>>>> Sounds like what I am referring to Greg... The frequency counter
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>>>>>> absolutely correct for what page 33 of the SM states, so I was
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>>>>>> if there was anything else that adjusted the frequency slightly.
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>>>>>> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@...
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>>>>>>> passband. It made a significant
>>>>>>> Difference as all three units I bought needed tweaking for
>> USB/LSB. If
>>>>>>> you switch between USB/LSB on a clear frequency the pitch of the
>> noise
>>>>>>> should be roughly the same for both USB and LSB. I believe the
>> manual
>>>>>>> states what the frequencies for each should be, I used a frequency
>>>>>>> counter to monitor the adjustment.
>>>>>>>
>>>>>>> Greg
>>>>>>> KG6YV
>>>>>>>
>>>>>>> From: TS-520_820_530_830@yahoogroups.com
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>>>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
>>>>>> Parnell
>>>>>>> Sent: Monday, January 31, 2011 1:06 PM
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
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>>>>>>> Hi Greg, not in front of the service manual right now (at
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>>>>>>> referring to the adjustment on the PLL board (TC2, TC3, VR2 and
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>>>>>>> Reply-To:
>>>>>>> <TS-520_820_530_830@yahoogroups.com
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>> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
>>>>>> 0yahoogroup
>>>>>>> s.com>>
>>>>>>> Date: Mon, 31 Jan 2011 13:04:32 -0800
>>>>>>> To:
>>>>>>> "TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
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>>>>>>> Yes sir Chris,
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>>>>>>> It sounds like your carrier frequencies are off slightly but then
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>>>>>>> perhaps you already set them to spec....
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>> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
>>>>>> 0yah
>>>>>>> oogroups.com>
>>>>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
>>>>>> Parnell
>>>>>>> Sent: Monday, January 31, 2011 11:48 AM
>>>>>>> To:
>>>>>>> TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
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>>>>>>> .com>
>>>>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>>>>>> Subject: [TS-520_820_530_830] TS-830s alignment question.
>>>>>>>
>>>>>>> Hi Everyone,
>>>>>>>
>>>>>>> Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
>>>>>>> Voltmeter
>>>>>>> etc. All aligned really well and on-spec.
>>>>>>>
>>>>>>> The only issue I have is that on transmit, (monitoring on my
>> FT-990),
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>>>>>>> I am slightly low on frequency and on LSB I am slightly high on
>>>>>> transmit
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>>>>>>>
>>>>>>> Any ideas?
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>>>>>>> Thanks, Chris ZL1CDP
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>>>>>>> Sent from my iPhone
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>>>>>>> [Non-text portions of this message have been removed]
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29586. Re: TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 08:07:08 UTC
From: paulrshinn
Topic: 29570 Message: 29586

My 830 TX and RX are off by a BUNCH. The displayed TX freq. is correct, but when it switches back into RX mode, the freq. display reads 7 kc. off. Actual RX freq. is OK, just the display is way off. How would I fix that? If I use RIT, then the display might read right, but then actual RX freq. is way off.

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Hi Chris,
> That is very strange that the TX and RX frequencies don't match then.
> Have you checked the output with a freq counter and a loop around the
> coax? Does it match the Digital display on the 830?
> Never TX into the counter directly however :-)
> Maybe The only thing you could do is tweak the caps on the PLL board for
> USB and LSB to get them to be on, or maybe the 990 is off?
> How far off does your 990 show the 830 is?
> I have never had this issue in any of the 830's I have aligned.
>
> 73,
> Gordon
>
>
> On 1/31/2011 9:25 PM, Chris Parnell wrote:
> >
> > Hi Gordon. Yea measures 10Mhz.
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> > Ta
> > Chris
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> > On 1/02/2011, at 5:18 PM, n6wk@... <mailto:n6wk%40n6wk.com> wrote:
> >
> > > Hi Chris,
> > > Connect your freq counter to TP2 on the PLL board. It should be
> > 10.0000,
> > > if not adjustTC1 on the PLL board until it is.
> > > If your LSB TX and Rx are the same, then your receive and TX freq
> > should
> > > also be the same unless you have a problem on the RIT circuit.
> > > Make sure the RIT stays the same when at zero, whether button in or
> > out.
> > > If not, then adjust VR2 on the AF board until it is.
> > >
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> > > Gordon

> > >
> > > On 1/31/2011 7:28 PM, Chris Parnell wrote:
> > >>
> > >> Hi Gordon, thanks for the response.
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> > >> Yes, as per the service manual, LSB TX/RX is the same frequency and
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> > >> offset is correct too.
> > >> Master Osc at 10.0000? - Not sure... Where do I check for that?
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> > >> Cheers
> > >> Chris
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> > >> On 1/02/11 10:48 AM, "n6wk@... <mailto:n6wk%40n6wk.com>
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> > >>> Chris,
> > >>> Be sure to check that the LSB Rec and TX frequency is the same as in
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> > >>> adjust the TC2 LSB and TC3 USB for the proper frequency.
> > >>> For CW you adjust VR3 to get the correct offset. all these are on the
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> > >>> Is master Osc at 10.00000 ?
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> > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > >>>> Parnell
> > >>>>> Sent: Monday, January 31, 2011 1:06 PM
> > >>>>> To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > >>>>>
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> > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > >>>> 0yahoogroups
> > >>>>> .com>
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> > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
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> > >>>>> Sent: Monday, January 31, 2011 11:48 AM
> > >>>>> To:
> > >>>>> TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
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29587. Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 17:27:45 UTC
From: Dennis Wade
Topic: 29587 Message: 29587

Good Morning everyone,

I had an idea for putting an actual rear panel connector
(actually rewiring the existing "REMOTE" DIN jack) to allow rear panel
connections for sound card/computer modes that require audio out, mic
and PTT lines.

Some time ago there was a thread that ended up with a
source for fixed level audio that would be appropriate for putting
into a sound card. In looking at this and wondering how to bring it
out of the radio with some elegance, I looked into just what the rear
DIN jacks were used for. I discovered that the REMOTE jack already
had speaker audio and PTT, plus one unused pin (pin 7).

My thought is to replace the speaker audio line with the
fixed level audio, bring a high level mic input to the now unused pin
7, and utilize the PTT line for keying.

Am I overlooking something? If someone could also look at
the schematic and give me some opinion about the value of (or not)
doing this, that would be appreciated.

Thanks!

Dennis
--
"Life isn't about avoiding the storms. Life is about learning how to
dance in the rain."
      - Unknown

Dennis L. Wade
KG6ZI
Carmichael, CA

29588. Re: TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 18:10:00 UTC
From: w5rkl
Topic: 29570 Message: 29588

A quick way to tell if the PLL is the source of the frequency problem simply measure the VCO frequency at the RF Unit's VCO terminal. The VCO frequency should be the same whether in TX or RX. You will have to compare the RF Units' VCO frequency to the VCO frequencies in the 830 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "paulrshinn" <subscriptions@...> wrote:
>
> My 830 TX and RX are off by a BUNCH. The displayed TX freq. is correct, but when it switches back into RX mode, the freq. display reads 7 kc. off. Actual RX freq. is OK, just the display is way off. How would I fix that? If I use RIT, then the display might read right, but then actual RX freq. is way off.
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> > Never TX into the counter directly however :-)
> > Maybe The only thing you could do is tweak the caps on the PLL board for
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> > > > Connect your freq counter to TP2 on the PLL board. It should be
> > > 10.0000,
> > > > if not adjustTC1 on the PLL board until it is.
> > > > If your LSB TX and Rx are the same, then your receive and TX freq
> > > should
> > > > also be the same unless you have a problem on the RIT circuit.
> > > > Make sure the RIT stays the same when at zero, whether button in or
> > > out.
> > > > If not, then adjust VR2 on the AF board until it is.
> > > >
> > > > 73,
> > > > Gordon
> > > >
> > > > On 1/31/2011 7:28 PM, Chris Parnell wrote:
> > > >>
> > > >> Hi Gordon, thanks for the response.
> > > >>
> > > >> Yes, as per the service manual, LSB TX/RX is the same frequency and
> > > the CW
> > > >> offset is correct too.
> > > >> Master Osc at 10.0000? - Not sure... Where do I check for that?
> > > >>
> > > >> Cheers
> > > >> Chris
> > > >>
> > > >> On 1/02/11 10:48 AM, "n6wk@ <mailto:n6wk%40n6wk.com>
> > > <mailto:n6wk%40n6wk.com>"
> > > >> <n6wk@ <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>>
> > > wrote:
> > > >>
> > > >>> Chris,
> > > >>> Be sure to check that the LSB Rec and TX frequency is the same as in
> > > >>> step 3 of the service manual.
> > > >>> If not, you adjust VR2 until it is in LSB. Once that is set, then you
> > > >>> adjust the TC2 LSB and TC3 USB for the proper frequency.
> > > >>> For CW you adjust VR3 to get the correct offset. all these are on the
> > > >>> PLL board
> > > >>> Is master Osc at 10.00000 ?
> > > >>>
> > > >>> 73,
> > > >>> Gordon
> > > >>>
> > > >>> On 1/31/2011 1:37 PM, Chris Parnell wrote:
> > > >>>>
> > > >>>> Sounds like what I am referring to Greg... The frequency counter
> > > reads
> > > >>>> absolutely correct for what page 33 of the SM states, so I was
> > > >> wondering
> > > >>>> if there was anything else that adjusted the frequency slightly.
> > > >>>>

> > > >>>> Cheers
> > > >>>> Chris
> > > >>>>
> > > >>>> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@
> > > <mailto:greg.anders%40synopsys.com>
> > > >> <mailto:greg.anders%40synopsys.com>
> > > >>>> <mailto:greg.anders%40synopsys.com>> wrote:
> > > >>>>
> > > >>>>> Hi Chris,
> > > >>>>>
> > > >>>>> I can't really say, I had three 830's but sold them all. I do
> > > remember
> > > >>>>> an adjustment for CW,USB and LSB carriers to center them in the
> > > filter
> > > >>>>> passband. It made a significant
> > > >>>>> Difference as all three units I bought needed tweaking for
> > > USB/LSB. If
> > > >>>>> you switch between USB/LSB on a clear frequency the pitch of the
> > > noise
> > > >>>>> should be roughly the same for both USB and LSB. I believe the
> > > manual
> > > >>>>> states what the frequencies for each should be, I used a frequency
> > > >>>>> counter to monitor the adjustment.
> > > >>>>>
> > > >>>>> Greg
> > > >>>>> KG6YV
> > > >>>>>
> > > >>>>> From: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> [mailto:TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > > >>>> Parnell
> > > >>>>> Sent: Monday, January 31, 2011 1:06 PM
> > > >>>>> To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> Subject: Re: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>> Hi Greg, not in front of the service manual right now (at
> > > work)Â© Are
> > > >>>> you
> > > >>>>> referring to the adjustment on the PLL board (TC2, TC3, VR2 and
> > > VR3)?

> > > >>>>> (from
> > > >>>>> memory)
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>> From: Greg Anders
> > > >>>>> <greg.anders@ <mailto:greg.anders%40synopsys.com>
> > > <mailto:greg.anders%40synopsys.com>
> > > >>>>
> > > <mailto:greg.anders%40synopsys.com><mailto:greg.anders%40synopsys.com>>
> > > >>>>> Reply-To:
> > > >>>>> <TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>>
> > > >>>>> Date: Mon, 31 Jan 2011 13:04:32 -0800
> > > >>>>> To:
> > > >>>>> "TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>"
> > > >>>>> <TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>>
> > > >>>>> Subject: RE: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>> Yes sir Chris,
> > > >>>>>
> > > >>>>> It sounds like your carrier frequencies are off slightly but then
> > > >> again
> > > >>>>> perhaps you already set them to spec....
> > > >>>>>
> > > >>>>> Greg
> > > >>>>>
> > > >>>>> From:
> > > >>>>> TS-520_820_530_830@yahoogroups.com

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroups
> > > >>>>> .com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> [mailto:TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yah
> > > >>>>> oogroups.com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > > >>>> Parnell
> > > >>>>> Sent: Monday, January 31, 2011 11:48 AM
> > > >>>>> To:
> > > >>>>> TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroups
> > > >>>>> .com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> Subject: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>> Hi Everyone,
> > > >>>>>
> > > >>>>> Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
> > > >>>>> Voltmeter
> > > >>>>> etc. All aligned really well and on-spec.
> > > >>>>>
> > > >>>>> The only issue I have is that on transmit, (monitoring on my
> > > FT-990),
> > > >>>> on
> > > >>>>> USB
> > > >>>>> I am slightly low on frequency and on LSB I am slightly high on
> > > >>>> transmit
> > > >>>>> frequency.
> > > >>>>>
> > > >>>>> Any ideas?
> > > >>>>>
> > > >>>>> Thanks, Chris ZL1CDP
> > > >>>>>
> > > >>>>> Sent from my iPhone

> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>> ------------------------------------
> > > >>>>>
> > > >>>>> Yahoo! Groups Links
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>>
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> > > >>>>
> > > >>>
> > > >>>
> > > >>> ------------------------------------
> > > >>>
> > > >>> Yahoo! Groups Links
> > > >>>
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> > > >>>
> > > >>
> > > >>
> > > >
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
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> > > >
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>

29589. Re: Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 18:27:33 UTC
From: w5rkl
Topic: 29587 Message: 29589

Dennis,

Fixed audio is present at the AF Units' plug 2 pin 3 (AV1). However, the level of audio here may not be sufficient to drive the sound cards interface to the sound card microphone or line input connections. A scope connected here could give you an idea of the audio level.

Transmit audio from the sound card interface to the 830 can be applied to the IF Unit plug 7 pin 5. This is after the microphone preamp. Connecting at this point will allow the MIC gain to remain at it's normal SSB voice setting. The sound card interface transmit audio level pot is adjusted and not the MIC gain.

I'm not sure if I would rewire the Remote DIN socket or any of the rear panel DIN sockets for that matter. A better solution is to install 3 female RCA sockets on the rear panel, one for receiver audio, one for transmit audio, and one for PTT. If you do it right, take your time, the finish product will look professional. Use shielded cable, simple interconnecting cables used to connect VCRs to stereo amplifiers will work fine. Run the shielded cables along the wiring harness and tie wrap them to the wiring harness after the connections have been made. Black cables are good for this.

Just my 2 cents.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Dennis Wade <sacramento.cyclist@...> wrote:
>
> Good Morning everyone,
>
> I had an idea for putting an actual rear panel connector
> (actually rewiring the existing "REMOTE" DIN jack) to allow rear panel
> connections for sound card/computer modes that require audio out, mic
> and PTT lines.
>
> Some time ago there was a thread that ended up with a
> source for fixed level audio that would be appropriate for putting
> into a sound card. In looking at this and wondering how to bring it
> out of the radio with some elegance, I looked into just what the rear
> DIN jacks were used for. I discovered that the REMOTE jack already
> had speaker audio and PTT, plus one unused pin (pin 7).
>
> My thought is to replace the speaker audio line with the
> fixed level audio, bring a high level mic input to the now unused pin
> 7, and utilize the PTT line for keying.
>

> Am I overlooking something? If someone could also look at
> the schematic and give me some opinion about the value of (or not)
> doing this, that would be appreciated.
>
> Thanks!
>
> Dennis
> --
> "Life isn't about avoiding the storms. Life is about learning how to
> dance in the rain."
>   - Unknown
>
> -------------------------
> Dennis L. Wade
> KG6ZI
> Carmichael, CA
>

29590. Re: [TS-520_820_530_830] Re: Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 18:54:17 UTC
From: Dennis Wade
Topic: 29587 Message: 29590

Thanks Mike. Those are good ideas. The pin 3 audio will need to be checked before I use it, but it was the answer given in the earlier thread.

Has anyone else used the audio from plug 2, pin 3 (AV1)?

The RCA jack idea is a good one, but the point was to not have to do any drilling, etc to accomplish the task.

That is still an option though.

Thanks!

Dennis

On Tue, Feb 1, 2011 at 10:27 AM, w5rkl <w5rkl@...> wrote:

>
>
> Dennis,
>
> Fixed audio is present at the AF Units' plug 2 pin 3 (AV1). However, the
> level of audio here may not be sufficient to drive the sound cards interface
> to the sound card microphone or line input connections. A scope connected
> here could give you an idea of the audio level.
>
> Transmit audio from the sound card interface to the 830 can be applied to
> the IF Unit plug 7 pin 5. This is after the microphone preamp. Connecting at
> this point will allow the MIC gain to remain at it's normal SSB voice
> setting. The sound card interface transmit audio level pot is adjusted and
> not the MIC gain.
>
> I'm not sure if I would rewire the Remote DIN socket or any of the rear
> panel DIN sockets for that matter. A better solution is to install 3 female
> RCA sockets on the rear panel, one for receiver audio, one for transmit
> audio, and one for PTT. If you do it right, take your time, the finish
> product will look professional. Use shielded cable, simple interconnecting
> cables used to connect VCRs to stereo amplifiers will work fine. Run the
> shielded cables along the wiring harness and tie wrap them to the wiring
> harness after the connections have been made. Black cables are good for
> this.
>
> Just my 2 cents.
>
> 73s
> Mike
> W5RKL
>

>
> --- In TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>,
> Dennis Wade <sacramento.cyclist@...> wrote:
> >
> > Good Morning everyone,
> >
> > I had an idea for putting an actual rear panel connector
> > (actually rewiring the existing "REMOTE" DIN jack) to allow rear panel
> > connections for sound card/computer modes that require audio out, mic
> > and PTT lines.
> >
> > Some time ago there was a thread that ended up with a
> > source for fixed level audio that would be appropriate for putting
> > into a sound card. In looking at this and wondering how to bring it
> > out of the radio with some elegance, I looked into just what the rear
> > DIN jacks were used for. I discovered that the REMOTE jack already
> > had speaker audio and PTT, plus one unused pin (pin 7).
> >
> > My thought is to replace the speaker audio line with the
> > fixed level audio, bring a high level mic input to the now unused pin
> > 7, and utilize the PTT line for keying.
> >
> > Am I overlooking something? If someone could also look at
> > the schematic and give me some opinion about the value of (or not)
> > doing this, that would be appreciated.
> >
> > Thanks!
> >
> > Dennis
> > --
> > "Life isn't about avoiding the storms. Life is about learning how to
> > dance in the rain."
> > - Unknown
> >
> > -------------------------
> > Dennis L. Wade
> > KG6ZI
> > Carmichael, CA
> >
>
>
>

--
"Life isn't about avoiding the storms. Life is about learning how to dance
in the rain."
- Unknown

Dennis L. Wade
KG6ZI

Carmichael, CA

[Non-text portions of this message have been removed]

29591. Re: Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 19:40:45 UTC
From: w5rkl
Topic: 29587 Message: 29591

I don't know if anyone else has used the AV1 audio or not. AV1 is fixed audio level from the audio preamplifier which is most likely in the "mv" (millivolt) level.

I understand not wanting to drill holes in the rear panel. The rear panel would have to be removed and the holes lined up horizontally so they are even and a punch used to make a mark so the drill bit doesn't wander around. Just a thought.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Dennis Wade <sacramento.cyclist@...> wrote:
>
> Thanks Mike. Those are good ideas. The pin 3 audio will need to be checked
> before I use it, but it was the answer given in the earlier thread.
>
> Has anyone else used the audio from plug 2, pin 3 (AV1)?
>
> The RCA jack idea is a good one, but the point was to not have to do any
> drilling, etc to accomplish the task.
>
> That is still an option though.
>
> Thanks!
>
> Dennis
>
> On Tue, Feb 1, 2011 at 10:27 AM, w5rkl <w5rkl@...> wrote:
>
> > >
> > >
> > > Dennis,
> > >
> > > Fixed audio is present at the AF Units' plug 2 pin 3 (AV1). However, the
> > > level of audio here may not be sufficient to drive the sound cards interface
> > > to the sound card microphone or line input connections. A scope connected
> > > here could give you an idea of the audio level.
> > >
> > > Transmit audio from the sound card interface to the 830 can be applied to
> > > the IF Unit plug 7 pin 5. This is after the microphone preamp. Connecting at
> > > this point will allow the MIC gain to remain at it's normal SSB voice
> > > setting. The sound card interface transmit audio level pot is adjusted and
> > > not the MIC gain.
> > >
> > > I'm not sure if I would rewire the Remote DIN socket or any of the rear
> > > panel DIN sockets for that matter. A better solution is to install 3 female

> > RCA sockets on the rear panel, one for receiver audio, one for transmit
> > audio, and one for PTT. If you do it right, take your time, the finish
> > product will look professional. Use shielded cable, simple interconnecting
> > cables used to connect VCRs to stereo amplifiers will work fine. Run the
> > shielded cables along the wiring harness and tie wrap them to the wiring
> > harness after the connections have been made. Black cables are good for
> > this.
> >
> > Just my 2 cents.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>,
> > Dennis Wade <sacramento.cyclist@> wrote:
> > >
> > > Good Morning everyone,
> > >
> > > I had an idea for putting an actual rear panel connector
> > > (actually rewiring the existing "REMOTE" DIN jack) to allow rear panel
> > > connections for sound card/computer modes that require audio out, mic
> > > and PTT lines.
> > >
> > > Some time ago there was a thread that ended up with a
> > > source for fixed level audio that would be appropriate for putting
> > > into a sound card. In looking at this and wondering how to bring it
> > > out of the radio with some elegance, I looked into just what the rear
> > > DIN jacks were used for. I discovered that the REMOTE jack already
> > > had speaker audio and PTT, plus one unused pin (pin 7).
> > >
> > > My thought is to replace the speaker audio line with the
> > > fixed level audio, bring a high level mic input to the now unused pin
> > > 7, and utilize the PTT line for keying.
> > >
> > > Am I overlooking something? If someone could also look at
> > > the schematic and give me some opinion about the value of (or not)
> > > doing this, that would be appreciated.
> > >
> > > Thanks!
> > >
> > > Dennis
> > > --
> > > "Life isn't about avoiding the storms. Life is about learning how to
> > > dance in the rain."
> > > - Unknown
> > >
> > > ------------------------
> > > Dennis L. Wade

> > > KG6ZI
> > > Carmichael, CA
> > >
> >
> >
> >
>
>
>
> --
> "Life isn't about avoiding the storms. Life is about learning how to dance
> in the rain."
> - Unknown
>
> ------------------------
> Dennis L. Wade
> KG6ZI
> Carmichael, CA
>
>
> [Non-text portions of this message have been removed]
>

29592. Re: [TS-520_820_530_830] Re: TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 21:40:00 UTC
From: Chris Parnell
Topic: 29570 Message: 29592

Hi All,

Just a quick update to let you know that I found the culprit to my misaligned TS-830s and all is now correct and on frequency.
Thank you to all that replied, and a special thanks to Gordon N6WK for his guidance.

Now☐ On to replacing the cathode resistors under the finals to bring the current down to 225mA.

Cheers
Chris, ZL1CDP

From: w5rkl <w5rkl@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Tue, 01 Feb 2011 18:10:00 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-830s alignment question.

A quick way to tell if the PLL is the source of the frequency problem simply measure the VCO frequency at the RF Unit's VCO terminal. The VCO frequency should be the same whether in TX or RX. You will have to compare the RF Units' VCO frequency to the VCO frequencies in the 830 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "paulrshinn" <subscriptions@...> wrote:
>
> My 830 TX and RX are off by a BUNCH. The displayed TX freq. is correct, but when it switches back into RX mode, the freq. display reads 7 kc. off. Actual RX freq. is OK, just the display is way off. How would I fix that? If I use RIT, then the display might read right, but then actual RX freq. is way off.
>
>
> --- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , n6wk@ wrote:
> >
> > Hi Chris,
> > That is very strange that the TX and RX frequencies don't match then.
> > Have you checked the output with a freq counter and a loop around the
> > coax? Does it match the Digital display on the 830?
> > Never TX into the counter directly however :-)
> > Maybe The only thing you could do is tweak the caps on the PLL board for

> > USB and LSB to get them to be on, or maybe the 990 is off?
> > How far off does your 990 show the 830 is?
> > I have never had this issue in any of the 830's I have aligned.
> >
> > 73,
> > Gordon
> >
> >
> > On 1/31/2011 9:25 PM, Chris Parnell wrote:
> > >
> > > Hi Gordon. Yea measures 10Mhz.
> > >
> > > Ta
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 1/02/2011, at 5:18 PM, n6wk@ <mailto:n6wk%40n6wk.com> wrote:
> > >
> > > > Hi Chris,
> > > > Connect your freq counter to TP2 on the PLL board. It should be
> > > 10.0000,
> > > > if not adjustTC1 on the PLL board until it is.
> > > > If your LSB TX and Rx are the same, then your receive and TX freq
> > > should
> > > > also be the same unless you have a problem on the RIT circuit.
> > > > Make sure the RIT stays the same when at zero, whether button in or
> > > out.
> > > > If not, then adjust VR2 on the AF board until it is.
> > > >
> > > > 73,
> > > > Gordon
> > > >
> > > > On 1/31/2011 7:28 PM, Chris Parnell wrote:
> > > >>
> > > >> Hi Gordon, thanks for the response.
> > > >>
> > > >> Yes, as per the service manual, LSB TX/RX is the same frequency and
> > > the CW
> > > >> offset is correct too.
> > > >> Master Osc at 10.0000? - Not sure... Where do I check for that?
> > > >>
> > > >> Cheers
> > > >> Chris
> > > >>
> > > >> On 1/02/11 10:48 AM, "n6wk@ <mailto:n6wk%40n6wk.com>
> > > <mailto:n6wk%40n6wk.com>"
> > > >> <n6wk@ <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>>
> > > wrote:
> > > >>

> > > >>> Chris,
> > > >>> Be sure to check that the LSB Rec and TX frequency is the same as in
> > > >>> step 3 of the service manual.
> > > >>> If not, you adjust VR2 until it is in LSB. Once that is set, then you
> > > >>> adjust the TC2 LSB and TC3 USB for the proper frequency.
> > > >>> For CW you adjust VR3 to get the correct offset. all these are on the
> > > >>> PLL board
> > > >>> Is master Osc at 10.00000 ?
> > > >>>
> > > >>> 73,
> > > >>> Gordon
> > > >>>
> > > >>> On 1/31/2011 1:37 PM, Chris Parnell wrote:
> > > >>>>
> > > >>>> Sounds like what I am referring to Greg... The frequency counter
> > > reads
> > > >>>> absolutely correct for what page 33 of the SM states, so I was
> > > >> wondering
> > > >>>> if there was anything else that adjusted the frequency slightly.
> > > >>>>
> > > >>>> Cheers
> > > >>>> Chris
> > > >>>>
> > > >>>> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@
> > > <mailto:greg.anders%40synopsys.com>
> > > >> <mailto:greg.anders%40synopsys.com>
> > > >>>> <mailto:greg.anders%40synopsys.com>> wrote:
> > > >>>>
> > > >>>>> Hi Chris,
> > > >>>>>
> > > >>>>> I can't really say, I had three 830's but sold them all. I do
> > > remember
> > > >>>>> an adjustment for CW,USB and LSB carriers to center them in the
> > > filter
> > > >>>>> passband. It made a significant
> > > >>>>> Difference as all three units I bought needed tweaking for
> > > USB/LSB. If
> > > >>>>> you switch between USB/LSB on a clear frequency the pitch of the
> > > noise
> > > >>>>> should be roughly the same for both USB and LSB. I believe the
> > > manual
> > > >>>>> states what the frequencies for each should be, I used a frequency
> > > >>>>> counter to monitor the adjustment.
> > > >>>>>
> > > >>>>> Greg
> > > >>>>> KG6YV
> > > >>>>>
> > > >>>>> From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>

> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > > >>>> Parnell
> > > >>>>> Sent: Monday, January 31, 2011 1:06 PM
> > > >>>>> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> Subject: Re: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>> Hi Greg, not in front of the service manual right now (at
> > > work)Â© Are
> > > >>>> you
> > > >>>>> referring to the adjustment on the PLL board (TC2, TC3, VR2 and
> > > VR3)?
> > > >>>>> (from
> > > >>>>> memory)
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>> From: Greg Anders
> > > >>>>> <greg.anders@ <mailto:greg.anders%40synopsys.com>
> > > <mailto:greg.anders%40synopsys.com>
> > > >>>>
> > > <mailto:greg.anders%40synopsys.com><mailto:greg.anders%40synopsys.com>>
> > > >>>>> Reply-To:
> > > >>>>> <TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>>
> > > >>>>> Date: Mon, 31 Jan 2011 13:04:32 -0800
> > > >>>>> To:
> > > >>>>> "TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>

> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>"
> > > >>>>> <TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroup
> > > >>>>> s.com>>
> > > >>>>> Subject: RE: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>> Yes sir Chris,
> > > >>>>>
> > > >>>>> It sounds like your carrier frequencies are off slightly but then
> > > >> again
> > > >>>>> perhaps you already set them to spec....
> > > >>>>>
> > > >>>>> Greg
> > > >>>>>
> > > >>>>> From:
> > > >>>>> TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroups
> > > >>>>> .com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> [mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yah
> > > >>>>> oogroups.com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > > >>>> Parnell
> > > >>>>> Sent: Monday, January 31, 2011 11:48 AM
> > > >>>>> To:
> > > >>>>> TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>
> > > >>>>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > >>>> 0yahoogroups
> > > >>>>> .com>
> > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>>> Subject: [TS-520_820_530_830] TS-830s alignment question.
> > > >>>>>
> > > >>>>> Hi Everyone,
> > > >>>>>
> > > >>>>> Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
> > > >>>>> Voltmeter
> > > >>>>> etc. All aligned really well and on-spec.
> > > >>>>>
> > > >>>>> The only issue I have is that on transmit, (monitoring on my
> > > FT-990),
> > > >>>> on
> > > >>>>> USB
> > > >>>>> I am slightly low on frequency and on LSB I am slightly high on
> > > >>>> transmit
> > > >>>>> frequency.
> > > >>>>>
> > > >>>>> Any ideas?
> > > >>>>>
> > > >>>>> Thanks, Chris ZL1CDP
> > > >>>>>
> > > >>>>> Sent from my iPhone
> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
> > > >>>>>
> > > >>>>>
> > > >>>>>
> > > >>>>> [Non-text portions of this message have been removed]
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> > > > > Yahoo! Groups Links
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[Non-text portions of this message have been removed]

29593. TS-520S Crystal Calibrator question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-01 23:48:13 UTC
From: John
Topic: 29593 Message: 29593

I am having difficulty when using the crystal calibrator on my TS-520S. It gives me birdies about every 25kHz as expected, but they do not occur at even 25kHz VFO markings. I have calibrated my DG-5 to WWV (15.000 mHz) and several stations come in as expected by the DG-5 indications, but the calibrator is off about 1.5 kHz or so.

I have tried to zero beat the calibrator against WWV as per the manual, but it won't line up. Maybe I'm doing something wrong, but a "zero beat" to me means the tone decreases in pitch until it goes away (the "zero beat" and then rises again in pitch. The calibrator tone goes from low pitch to high pitch to low pitch across the range of about 2 khz, which seems the opposite of zero beat. I have also tried using a frequency counter, per the service manual (counter at test point MO on Marker Board). I am unable to get a stable frequency reading to set the calibrator. What am I doing wrong?

John KD5ZGX

29594. Re: [TS-520_820_530_830] TS-520S Crystal Calibrator question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 01:22:00 UTC
From: John Davidson
Topic: 29593 Message: 29594

From: John <pyrrus2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, February 1, 2011 6:48:13 PM
Subject: [TS-520_820_530_830] TS-520S Crystal Calibrator question

Good luck...JD
I have tried to zero beat the calibrator against WWV as per the manual, but it won't line up. Maybe I'm doing something wrong, but a "zero beat" to me means the tone decreases in pitch until it goes away (the "zero beat" and then rises again in pitch. The calibrator tone goes from low pitch to high pitch to low pitch across the range of about 2 khz, which seems the opposite of zero beat. I have also tried using a frequency counter, per the service manual (counter at test point MO on Marker Board). I am unable to get a stable frequency reading to set the calibrator. What am I doing wrong?

John KD5ZGX

  Using WWV can be tricky due to the 400 and 600 hZ tone modulation in most of the minute cycle. You should do your Zero beating while the second ticks are sent without the tone.

[Non-text portions of this message have been removed]

29595. 6146Ws Tubes.....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 01:40:02 UTC
From: usps52
Topic: 29595 Message: 29595

Just ordered and rec'd 5 NOS GE 6146Ws from Tube Depot. They were ON SALE, 5 for 14 bucks each, just add 4.95 for FEDEX ground shipping...best deal I have found and I have been all over the internet looking for past 2 weeks....packed really well as well...if you need some, check it out for yourself. Randy, KA4AQM

29596. TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 02:46:37 UTC
From: jwimmer@bellsouth.net
Topic: 29596 Message: 29596

I have a TS-820S and while it receives great, if I plug in any of the 3 D-104 mic's I have, I kill the receive audio. I have checked to make sure the mics are wired correctly as follows:

Pin 1 - white
Pin 2 - red
Pin 3 - black
Pin 4 - shield

Pin 1 and 4 are mic, 2 and 3 are key. Everything to me looks fine, but I can't for the life of me figure out why this might be happening!

Any words of wisdom from veteran 820 owners who like the Astatic mics would be humbly and greatly appreciated!

Thanks much
Jeff

29597. Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 03:47:05 UTC
From: Scott Litz
Topic: 29596 Message: 29597

JEFF CHECK UNDERNEATH THE BOTTOM SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF ITS A POWER MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE AUDIO OUT WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM

--- On Tue, 2/1/11, jwimmer@bellsouth.net <jwimmer@...> wrote:

> From: jwimmer@... <jwimmer@...>
> Subject: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 8:46 PM
> I have a TS-820S and while it
> receives great, if I plug in any of the 3 D-104 mic's I
> have, I kill the receive audio. I have checked to make
> sure the mics are wired correctly as follows:
>
> Pin 1 - white
> Pin 2 - red
> Pin 3 - black
> Pin 4 - shield
>
> Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> me looks fine, but I can't for the life of me figure out why
> this might be happening!
>
> Any words of wisdom from veteran 820 owners who like the
> Astatic mics would be humbly and greatly appreciated!
>
> Thanks much
> Jeff
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

29598. Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 03:49:08 UTC
From: Scott Litz
Topic: 29596 Message: 29598

THE SWITCH WILL BE UNDER THE BOTTOM COVER UNLESS ITS THE OLD DEAD HEAD AND THEN SOME ONE HAS REWIRED FOR ELECTRONIC KEYING . KC0ROM

--- On Tue, 2/1/11, jwimmer@... <jwimmer@...> wrote:

> From: jwimmer@bellsouth.net <jwimmer@...>
> Subject: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 8:46 PM
> I have a TS-820S and while it
> receives great, if I plug in any of the 3 D-104 mic's I
> have, I kill the receive audio. I have checked to make
> sure the mics are wired correctly as follows:
>
> Pin 1 - white
> Pin 2 - red
> Pin 3 - black
> Pin 4 - shield
>
> Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> me looks fine, but I can't for the life of me figure out why
> this might be happening!
>
> Any words of wisdom from veteran 820 owners who like the
> Astatic mics would be humbly and greatly appreciated!
>
> Thanks much
> Jeff
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
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>

29599. Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 03:51:27 UTC
From: Scott Litz
Topic: 29596 Message: 29599

USED THESE MIKES FOR YEARS ,HOPE THIS HELPS .

--- On Tue, 2/1/11, Scott Litz <electronics4002@...> wrote:

> From: Scott Litz <electronics4002@yahoo.com>
> Subject: Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 9:47 PM
> JEFF CHECK UNDERNEATH THE BOTTOM
> SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF ITS A POWER
> MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE AUDIO OUT
> WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM
>
> --- On Tue, 2/1/11, jwimmer@...
> <jwimmer@bellsouth.net>
> wrote:
>
> > From: jwimmer@...
> <jwimmer@...t>
> > Subject: [TS-520_820_530_830] TS-820S loses receive
> when I plug in a D-104 mic
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Tuesday, February 1, 2011, 8:46 PM
> > I have a TS-820S and while it
> > receives great, if I plug in any of the 3 D-104 mic's
> I
> > have, I kill the receive audio. I have checked to
> make
> > sure the mics are wired correctly as follows:
> >
> > Pin 1 - white
> > Pin 2 - red
> > Pin 3 - black
> > Pin 4 - shield
> >
> > Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> > me looks fine, but I can't for the life of me figure
> out why
> > this might be happening!
> >
> > Any words of wisdom from veteran 820 owners who like
> the
> > Astatic mics would be humbly and greatly appreciated!
> >

> > Thanks much
> > Jeff
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
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> >
> >   TS-520_820_530_830-fullfeatured@yahoogroups.com
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> Yahoo! Groups Links
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>   TS-520_820_530_830-fullfeatured@yahoogroups.com
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>

29600. Re: TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 04:05:14 UTC
From: jwimmer@bellsouth.net
Topic: 29596 Message: 29600

Thanks Scott. 2 of them are the T-UG8 base, and they do have the E/R switch. I had read in some other forums, on QRZ and maybe it was Hamuniverse I saw it on that these old D104's should be in relay mode. I have switched the 2 T-UG8 mic's to the relay position, still no joy. The third mic is a T-UP9 base and I won't even bother with it until I get the 2 other mic's working. I keep wondering if it's shorting out the mic input.

--- In TS-520_820_530_830@yahoogroups.com, Scott Litz <electronics4002@...> wrote:
>
> USED THESE MIKES FOR YEARS ,HOPE THIS HELPS .
>
> --- On Tue, 2/1/11, Scott Litz <electronics4002@...> wrote:
>
> > From: Scott Litz <electronics4002@...>
> > Subject: Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Tuesday, February 1, 2011, 9:47 PM
> > JEFF CHECK UNDERNEATH THE BOTTOM
> > SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF ITS A POWER
> > MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE AUDIO OUT
> > WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM
> >
> > --- On Tue, 2/1/11, jwimmer@...
> > <jwimmer@...>
> > wrote:
> >
> > > From: jwimmer@...
> > <jwimmer@...>
> > > Subject: [TS-520_820_530_830] TS-820S loses receive
> > when I plug in a D-104 mic
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Tuesday, February 1, 2011, 8:46 PM
> > > I have a TS-820S and while it
> > > receives great, if I plug in any of the 3 D-104 mic's
> > I
> > > have, I kill the receive audio. I have checked to
> > make
> > > sure the mics are wired correctly as follows:
> > >
> > > Pin 1 - white
> > > Pin 2 - red
> > > Pin 3 - black
> > > Pin 4 - shield
> > >
> > > Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> > > me looks fine, but I can't for the life of me figure

> > out why
> > > this might be happening!
> > >
> > > Any words of wisdom from veteran 820 owners who like
> > the
> > > Astatic mics would be humbly and greatly appreciated!
> > >
> > > Thanks much
> > > Jeff
> > >
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> > >
> > > Yahoo! Groups Links
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> > >   TS-520_820_530_830-fullfeatured@yahoogroups.com
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> > > Yahoo! Groups Links
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> > >   TS-520_820_530_830-fullfeatured@yahoogroups.com
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29601. Re: TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 05:51:46 UTC
From: w5rkl
Topic: 29596 Message: 29601

Does the 820 switch from receive to transmit, meaning the relays energize when the microphone is plugged into the 820 without the PTT bar squeezed? If this is what is happening then the microphone wiring inside the base and the 4 pin microphone plug is wired incorrectly.

The microphone itself, when properly wired, has nothing to do with the receive audio unless, as I said above, the 820 switches from receive to transmit due to bad wiring. I also would not rule out shorted microphone connections at the plug or in the microphone cable itself.

Looking at the 820s' front panel microphone socket, the top 2 pins, 3 and 2, are the PTT pins. If these pins are shorted together the 820 will switch from receive to transmit, disabling the receiver which leads to loss of receive audio.

Remove the microphone element from the top of the D-104 stand by loosening the nut at the base of the top microphone element. Once the nut is loosened completely pull the top off of the stand. This is important to ensure the element is not subjected to DC voltage from an ohm meter.

The PTT bar must not be squeezed by your hand or the PTT slide bar, if so equipped. Some D-104 microphones have had the slide bar removed.

Looking at the 4 pin microphone plug, with the curved portion at the bottom, the top 2 pins are pins 3 and 2, PTT. Connect an ohm meter between these pins without squeezing the PTT bar. If the ohm meter shows a short then the microphone wiring is wrong.

A properly wired D-104, with the ohm meter connected between pins 3 and 2 on the microphone plug, squeezing the PTT bar should cause the ohm meter to indicate a short. Releasing the PTT bar should indicate an "open".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jwimmer@..." <jwimmer@...> wrote:
>
> Thanks Scott. 2 of them are the T-UG8 base, and they do have the E/R switch. I had read in some other forums, on QRZ and maybe it was Hamuniverse I saw it on that these old D104's should be in relay mode. I have switched the 2 T-UG8 mic's to the relay position, still no joy. The third mic is a T-UP9 base and I won't even bother with it until I get the 2 other mic's working. I keep wondering if it's shorting out the mic input.
>
> --- In TS-520_820_530_830@yahoogroups.com, Scott Litz <electronics4002@> wrote:
> >
> > USED THESE MIKES FOR YEARS ,HOPE THIS HELPS .
> >
> > --- On Tue, 2/1/11, Scott Litz <electronics4002@> wrote:

> >
> > > From: Scott Litz <electronics4002@>
> > > Subject: Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Tuesday, February 1, 2011, 9:47 PM
> > > JEFF CHECK UNDERNEATH THE BOTTOM
> > > SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF ITS A POWER
> > > MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE AUDIO OUT
> > > WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM
> > > >
> > > > --- On Tue, 2/1/11, jwimmer@
> > > > <jwimmer@>
> > > > wrote:
> > > >
> > > > > From: jwimmer@
> > > > <jwimmer@>
> > > > > Subject: [TS-520_820_530_830] TS-820S loses receive
> > > > when I plug in a D-104 mic
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Date: Tuesday, February 1, 2011, 8:46 PM
> > > > > I have a TS-820S and while it
> > > > > receives great, if I plug in any of the 3 D-104 mic's
> > > > I
> > > > > have, I kill the receive audio. I have checked to
> > > > make
> > > > > sure the mics are wired correctly as follows:
> > > > >
> > > > > Pin 1 - white
> > > > > Pin 2 - red
> > > > > Pin 3 - black
> > > > > Pin 4 - shield
> > > > >
> > > > > Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> > > > > me looks fine, but I can't for the life of me figure
> > > > out why
> > > > > this might be happening!
> > > > >
> > > > > Any words of wisdom from veteran 820 owners who like
> > > > the
> > > > > Astatic mics would be humbly and greatly appreciated!
> > > > >
> > > > > Thanks much
> > > > > Jeff
> > > > >
> > > > >
> > > > >
> > > > > ------------------------------------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >

> > > >
> > > >   TS-520_820_530_830-fullfeatured@yahoogroups.com
> > > >
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> > > Yahoo! Groups Links
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> > >
> > >   TS-520_820_530_830-fullfeatured@yahoogroups.com
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>

29602. Ts-830s final unit info

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 06:56:50 UTC
From: Chris Parnell
Topic: 29602 Message: 29602

Hi all,

Just replaced the cathode resistors (that were blown) in my final unit underneath the PA on the TS-830s.
After reconnecting the final unit board with screws and putting tubes in and plate caps on top, I then obviously fitted the PA shield casing.

Turned on and there is no frequency display!!!!! Grrrrrrrrr☐. Any ideas what could have gone wrong?

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

29603. D-104 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 06:57:57 UTC
From: kd8hmo
Topic: 29603 Message: 29603

I have a 520S and a 530S. Will a D-104 with the amplified T-UG8 stand match up with these radios as far as impedance goes? I read where the amp was an attempt to match the old crystal element to the newer radios. Also, would it be a good idea to replace the electrolytic caps on the amplifier of this mic?

29604. Re: [TS-520_820_530_830] Ts-830s final unit info

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 07:04:00 UTC
From: Chris Parnell
Topic: 29602 Message: 29604

Sorry all… Ignore that last post… Me being stupid.
I must have caught the bandswitch as it was on Aux!

Sorry.
Chris, ZL1CDP

From: Chris Parnell <cparnell1001@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Wed, 02 Feb 2011 19:56:50 +1300
To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Ts-830s final unit info

Hi all,

Just replaced the cathode resistors (that were blown) in my final unit
underneath the PA on the TS-830s.
After reconnecting the final unit board with screws and putting tubes in and
plate caps on top, I then obviously fitted the PA shield casing.

Turned on and there is no frequency display!!!!! Grrrrrrrrr?. Any ideas what
could have gone wrong?

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29605. Re: D-104 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 14:00:16 UTC
From: w5rkl
Topic: 29603 Message: 29605

The amplified D-104 has a low impedance which will work okay with the 530 but not the 520.

Why or what makes you believe the electrolytic capacitors need replacing? Is there a problem with the microphone amplifier that, through troubleshooting, the source of the problem points to one or more of the electrolytic capacitors as the source of the problem or are you thinking of replacing the capacitors simply because they are old?

I mean no disrespect but if you are thinking of replacing the electrolytic capacitors simply because you were told or you read where a ham or group of hams believe it's good insurance to replace them because they are "old" then that's wasteful, poor troubleshooting/maintenance practice, and just pure non-sense!

Replacing any component, regardless of what the component is, should ONLY be done "if" there is evidence through troubleshooting that proves that component(s) has failed! Don't fall for this "it's good insurance.." or "they're old so they will fail soon.." non-sense. Therefore, unless you have solid evidence that one or more electrolytic capacitors, or any other components for that matter, is/are a source of a problem with the microphone or any other electronic equipment, do NOT replace them!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> I have a 520S and a 530S. Will a D-104 with the amplified T-UG8 stand match up with these radios as far as impedance goes? I read where the amp was an attempt to match the old crystal element to the newer radios. Also, would it be a good idea to replace the electrolytic caps on the amplifier of this mic?
>

29606. Re: Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 17:02:24 UTC
From: aisea6
Topic: 29587 Message: 29606

It'll be good to have fixed audio levels for receive and transmit like other radios without mentioning any brand names.

I am wondering how the rest of us did our wiring.
I took the receiver output via a resistor at the rear speaker jack and on transmit use the mic socket and ensure the processor is switched off.
Thanks guys I'll have a look at the AV1 fixed audio level to see if there's enough level.
I don't think I would like to cut any more holes or modify the factory wiring as it's for something else.

For sound card modes bypassing the processor is more important for me.

As techs are never satisfied.

Aisea (3D2AA)

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I don't know if anyone else has used the AV1 audio or not. AV1 is fixed audio level from the audio preamplifier which is most likely in the "mv" (millivolt) level.
>
> I understand not wanting to drill holes in the rear panel. The rear panel would have to be removed and the holes lined up horizontally so they are even and a punch used to make a mark so the drill bit doesn't wander around. Just a thought.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Dennis Wade <sacramento.cyclist@> wrote:
> >
> > Thanks Mike. Those are good ideas. The pin 3 audio will need to be checked
> > before I use it, but it was the answer given in the earlier thread.
> >
> > Has anyone else used the audio from plug 2, pin 3 (AV1)?
> >
> > The RCA jack idea is a good one, but the point was to not have to do any
> > drilling, etc to accomplish the task.
> >
> > That is still an option though.
> >
> > Thanks!
> >
> > Dennis

> >
> > On Tue, Feb 1, 2011 at 10:27 AM, w5rkl <w5rkl@> wrote:
> >
> > >
> > >
> > > Dennis,
> > >
> > > Fixed audio is present at the AF Units' plug 2 pin 3 (AV1). However, the
> > > level of audio here may not be sufficient to drive the sound cards interface
> > > to the sound card microphone or line input connections. A scope connected
> > > here could give you an idea of the audio level.
> > >
> > > Transmit audio from the sound card interface to the 830 can be applied to
> > > the IF Unit plug 7 pin 5. This is after the microphone preamp. Connecting at
> > > this point will allow the MIC gain to remain at it's normal SSB voice
> > > setting. The sound card interface transmit audio level pot is adjusted and
> > > not the MIC gain.
> > >
> > > I'm not sure if I would rewire the Remote DIN socket or any of the rear
> > > panel DIN sockets for that matter. A better solution is to install 3 female
> > > RCA sockets on the rear panel, one for receiver audio, one for transmit
> > > audio, and one for PTT. If you do it right, take your time, the finish
> > > product will look professional. Use shielded cable, simple interconnecting
> > > cables used to connect VCRs to stereo amplifiers will work fine. Run the
> > > shielded cables along the wiring harness and tie wrap them to the wiring
> > > harness after the connections have been made. Black cables are good for
> > > this.
> > >
> > > Just my 2 cents.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com<TS-520_820_530_830%40yahoogroups.com>,
> > > Dennis Wade <sacramento.cyclist@> wrote:
> > > >
> > > > Good Morning everyone,
> > > >
> > > > I had an idea for putting an actual rear panel connector
> > > > (actually rewiring the existing "REMOTE" DIN jack) to allow rear panel
> > > > connections for sound card/computer modes that require audio out, mic
> > > > and PTT lines.
> > > >
> > > > Some time ago there was a thread that ended up with a
> > > > source for fixed level audio that would be appropriate for putting
> > > > into a sound card. In looking at this and wondering how to bring it
> > > > out of the radio with some elegance, I looked into just what the rear
> > > > DIN jacks were used for. I discovered that the REMOTE jack already

> > > > had speaker audio and PTT, plus one unused pin (pin 7).
> > > >
> > > > My thought is to replace the speaker audio line with the
> > > > fixed level audio, bring a high level mic input to the now unused pin
> > > > 7, and utilize the PTT line for keying.
> > > >
> > > > Am I overlooking something? If someone could also look at
> > > > the schematic and give me some opinion about the value of (or not)
> > > > doing this, that would be appreciated.
> > > >
> > > > Thanks!
> > > >
> > > > Dennis
> > > > --
> > > > "Life isn't about avoiding the storms. Life is about learning how to
> > > > dance in the rain."
> > > > - Unknown
> > > >
> > > > -------------------------
> > > > Dennis L. Wade
> > > > KG6ZI
> > > > Carmichael, CA
> > > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > --
> > > "Life isn't about avoiding the storms. Life is about learning how to dance
> > > in the rain."
> > > - Unknown
> > >
> > > -------------------------
> > > Dennis L. Wade
> > > KG6ZI
> > > Carmichael, CA
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
>

29607. Re: Adding a data port to an 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-02 19:57:36 UTC
From: w5rkl
Topic: 29587 Message: 29607

Aisea,

I have used the MIC socket for PSK, RTTY, and SSTV sound card transmit audio and receiver audio to the sound card by parallel connections to the speaker. I don't care for this arrangement.

The TS-520S, TS-520SE, TS-820, and TS-820S, have Phone Patch IN and Phone Patch OUT sockets on the rear panels. Unfortunately, none of these sockets provide for fixed audio levels, whether it's receive audio or transmit audio. The Phone Patch IN audio level from the sound card interface to the transmitters' speech amplifier is controlled by the MIC gain. The Phone Patch IN audio level from the radio to the sound card is controlled by the volume control. Again, no fixed audio at any of these transceivers' phone patch IN/OUT sockets.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "aisea6" <aisea@...> wrote:
>
> It'll be good to have fixed audio levels for receive and transmit like other radios without mentioning any brand names.
>
> I am wondering how the rest of us did our wiring.
> I took the receiver output via a resistor at the rear speaker jack and on transmit use the mic socket and ensure the processor is switched off.
> Thanks guys I'll have a look at the AV1 fixed audio level to see if there's enough level.
> I don't think I would like to cut any more holes or modify the factory wiring as it's for something else.
>
> For sound card modes bypassing the processor is more important for me.
>
> As techs are never satisfied.
>
> Aisea (3D2AA)

29608. Re: Burned Resistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 03:25:22 UTC
From: kevin
Topic: 29566 Message: 29608

Mike et al,
You are very correct about poor troubleshooting form. I have burned myself countless times by replacing or fixing things that do not need fixing. Other than slightly lower output than the book might say (and who is to say if my wattmeters are accurate) and an S meter that doesn't zero out the radio works fine, plenty of drive etc.

I guess I was really horrified when I opened it up. I have two other Hybrids and they are fairly clean looking inside. This one looks horrible even though it works well. Maybe it belonged to a smoker and that contributes to its internal bad looks. The face place is quite worn by the load knob and send switch so I guess it was also used a lot. At any rate I am going to take a step back and proceed with more caution and good form.

Do you know if I can test those resistors in place?"
Kevin KD0ILM

"If you're going to be stupid you gotta be tough".

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I was cleaning up my 520 and wish I hadn't looked inside. While the rig works pretty well it looks like heck inside. I found 4 resistors near the transformer that look burned. I have put pictures in a folder called KD0ILM in the pictures of this forum. I wonder if one of you fine fellows can tell me what they are.
> Best Kevin
> KD0ILM
>

29609. Re: TS 520 NOT!!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 03:27:06 UTC
From: kevin
Topic: 29579 Message: 29609

Jeb,
Which Kevin are you referring to? I am the Kevin that recently posted about "burned resistors" on my 520. Now you have me worried.
Kevin
KD0ILM

--- In TS-520_820_530_830@yahoogroups.com, Jeb Brygider <jeb_brygider@...> wrote:
>
> I hate to break this to you Kevin, but according to the pictures, this is not a 520! LOL
> It's a 530, much different animal. I know I'm being a pain of a stickler, but we all seem to lump the 520 -830 series in a group and many of us, (myself included) sometimes call them all 520 series radios. I know in my case that it's just old age creeping upon me. If you hadn't posted the pics, I'm sure many of us would be mentally trying to troubleshoot a 520, while we should have been thinking about a 530! As we used to say back in Maine : "It's the same, but different!"
> Carry on the good quest! It deserves to be brought back to it's original glory! Good luck, and listen to the good advice from the group!
> Jeb Brygider KE7LIU (only been doing this since 1959, and learning new stuff every day!)
>   Maker of fine solder smoke since 1952!
>
>
>
>
> [Non-text portions of this message have been removed]
>

29610. Philips QE05-40 tubes in Hybrid as finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 08:30:50 UTC
From: Chris Parnell
Topic: 29610 Message: 29610

Hi all,

Has anyone used the Philips QE05/40 tubes in Kenwood Hybrids? They are the equivalent of the 6146B I believe□. I have two new ones that came with the 830 and wondered if they were reliable.

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

29611. Re: Burned Resistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 15:59:27 UTC
From: w5rkl
Topic: 29566 Message: 29611

Kevin,

Yes you can test/measure the resistors in place but the resistance will be less than each individual resistor. This is normal since the resistors, R2 and R3 (both 10 ohms each) are wired in "parallel". The resistance should be around 5 ohms (2 x 10 ohms in parallel -- 10 x 10 / 10 + 10 = 5). When measuring R2 and R3, set the 520s' meter switch to a position other than IP. You can also measure resistors R6 (100 ohms) and R4 (3.3K) also with the meter switch to a position other than IP.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> Mike et al,
> You are very correct about poor troubleshooting form. I have burned myself countless times by replacing or fixing things that do not need fixing. Other than slightly lower output than the book might say (and who is to say if my wattmeters are accurate) and an S meter that doesn't zero out the radio works fine, plenty of drive etc.
>
> I guess I was really horrified when I opened it up. I have two other Hybrids and they are fairly clean looking inside. This one looks horrible even though it works well. Maybe it belonged to a smoker and that contributes to its internal bad looks. The face place is quite worn by the load knob and send switch so I guess it was also used a lot. At any rate I am going to take a step back and proceed with more caution and good form.
>
> Do you know if I can test those resistors in place?"
> Kevin KD0ILM
>
>
> "If you're going to be stupid you gotta be tough".

29612. Wire wrap tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 12:36:28 UTC
From: puettgt1
Topic: 29612 Message: 29612

Does anyone know the size of wire wrap tool used on Kenwood 830 Thanks

29613. TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 14:19:33 UTC
From: John
Topic: 29613 Message: 29613

Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear train because it was gritty in operation. I'm an engineer, so this should be no problem, right? After all, it is just a simple mechanical mechanism. No problem removing it, cleaned and relubed the gears ok. Opps... I tugged a little too hard on the shaft the knob goes on and suddenly I had it in my hand. I tried to put it back in, but it clearly wouldn't go. Took the black knurled fitting off, and four little balls fell out - 2 bigger ones, two smaller ones. The outer hollow shaft attached to the pinion gear has three holes, and there is a groove in the inner shaft, so I postulated that one ball goes into the hollow shaft as a base bearing, and the other three go into the holes to retain and act as a planetary gear set, retained by the bearing race inside the black knurled fitting.

So much for logic - which ball goes where? No matter how I assemble the mechanism, it either has too much slack and the knob spind without reliably turning the VFO, or it is very hard to turn, yet very positive. Right now, I would more than settle for the previous gritty feeling. Help!

John KD5ZGX

29614. Re: Philips QE05-40 tubes in Hybrid as finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 16:29:48 UTC
From: w5rkl
Topic: 29610 Message: 29614

Chris,

Phillips enter-electrode capacitance specifications indicate the QE05-40 is equal to a 6146/6146A, not a 6146B. This doesn't mean this tube should never be used in any of the hybrids. It simple means the QE05-40 enter-electrode capacitance values are the same as a 6146 or 6146A and not a 6146B.

Contrary to popular belief, the enter-electrode capacitance values between the 6146/6146A and 6146B are not significantly different. The difference is the Cathode to Plate capacitance which is .22pf in the 6146B and .24pf in the 6146/6146A. That is only ".024pf" difference in Cathode to Plate enter-electrode capacitance values between the 6146/6146A and 6146B tubes. It is true the 6146B has a much heftier plate which results in a lower maixmum RF power rating in the 6146/6146A as compared to the 6146B. However, .024pf does not appear to be a significant difference in Cathode to Plate enter-electrode capacitance to suggest not using either a pair of 6146A or 6146B tubes in the hybrids. One would have to keep in mind the lower power rating of the 6146/6146A if those are used. Naturally one would not "mix" a 6146A and a 6146B in the final amplifier, keep the tubes the same, either 2 x 6146A or 2 x 6146B. The final amplifiers' neutralization should always be checked and if necessary, adjusted to achieve proper final amplifier neutralization as outlined in the service manuals.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all,
>
> Has anyone used the Philips QE05/40 tubes in Kenwood Hybrids? They are the
> equivalent of the 6146B I believe□. I have two new ones that came with the
> 830 and wondered if they were reliable.
>
> Thanks
> Chris, ZL1CDP
>
>
>
>
> [Non-text portions of this message have been removed]
>

29615. Re: Philips QE05-40 tubes in Hybrid as finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 17:01:50 UTC
From: w5rkl
Topic: 29610 Message: 29615

The difference of ".024pf" should be ".02pf". The enter-electrode capacitance difference between the 6146/6146A and 6146b is ".02pf" not ".024pf". Sorry about that, I was typing too fast.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
>
> Chris,
>
> Phillips enter-electrode capacitance specifications indicate the QE05-40 is equal to a 6146/6146A, not a 6146B. This doesn't mean this tube should never be used in any of the hybrids. It simple means the QE05-40 enter-electrode capacitance values are the same as a 6146 or 6146A and not a 6146B.
>
> Contrary to popular belief, the enter-electrode capacitance values between the 6146/6146A and 6146B are not significantly different. The difference is the Cathode to Plate capacitance which is .22pf in the 6146B and .24pf in the 6146/6146A. That is only ".024pf" difference in Cathode to Plate enter-electrode capacitance values between the 6146/6146A and 6146B tubes. It is true the 6146B has a much heftier plate which results in a lower maixmum RF power rating in the 6146/6146A as compared to the 6146B. However, .024pf does not appear to be a significant difference in Cathode to Plate enter-electrode capacitance to suggest not using either a pair of 6146A or 6146B tubes in the hybrids. One would have to keep in mind the lower power rating of the 6146/6146A if those are used. Naturally one would not "mix" a 6146A and a 6146B in the final amplifier, keep the tubes the same, either 2 x 6146A or 2 x 6146B. The final amplifiers' neutralization should always be checked and if necessary, adjusted to achieve proper final amplifier neutralization as outlined in the service manuals.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> >
> > Hi all,
> >
> > Has anyone used the Philips QE05/40 tubes in Kenwood Hybrids? They are the
> > equivalent of the 6146B I believe□. I have two new ones that came with the
> > 830 and wondered if they were reliable.
> >
> > Thanks
> > Chris, ZL1CDP
> >

> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29616. Re: [TS-520_820_530_830] Wire wrap tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 18:35:29 UTC
From: Joseph Stiles
Topic: 29612 Message: 29616

Puettgt1,

You are not going to like it...but...these thing are no longer cheap...you
can find them for just wrapping....or unwrapping & wrapping.... I suggest the
latter. Beware of the cheap import stuff. I bought a combo unit (wrap/unwrap)."
"GOOGLE" "JONARD" or look at the JONARD web site...www.jonard.com...I have
a model WDUD-2224...it is made for 22-24ga wire. It will un-wrap/wrap pretty
much all the wires you have in the KW hybrids. Just be aware...most of the wires
have been "wrapped" for 30 years..and no matter how gentle you are..you're gonna
break some. Good luck.....................

73's joe wb7uqu

_____
From: puettgt1 <Puettgt1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, February 3, 2011 4:36:28 AM
Subject: [TS-520_820_530_830] Wire wrap tool

Does anyone know the size of wire wrap tool used on Kenwood 830 Thanks

[Non-text portions of this message have been removed]

29617. RE: [TS-520_820_530_830] Wire wrap tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 18:46:18 UTC
From: brad
Topic: 29612 Message: 29617

OK Machine INC supplies the Telephone industry who has wire wrapped for over 40 years. Check them out. They have hand tools that you turn after inserting the wire and they have wrapping guns that are hand squeezed as well as power torqued units. Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Thursday, February 03, 2011 13:35
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Wire wrap tool

Puettgt1,

You are not going to like it...but...these thing are no longer cheap...you can find them for just wrapping....or unwrapping & wrapping.... I suggest the
latter. Beware of the cheap import stuff. I bought a combo unit (wrap/unwrap)."
"GOOGLE" "JONARD" or look at the JONARD web site...www.jonard.com...I have a model WDUD-2224...it is made for 22-24ga wire. It will un-wrap/wrap pretty

much all the wires you have in the KW hybrids. Just be aware...most of the wires
have been "wrapped" for 30 years..and no matter how gentle you are..you're gonna
break some. Good luck.....................

73's joe wb7uqu

From: puettgt1 <Puettgt1@... <mailto:Puettgt1%40hotmail.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thu, February 3, 2011 4:36:28 AM
Subject: [TS-520_820_530_830] Wire wrap tool

Does anyone know the size of wire wrap tool used on Kenwood 830 Thanks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29618. Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 20:14:18 UTC
From: PGA
Topic: 29613 Message: 29618

John,

I had the same problem with a TS-180s, wich has more or less the same reduction gear. There should be 2 and 3 balls. The two balls go in the hollow shaft, with the spring first. For placing the 3 other balls you unscrew the copper colored bushing. You will see tree holes were the balls will fit. Push in the small axis, put the 3 ball bearings in and screw the copper bushing in it's place. For easy reassembling use some grease to fix the balls to the holes.
The only thing I don't remember is wich balls go where but that is easely found out. There should be 5 in total.

At the time (couple of years ago) I have even found a exploded view of the assembly in one of the Kenwood service manuals, but I have to search for that again in my archive.

Still hope this helps you on your way,

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@...> wrote:
>
> Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear train because it was gritty in operation. I'm an engineer, so this should be no problem, right? After all, it is just a simple mechanical mechanism. No problem removing it, cleaned and relubed the gears ok. Opps... I tugged a little too hard on the shaft the knob goes on and suddenly I had it in my hand. I tried to put it back in, but it clearly wouldn't go. Took the black knurled fitting off, and four little balls fell out - 2 bigger ones, two smaller ones. The outer hollow shaft attached to the pinion gear has three holes, and there is a groove in the inner shaft, so I postulated that one ball goes into the hollow shaft as a base bearing, and the other three go into the holes to retain and act as a planetary gear set, retained by the bearing race inside the black knurled fitting.
>
> So much for logic - which ball goes where? No matter how I assemble the mechanism, it either has too much slack and the knob spind without reliably turning the VFO, or it is very hard to turn, yet very positive. Right now, I would more than settle for the previous gritty feeling. Help!
>
> John KD5ZGX
>

29619. Re: [TS-520_820_530_830] Wire wrap tool

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 20:21:29 UTC
From: Jim S
Topic: 29612 Message: 29619

You certainly do not need a motorized wrapping gun for the small amount of wrapping and unwrapping that you might need to do on your radio.

Keep in mind that wirewrapping is a one time deal. That is to say, once you unwrap a wire from the terminal, you should solder that terminal to get good electrical bonding. A proper wirewrap is "gas tight" meaning that there is no chance of oxidation taking place between the wrap and the terminal. Once you unwrap and try to re-wrap that wire, this will no longer be the case.

I once had one of those little hand tools, myself. I believe I did get it from OK inc. but it has been a LONG time ago.

Good luck, Jim AG3Y

----- Original Message -----
From: brad
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 03, 2011 1:46 PM
Subject: RE: [TS-520_820_530_830] Wire wrap tool

OK Machine INC supplies the Telephone industry who has wire wrapped for over 40 years. Check them out. They have hand tools that you turn after inserting the wire and they have wrapping guns that are hand squeezed as well as power torqued units. Brad KB2CHY

_____

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Joseph Stiles
Sent: Thursday, February 03, 2011 13:35
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Wire wrap tool

Puettgt1,

You are not going to like it...but...these thing are no longer cheap...you can find them for just wrapping....or unwrapping & wrapping.... I suggest the
latter. Beware of the cheap import stuff. I bought a combo unit (wrap/unwrap)."
"GOOGLE" "JONARD" or look at the JONARD web site...www.jonard.com...I have a model WDUD-2224...it is made for 22-24ga wire. It will un-wrap/wrap pretty

much all the wires you have in the KW hybrids. Just be aware...most of the wires
have been "wrapped" for 30 years..and no matter how gentle you are..you're gonna

break some. Good luck.....................

73's joe wb7uqu

From: puettgt1 <Puettgt1@... <mailto:Puettgt1%40hotmail.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thu, February 3, 2011 4:36:28 AM
Subject: [TS-520_820_530_830] Wire wrap tool

Does anyone know the size of wire wrap tool used on Kenwood 830 Thanks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29620. Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 21:13:08 UTC
From: PGA
Topic: 29613 Message: 29620

An addition to my previous post:
The 2 smallest balls (ca 2.5mm) are for the axel bearing, the other 3 (ca 3mm) are for the reduction balldrive.

73 Wim

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> John,
>
> I had the same problem with a TS-180s, wich has more or less the same reduction gear.
> There should be 2 and 3 balls. The two balls go in the hollow shaft, with the spring first. For placing the 3 other balls you unscrew the copper colored bushing. You will see tree holes were the balls will fit. Push in the small axis, put the 3 ball bearings in and screw the copper bushing in it's place. For easy reassembling use some grease to fix the balls to the holes.
> The only thing I don't remember is wich balls go where but that is easely found out. There should be 5 in total.
>
> At the time (couple of years ago) I have even found a exploded view of the assembly in one of the Kenwood service manuals, but I have to search for that again in my archive.
>
>
> Still hope this helps you on your way,
>
> 73, Wim PA0PGA
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@> wrote:
> >
> > Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear train because it was gritty in operation. I'm an engineer, so this should be no problem, right? After all, it is just a simple mechanical mechanism. No problem removing it, cleaned and relubed the gears ok. Opps... I tugged a little too hard on the shaft the knob goes on and suddenly I had it in my hand. I tried to put it back in, but it clearly wouldn't go. Took the black knurled fitting off, and four little balls fell out - 2 bigger ones, two smaller ones. The outer hollow shaft attached to the pinion gear has three holes, and there is a groove in the inner shaft, so I postulated that one ball goes into the hollow shaft as a base bearing, and the other three go into the holes to retain and act as a planetary gear set, retained by the bearing race inside the black knurled fitting.
> >
> > So much for logic - which ball goes where? No matter how I assemble the mechanism, it either has too much slack and the knob spind without reliably turning the VFO, or it is

very hard to turn, yet very positive. Right now, I would more than settle for the previous gritty feeling. Help!
> >
> > John KD5ZGX
> >
>

29621. Re: [TS-520_820_530_830] Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 21:14:52 UTC
From: Joseph Stiles
Topic: 29613 Message: 29621

I also have had this problem...I'm not an engineer...so I know how to do it...hihi...If I remember right...take a look at the "plate" control...they are (don't quote me on this) identical...as far as where stuff goes. I have not found and internal "exploded" diagram for the VFO gear reduction. But I do remember that.....the grease/lube is real old...and "stuff" is stuck in places where you can't see it...the 3 balls of same size should be on the outside...and one smaller is on the inside hollow shaft...these things are inanimate objects...and don't care how smart you are..or what "degree" you have.....good luck.....

73's joe wb7uqu

From: PGA <wpenders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, February 3, 2011 12:14:18 PM
Subject: [TS-520_820_530_830] Re: TS-520S VFO Knob Issue

John,

I had the same problem with a TS-180s, wich has more or less the same reduction gear.
There should be 2 and 3 balls. The two balls go in the hollow shaft, with the spring first. For placing the 3 other balls you unscrew the copper colored bushing. You will see tree holes were the balls will fit. Push in the small axis, put the 3 ball bearings in and screw the copper bushing in it's place. For easy reassembling use some grease to fix the balls to the holes.
The only thing I don't remember is wich balls go where but that is easely found out. There should be 5 in total.

At the time (couple of years ago) I have even found a exploded view of the assembly in one of the Kenwood service manuals, but I have to search for that again in my archive.

Still hope this helps you on your way,

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@...> wrote:
>
> Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear
>train because it was gritty in operation. I'm an engineer, so this should be no
>problem, right? After all, it is just a simple mechanical mechanism. No
>problem removing it, cleaned and relubed the gears ok. Opps... I tugged a
>little too hard on the shaft the knob goes on and suddenly I had it in my hand.
>I tried to put it back in, but it clearly wouldn't go. Took the black knurled
>fitting off, and four little balls fell out - 2 bigger ones, two smaller ones.

>The outer hollow shaft attached to the pinion gear has three holes, and there is
>a groove in the inner shaft, so I postulated that one ball goes into the hollow
>shaft as a base bearing, and the other three go into the holes to retain and act
>as a planetary gear set, retained by the bearing race inside the black knurled
>fitting.
>
>
> So much for logic - which ball goes where? No matter how I assemble the
>mechanism, it either has too much slack and the knob spind without reliably
>turning the VFO, or it is very hard to turn, yet very positive. Right now, I
>would more than settle for the previous gritty feeling. Help!
>
>
> John KD5ZGX
>

[Non-text portions of this message have been removed]

29622. Used transceiver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-03 21:03:25 UTC
From: dek7nrt
Topic: 29622 Message: 29622

I recently returned to ham radio and I am in the market to purchase a clean, operable, ready to go on the air, Kenwood TS 520/530/820/830 series HF radio. Preferably, a TS-530. But any clean radio in the series indicated, will be appreciated. The radio needs to be shipped to Kennewick, WA, and I have a PayPal account.

Thank you...

Nick Thomas, K7NRT
(702) 468-5431
DEK7NRT@Yahoo
DEK7NRT@Google

29623. Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 01:38:46 UTC
From: Walter Breining
Topic: 29596 Message: 29623

Jeff:

Is your mike the one with 5 wires plus a shield?
If it is,
White is live audio and surrounded by the shield. Plug pin 1
Shield is audio ground. Plug pin 4
Blue is PTT common. Plug pin 3
Red is PTT. Plug pin 2
Black connects to blue when mike is not keyed and is not used with the TS-820.
Yellow connects to the shield when the mike is not keyed and is not used with the TS-820.

Unless your TS-820 has been modified, there is nothing on the mike connection on the radio that will effect the receive, so I am assuming that the receive is dead because the radio is still keyed when you unkey the mike.

Be sure that you are using the TUG-8 and not 9 base.

How many wires does your mike cord have? If it has a blue wire try connecting the Blue wire to pin 3 instead of the Black wire. Use the E position on the switch if your mike has one.

Pin 1 White
Pin 4 Shield
Pin 3 Blue
Pin 2 Red.

Let us know if this works. Let us know if this does not seem to match your version of the TUG-8.

Vy 73, Walt N9WB

----- Original Message -----
From: Scott Litz
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 01, 2011 10:47 PM
Subject: Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

JEFF CHECK UNDERNEATH THE BOTTOM SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF ITS A POWER MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE AUDIO OUT WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM

--- On Tue, 2/1/11, jwimmer@... <jwimmer@...> wrote:

> From: jwimmer@... <jwimmer@...>
> Subject: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 8:46 PM

> I have a TS-820S and while it
> receives great, if I plug in any of the 3 D-104 mic's I
> have, I kill the receive audio. I have checked to make
> sure the mics are wired correctly as follows:
>
> Pin 1 - white
> Pin 2 - red
> Pin 3 - black
> Pin 4 - shield
>
> Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> me looks fine, but I can't for the life of me figure out why
> this might be happening!
>
> Any words of wisdom from veteran 820 owners who like the
> Astatic mics would be humbly and greatly appreciated!
>
> Thanks much
> Jeff
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
> TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

[Non-text portions of this message have been removed]

29624. Re: [TS-520_820_530_830] TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 01:55:23 UTC
From: Walter Breining
Topic: 29596 Message: 29624

Jeff:

Is your mike the one with 5 wires plus a shield?
If it is,
White is live audio and surrounded by the shield. Plug pin 1
Shield is audio ground. Plug pin 4
Blue is PTT common. Plug pin 3
Red is PTT. Plug pin 2
Black connects to blue when mike is not keyed and is not used with the TS-820.
Yellow connects to the shield when the mike is not keyed and is not used with the TS-820.

Unless your TS-820 has been modified, there is nothing on the mike connection on the radio that will effect the receive, so I am assuming that the receive is dead because the radio is still keyed when you unkey the mike.

Be sure that you are using the TUG-8 and not 9 base.

How many wires does your mike cord have? If it has a blue wire try connecting the Blue wire to pin 3 instead of the Black wire. Use the E position on the switch if your mike has one.

Pin 1 White
Pin 4 Shield
Pin 3 Blue
Pin 2 Red.

Let us know if this works. Let us know if this does not seem to match your version of the TUG-8.

Vy 73, Walt N9WB

> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 8:46 PM
> I have a TS-820S and while it
> receives great, if I plug in any of the 3 D-104 mic's I
> have, I kill the receive audio. I have checked to make
> sure the mics are wired correctly as follows:
>
> Pin 1 - white
> Pin 2 - red
> Pin 3 - black
> Pin 4 - shield
>
> Pin 1 and 4 are mic, 2 and 3 are key. Everything to
> me looks fine, but I can't for the life of me figure out why
> this might be happening!

>
> Any words of wisdom from veteran 820 owners who like the
> Astatic mics would be humbly and greatly appreciated!
>
> Thanks much
> Jeff
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
> TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

[Non-text portions of this message have been removed]

29625. Re: [TS-520_820_530_830] Re: TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 02:10:29 UTC
From: Scott Litz
Topic: 29596 Message: 29625

USE YOUR FRIEND THE OHM METER ,TO LOOK FOR SHORTS , SOME REQUIRED A GROUND LOOP FOR SPEAKER AUDIO, OTHERS DIDN'T , YOUR PLUG MAY HAVE A PROBLEM SOMETIMES THE SCREW FOR THE PLUG COLLAR WOULD SHORT THE AUDIO GROUND TO THE CASE AND IT MIGHT NEED TO BE ISOLATED, GOOD LUCK, KC0ROM

--- On Tue, 2/1/11, jwimmer@... <jwimmer@...> wrote:

> From: jwimmer@bellsouth.net <jwimmer@...>
> Subject: [TS-520_820_530_830] Re: TS-820S loses receive when I plug in a D-104 mic
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, February 1, 2011, 10:05 PM
> Thanks Scott. 2 of them are the
> T-UG8 base, and they do have the E/R switch. I had
> read in some other forums, on QRZ and maybe it was
> Hamuniverse I saw it on that these old D104's should be in
> relay mode. I have switched the 2 T-UG8 mic's to the
> relay position, still no joy. The third mic is a T-UP9
> base and I won't even bother with it until I get the 2 other
> mic's working. I keep wondering if it's shorting out
> the mic input.
>
> --- In TS-520_820_530_830@yahoogroups.com,
> Scott Litz <electronics4002@...> wrote:
> >
> > USED THESE MIKES FOR YEARS ,HOPE THIS HELPS .
> >
> > --- On Tue, 2/1/11, Scott Litz
> <electronics4002@...> wrote:
> >
> > > From: Scott Litz <electronics4002@...>
> > > Subject: Re: [TS-520_820_530_830] TS-820S loses
> receive when I plug in a D-104 mic
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Tuesday, February 1, 2011, 9:47 PM
> > > JEFF CHECK UNDERNEATH THE BOTTOM
> > > SWITCH FROM ELECTRONIC TO RELAY OR VICE VERSA IF
> ITS A POWER
> > > MIKE D-104 IF IT IS ELECTRONIC IT WILL GROUND THE
> AUDIO OUT
> > > WHEN PLUGGED IN GOOD LUCK SCOTT KC0ROM
> > >
> > > --- On Tue, 2/1/11, jwimmer@...
> > > <jwimmer@...>
> > > wrote:

> > >
> > > > From: jwimmer@...
> > > > <jwimmer@...>
> > > > Subject: [TS-520_820_530_830] TS-820S loses
> receive
> > > when I plug in a D-104 mic
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Date: Tuesday, February 1, 2011, 8:46 PM
> > > > I have a TS-820S and while it
> > > > receives great, if I plug in any of the 3
> D-104 mic's
> > > I
> > > > have, I kill the receive audio. I have
> checked to
> > > make
> > > > sure the mics are wired correctly as
> follows:
> > > >
> > > > Pin 1 - white
> > > > Pin 2 - red
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> > > >
> > > > Pin 1 and 4 are mic, 2 and 3 are key.
> Everything to
> > > > me looks fine, but I can't for the life of
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> > > out why
> > > > this might be happening!
> > > >
> > > > Any words of wisdom from veteran 820 owners
> who like
> > > the
> > > > Astatic mics would be humbly and greatly
> appreciated!
> > > >
> > > > Thanks much
> > > > Jeff
> > > >
> > > >
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
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> > > >
> > > >   TS-520_820_530_830-fullfeatured@yahoogroups.com
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>

29626. 830s tune-up problem/question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 05:54:25 UTC
From: Mark
Topic: 29626 Message: 29626

Hello everyone. My name is Mark, and I am the owner of my father's TS-830S station. I have the transceiver, SP-230 speaker, VFO-240, and AT-230. My question is this, when tuning the radio and you switch the meter switch to ALC and adjust the Drive control, all bands but 40 and 10 meters will peak with the carrier control set about 3 to 4. However, 40 and 10 require substantially more carrier. I tuned the radio on 40 meters today for the C.S.T.N. and had to crank the carrier up to bout 8. I have checked the plastic coupler on the band swith and it does not seem to have a crack in it. I am here to pick ya'll's collective brains. Have been pining for this radio for years and now that I got her, I want to get the ole girl back up to 100%. Tnx in advance for any advice you can offer.

Mark
N5SYR

29627. Re: TS-820S loses receive when I plug in a D-104 mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 12:33:59 UTC
From: w5rkl
Topic: 29596 Message: 29627

The TS-820 receive audio is not routed through the microphone socket.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Scott Litz <electronics4002@...> wrote:
>
> USE YOUR FRIEND THE OHM METER ,TO LOOK FOR SHORTS , SOME REQUIRED A GROUND LOOP FOR SPEAKER AUDIO, OTHERS DIDN'T , YOUR PLUG MAY HAVE A PROBLEM SOMETIMES THE SCREW FOR THE PLUG COLLAR WOULD SHORT THE AUDIO GROUND TO THE CASE AND IT MIGHT NEED TO BE ISOLATED, GOOD LUCK, KC0ROM

29628. Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 14:39:08 UTC
From: PGA
Topic: 29613 Message: 29628

John,
The exploded view of the reduction gear is in the TS-820s Service manual on page 37.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> An addition to my previous post:
> The 2 smallest balls (ca 2.5mm) are for the axel bearing, the other 3 (ca 3mm) are for the reduction balldrive.
>
> 73 Wim
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:
> >
> > John,
> >
> > I had the same problem with a TS-180s, wich has more or less the same reduction gear.
> > There should be 2 and 3 balls. The two balls go in the hollow shaft, with the spring first. For placing the 3 other balls you unscrew the copper colored bushing. You will see tree holes were the balls will fit. Push in the small axis, put the 3 ball bearings in and screw the copper bushing in it's place. For easy reassembling use some grease to fix the balls to the holes.
> > The only thing I don't remember is wich balls go where but that is easely found out. There should be 5 in total.
> >
> > At the time (couple of years ago) I have even found a exploded view of the assembly in one of the Kenwood service manuals, but I have to search for that again in my archive.
> >
> >
> > Still hope this helps you on your way,
> >
> > 73, Wim PA0PGA
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@> wrote:
> > >
> > > Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear train because it was gritty in operation. I'm an engineer, so this should be no problem, right? After all, it is just a simple mechanical mechanism. No problem removing it, cleaned and relubed the gears ok. Opps... I tugged a little too hard on the shaft the knob goes on and

suddenly I had it in my hand. I tried to put it back in, but it clearly wouldn't go. Took the black knurled fitting off, and four little balls fell out - 2 bigger ones, two smaller ones. The outer hollow shaft attached to the pinion gear has three holes, and there is a groove in the inner shaft, so I postulated that one ball goes into the hollow shaft as a base bearing, and the other three go into the holes to retain and act as a planetary gear set, retained by the bearing race inside the black knurled fitting.
> > >
> > > So much for logic - which ball goes where? No matter how I assemble the mechanism, it either has too much slack and the knob spind without reliably turning the VFO, or it is very hard to turn, yet very positive. Right now, I would more than settle for the previous gritty feeling. Help!
> > >
> > > John KD5ZGX
> > >
> >
>

29629. Re: [TS-520_820_530_830] Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 17:08:25 UTC
From: Joseph Stiles
Topic: 29613 Message: 29629

Wim,

thanks for that info.....I passed right over it when I was
looking.....

73's joe wb7uqu

From: PGA <wpenders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 4, 2011 6:39:08 AM
Subject: [TS-520_820_530_830] Re: TS-520S VFO Knob Issue

John,
The exploded view of the reduction gear is in the TS-820s Service manual on page
37.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> An addition to my previous post:
> The 2 smallest balls (ca 2.5mm) are for the axel bearing, the other 3 (ca 3mm)
>are for the reduction balldrive.
>
> 73 Wim
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:
> >
> > John,
> >
> > I had the same problem with a TS-180s, wich has more or less the same
>reduction gear.
> > There should be 2 and 3 balls. The two balls go in the hollow shaft, with the
>spring first. For placing the 3 other balls you unscrew the copper colored
>bushing. You will see tree holes were the balls will fit. Push in the small
>axis, put the 3 ball bearings in and screw the copper bushing in it's place. For
>easy reassembling use some grease to fix the balls to the holes.
> > The only thing I don't remember is wich balls go where but that is easely
>found out. There should be 5 in total.
> >
> > At the time (couple of years ago) I have even found a exploded view of the
>assembly in one of the Kenwood service manuals, but I have to search for that
>again in my archive.

> >
> >
> > Still hope this helps you on your way,
> >
> > 73, Wim PA0PGA
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@> wrote:
> > >
> > > Over the weekend, I took the VFO out of my TS-520S to clean and relube the
>gear train because it was gritty in operation. I'm an engineer, so this should
>be no problem, right? After all, it is just a simple mechanical mechanism. No
>problem removing it, cleaned and relubed the gears ok. Opps... I tugged a
>little too hard on the shaft the knob goes on and suddenly I had it in my hand.
>I tried to put it back in, but it clearly wouldn't go. Took the black knurled
>fitting off, and four little balls fell out - 2 bigger ones, two smaller ones.
>The outer hollow shaft attached to the pinion gear has three holes, and there is
>a groove in the inner shaft, so I postulated that one ball goes into the hollow
>shaft as a base bearing, and the other three go into the holes to retain and act
>as a planetary gear set, retained by the bearing race inside the black knurled
>fitting.
>
> > >
> > > So much for logic - which ball goes where? No matter how I assemble the
>mechanism, it either has too much slack and the knob spind without reliably
>turning the VFO, or it is very hard to turn, yet very positive. Right now, I
>would more than settle for the previous gritty feeling. Help!
>
> > >
> > > John KD5ZGX
> > >
> >
>

[Non-text portions of this message have been removed]

29630. Re: 830s tune-up problem/question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 20:09:23 UTC
From: w5rkl
Topic: 29626 Message: 29630

Mark,

Since the 830 was your fathers do you know if anyone, including your father, has mess with and/or adjusted the driver coils inside the 830? If the 40 and 10 meter driver coils have been improperly adjusted then that could lead to the symptoms you are experiencing.

I seriously doubt the tubes are the source of your problem nor are resistors R15 and R16 (both 56K) on the Rectifier Unit either. You might considering checking the driver coil alignment for 40 and 10 meters as outlined in the 830 service manual. When checking the driver coil alignment make sure you follow the steps exactly as indicated in the 830 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Mark" <n5syr@...> wrote:
>
> Hello everyone. My name is Mark, and I am the owner of my father's TS-830S station. I have the transceiver, SP-230 speaker, VFO-240, and AT-230. My question is this, when tuning the radio and you switch the meter switch to ALC and adjust the Drive control, all bands but 40 and 10 meters will peak with the carrier control set about 3 to 4. However, 40 and 10 require substantially more carrier. I tuned the radio on 40 meters today for the C.S.T.N. and had to crank the carrier up to bout 8. I have checked the plastic coupler on the band swith and it does not seem to have a crack in it. I am here to pick ya'll's collective brains. Have been pining for this radio for years and now that I got her, I want to get the ole girl back up to 100%. Tnx in advance for any advice you can offer.
>
> Mark
> N5SYR
>

29631. 12BY7A Tube Shield

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 23:08:22 UTC
From: kd8hmo
Topic: 29631 Message: 29631

Is it a requirement for my 520S and 530S to have a tube shield on the 12BY7A tube? My 520S has a strange shield that resembles a ribbed condom, and my basket-case 530S had none at all. I picked up a shield for it that twist-locks on to the socket with the spring inside. Are these just for heat dissipation only? Or do they function as rf shields too?

29632. Re: 12BY7A Tube Shield

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 23:17:30 UTC
From: w5rkl
Topic: 29631 Message: 29632

The shield prevents RF from radiating from the driver tube to the surrounding circuits. There normally is a thin flexible rod that, when the shield is in place, rests between the shield and the driver tube. The thin rod grounds the shield.

The ribbed shield you have and other like it without the ribs are the only shields that will work over the driver tube. The twist lock shields with internal springs will not work, the hybrid driver tube socket is not equipment or designed to accept the twist lock shields.

I haven't used a shield over the driver tube in my 820 in 8 years. I have not had any RFI problems or reports of distorted audio on sideband or CW signals. The transceiver will work with or without the shield.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Is it a requirement for my 520S and 530S to have a tube shield on the 12BY7A tube? My 520S has a strange shield that resembles a ribbed condom, and my basket-case 530S had none at all. I picked up a shield for it that twist-locks on to the socket with the spring inside. Are these just for heat dissipation only? Or do they function as rf shields too?
>

29633. Re: [TS-520_820_530_830] 12BY7A Tube Shield

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 23:28:49 UTC
From: Mel Farrer
Topic: 29631 Message: 29633

Yes, they are for added heat dissipation. In some configurations, the tube may not get adequate cooling and the black or gray ribbed cover is used. If it has the locking extension on the socket, it is a shield also. I have seen them both ways.

Mel, K6KBE

From: kd8hmo <delta5_oh@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 4, 2011 3:08:22 PM
Subject: [TS-520_820_530_830] 12BY7A Tube Shield

Is it a requirement for my 520S and 530S to have a tube shield on the 12BY7A tube? My 520S has a strange shield that resembles a ribbed condom, and my basket-case 530S had none at all. I picked up a shield for it that twist-locks on to the socket with the spring inside. Are these just for heat dissipation only? Or do they function as rf shields too?

[Non-text portions of this message have been removed]

29634. Linear amp hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 00:05:00 UTC
From: kj4fcj
Topic: 29634 Message: 29634

I need to know where I can get the octal plug to relay & alc cables to interface an Ameritron 811 with my TS-820s & directions on how to do it. Charles kj4fcj

29635. Re: [TS-520_820_530_830] Linear amp hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 01:06:31 UTC
From: n6wk@n6wk.com
Topic: 29634 Message: 29635

Charles,
If you can't find one, I have a good used octal plug with cover here.
$5.00 plus shipping
If you want me to wire it up and add nice Gold plated RCA plugs on the
ends, add $12.00

73,
Gordon
N6WK

On 2/4/2011 4:05 PM, kj4fcj wrote:
>
> I need to know where I can get the octal plug to relay & alc cables to
> interface an Ameritron 811 with my TS-820s & directions on how to do
> it. Charles kj4fcj
>
>

29636. RE: [TS-520_820_530_830] Re: 12BY7A Tube Shield

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-04 23:29:39 UTC
From: Robert Herendeen
Topic: 29631 Message: 29636

I have found that the shield has a significant effect on the tuning of the drive coils in the 530 and 830.

In fact, the peak drive current was higher on 15-10 mtrs.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Friday, February 04, 2011 3:18 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: 12BY7A Tube Shield

The shield prevents RF from radiating from the driver tube to the surrounding circuits. There normally is a thin flexible rod that, when the shield is in place, rests between the shield and the driver tube. The thin rod grounds the shield.

The ribbed shield you have and other like it without the ribs are the only shields that will work over the driver tube. The twist lock shields with internal springs will not work, the hybrid driver tube socket is not equipment or designed to accept the twist lock shields.

I haven't used a shield over the driver tube in my 820 in 8 years. I have not had any RFI problems or reports of distorted audio on sideband or CW signals. The transceiver will work with or without the shield.

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

29637. Re: [TS-520_820_530_830] Linear amp hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 05:41:06 UTC
From: Charles Grove
Topic: 29634 Message: 29637

Great Gordon! I've had the amp since last May & haven't had any luck at all. Anyway, I will need the rca cables too, so give me a total w/s&h & payment method preferred and I'll get started on it. Thanks a lot, Charles kj4fcj

On Fri Feb 4th, 2011 8:06 PM EST n6wk@... wrote:

>Charles,
>If you can't find one, I have a good used octal plug with cover here.
>$5.00 plus shipping
>If you want me to wire it up and add nice Gold plated RCA plugs on the
>ends, add $12.00
>
>73,
>Gordon
>N6WK
>
>On 2/4/2011 4:05 PM, kj4fcj wrote:
>>
>> I need to know where I can get the octal plug to relay & alc cables to
>> interface an Ameritron 811 with my TS-820s & directions on how to do
>> it. Charles kj4fcj
>>
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>Yahoo! Groups Links
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29638. Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 07:53:56 UTC
From: rkersey tds.net
Topic: 29638 Message: 29638

Hello all,

I am accumulating parts to build my antenna and finally get my TS-830 on the air . . . I was looking for parts to build a dummy load or a 100W dummy load to buy when I came across instructions to build a salt water dummy load that would take 100 watts. It seems that all that is required is some copper wires for the electrodes and a suitable jar as well as some salt water of the proper resistance and a connector (SO-239).

Is there anything wrong with using one of these to tune up my TS-830 initially rather than building one out of 20 resistors and some mineral oil?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29639. Mini coax needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 07:58:12 UTC
From: rkersey tds.net
Topic: 29639 Message: 29639

Hello all,

I am building a cobweb antenna for my TS-830S and have to construct a balun out of RG-316 or RG174 coax. I need about four feet of this to build the balun and can't find this quantity for sale anywhere. Does anyone have a few feet of this that they would sell me for a reasonable price (less than $10)?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29640. Re: [TS-520_820_530_830] Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 08:05:57 UTC
From: Bob
Topic: 29638 Message: 29640

I remember reading that same article about the Salt water dummy load. I'd say, sure you can use it...as long as it maintains a constant 50 ohms during operation. That's the only thing I would be concerned about. Try it and see, let the rest of us know how it works out.

Bob, KD5MHQ

--- On Sat, 2/5/11, rkersey tds.net <rkersey@...> wrote:

Hello all,

I am accumulating parts to build my antenna and finally get my TS-830 on the air . . . I was looking for parts to build a dummy load or a 100W dummy load to buy when I came across instructions to build a salt water dummy load that would take 100 watts. It seems that all that is required is some copper wires for the electrodes and a suitable jar as well as some salt water of the proper resistance and a connector (SO-239).

Is there anything wrong with using one of these to tune up my TS-830 initially rather than building one out of 20 resistors and some mineral oil?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29641. Re: [TS-520_820_530_830] Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 09:25:47 UTC
From: Leslie Smith
Topic: 29638 Message: 29641

Hello Roy,Based on my knowledge of salt water pool chlorinators, I'd go the non-inductive resistor + oil route.
Les

----- Original Message -----
From: Bob
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Salt water dummy load
Date: Sat, 5 Feb 2011 00:05:57 -0800 (PST)

Â

I remember reading that same article about the Salt water dummy load. I'd say, sure you can use it...as long as it maintains a constant 50 ohms during operation. That's the only thing I would be concerned about. Try it and see, let the rest of us know how it works out.
Â
Bob, KD5MHQ

--- On Sat, 2/5/11, rkersey tds.net <rkersey@...> wrote:

Â

Hello all,

I am accumulating parts to build my antenna and finally get my TS-830 on the
air . . . I was looking for parts to build a dummy load or a 100W dummy load
to buy when I came across instructions to build a salt water dummy load that
would take 100 watts. It seems that all that is required is some copper
wires for the electrodes and a suitable jar as well as some salt water of
the proper resistance and a connector (SO-239).

Is there anything wrong with using one of these to tune up my TS-830 initially rather than building one out of 20 resistors and some mineral oil?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

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_____
Surf the Web in a faster, safer and easier way:
Download Opera 9 at http://www.opera.com

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29642. Re: [TS-520_820_530_830] Mini coax needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 10:22:50 UTC
From: Charles Coffee
Topic: 29639 Message: 29642

Roy
All Electronics Corp <<www.allelectronics.com>> sells RG-174 in lengths from
10 feet ($2.60) to 1000 feet.
If you can get their catalog it is on page 30 of the latest issue (Winter
2011).

Chuck, KJ4GU

On Sat, Feb 5, 2011 at 2:58 AM, rkersey tds.net <rkersey@...> wrote:

> Hello all,
>
> I am building a cobweb antenna for my TS-830S and have to construct a balun
> out of RG-316 or RG174 coax. I need about four feet of this to build the
> balun and can't find this quantity for sale anywhere. Does anyone have a
> few feet of this that they would sell me for a reasonable price (less than
> $10)?
>
> 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

29643. ts530s problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 10:43:50 UTC
From: churchguy_12901
Topic: 29643 Message: 29643

Hello to the group, I have just purchased another 530. I had foolishly sold my first one and missed it almost immediately,live and learn. The one I picked up has at least one problem that I have found. I have low power output into an antenna or dummy load (50-70 watts). When I am tuning the finals I have a hard time even seeing the "dip" on the plate. During the tune up, with the meter in lp the needle on the meter actually vibrates very rapidly.The needle on the meter only does this in the lp position. The only thing I have done so far is a decent cleaning and blown out the interior, I found the shield over the driver tube had the metal strap on the outside so I reinstalled it correctly. Any tips tricks or suggestions would be appreciated. Thanks Mike w2waw

29644. Re: [TS-520_820_530_830] Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 12:36:23 UTC
From: Dave & Loraine
Topic: 29638 Message: 29644

It may produce an interesting combination of gasses including hydrogen, oxygen, chlorine...
I've never heard of an OM being killed by his dummy load but, RF + explosive gas?
Bon chance
Dave f4eyk

29645. Re: [TS-520_820_530_830] ts530s problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 13:34:22 UTC
From: David Rust
Topic: 29643 Message: 29645

Mike, just my guess, but I would suspect your High voltage capacitors in the power supply are failing. What does your high voltage read under load? I had one like this one time that got down to 5 to 10 watts out. Check those, they are easy to replace, be sure you bleed them off before you take them out.
Dave

[Non-text portions of this message have been removed]

29646. Re: ts530s problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 14:19:15 UTC
From: churchguy_12901
Topic: 29643 Message: 29646

Thanks Dave, I will test it under load, It is nice to have a place to start. Thanks w2waw

--- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@...> wrote:
>
> Mike, just my guess, but I would suspect your High voltage capacitors in the power supply are failing. What does your high voltage read under load? I had one like this one time that got down to 5 to 10 watts out. Check those, they are easy to replace, be sure you bleed them off before you take them out.
> Dave
>
> [Non-text portions of this message have been removed]
>

29647. Re: ts530s problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 14:20:32 UTC
From: w5rkl
Topic: 29643 Message: 29647

Mike,

What initial position is the LOAD control set to? Start tune up with the LOAD control set for maximum capacitance, LOAD control knob pointing to 9 o'clock, fully CCW. Peak the ALC with the DRIVE control in TUNE mode then set the meter switch to IP and adjust the PLATE control for maximum DIP (reduction) in IP current.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "churchguy_12901" <churchguy_12901@...> wrote:
>
> Hello to the group, I have just purchased another 530. I had foolishly sold my first one and missed it almost immediately,live and learn. The one I picked up has at least one problem that I have found. I have low power output into an antenna or dummy load (50-70 watts). When I am tuning the finals I have a hard time even seeing the "dip" on the plate. During the tune up, with the meter in lp the needle on the meter actually vibrates very rapidly.The needle on the meter only does this in the lp position. The only thing I have done so far is a decent cleaning and blown out the interior, I found the shield over the driver tube had the metal strap on the outside so I reinstalled it correctly. Any tips tricks or suggestions would be appreciated. Thanks Mike w2waw
>

29648. Re: ts530s problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 14:22:23 UTC
From: churchguy_12901
Topic: 29643 Message: 29648

Thanks Mike, Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Mike,
>
> What initial position is the LOAD control set to? Start tune up with the LOAD control set for maximum capacitance, LOAD control knob pointing to 9 o'clock, fully CCW. Peak the ALC with the DRIVE control in TUNE mode then set the meter switch to IP and adjust the PLATE control for maximum DIP (reduction) in IP current.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "churchguy_12901" <churchguy_12901@> wrote:
> >
> > Hello to the group, I have just purchased another 530. I had foolishly sold my first one and missed it almost immediately,live and learn. The one I picked up has at least one problem that I have found. I have low power output into an antenna or dummy load (50-70 watts). When I am tuning the finals I have a hard time even seeing the "dip" on the plate. During the tune up, with the meter in lp the needle on the meter actually vibrates very rapidly.The needle on the meter only does this in the lp position. The only thing I have done so far is a decent cleaning and blown out the interior, I found the shield over the driver tube had the metal strap on the outside so I reinstalled it correctly. Any tips tricks or suggestions would be appreciated. Thanks Mike w2waw
> >
>

29649. Re: TS-520S VFO Knob Issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 15:19:34 UTC
From: John
Topic: 29613 Message: 29649

The followup on the problem & solution

PA0PGA directed me to the TS-820 manual which has an exploded view of the reduction drive mechanism. I found that I was missing one of the larger balls (don't know if I lost it or it had been lost before me). Went to my local hardware store and bought 5 5/32" diameter ball bearings (0.1563" dia., approximately 4mm)., I assembled the drive with the spring and the 2 smaller balls inside the larger shaft. I inserted the axle shaft, and held it in place while I put the 3 larger balls in the recesses. I then screwed down the top bushing, Still was slightly "gritty" so I opened it up again and put lapping compound in the recesses and covering the balls. Reassembled it and spun it with a drill motor for a few minutes. Smoothed it up real nicely. I then cleaned it out and reassembled it with fresh lube. Works great now. Thanks for the help.

John
KD5ZGX

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> John,
> The exploded view of the reduction gear is in the TS-820s Service manual on page 37.
>
> 73, Wim PA0PGA
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:
> >
> > An addition to my previous post:
> > The 2 smallest balls (ca 2.5mm) are for the axel bearing, the other 3 (ca 3mm) are for the reduction balldrive.
> >
> > 73 Wim
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:
> > >
> > > John,
> > >
> > > I had the same problem with a TS-180s, wich has more or less the same reduction gear.
> > > There should be 2 and 3 balls. The two balls go in the hollow shaft, with the spring first. For placing the 3 other balls you unscrew the copper colored bushing. You will see tree holes were the balls will fit. Push in the small axis, put the 3 ball bearings in and screw the copper bushing in it's place. For easy reassembling use some grease to fix the

balls to the holes.
> > > The only thing I don't remember is wich balls go where but that is easely found out. There should be 5 in total.
> > >
> > > At the time (couple of years ago) I have even found a exploded view of the assembly in one of the Kenwood service manuals, but I have to search for that again in my archive.
> > >
> > >
> > > Still hope this helps you on your way,
> > >
> > > 73, Wim PA0PGA
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "John" <pyrrus2003@> wrote:
> > > >
> > > > Over the weekend, I took the VFO out of my TS-520S to clean and relube the gear train because it was gritty in operation. I'm an engineer, so this should be no problem, right? After all, it is just a simple mechanical mechanism. No problem removing it, cleaned and relubed the gears ok. Opps... I tugged a little too hard on the shaft the knob goes on and suddenly I had it in my hand. I tried to put it back in, but it clearly wouldn't go. Took the black knurled fitting off, and four little balls fell out - 2 bigger ones, two smaller ones. The outer hollow shaft attached to the pinion gear has three holes, and there is a groove in the inner shaft, so I postulated that one ball goes into the hollow shaft as a base bearing, and the other three go into the holes to retain and act as a planetary gear set, retained by the bearing race inside the black knurled fitting.
> > > >
> > > > So much for logic - which ball goes where? No matter how I assemble the mechanism, it either has too much slack and the knob spind without reliably turning the VFO, or it is very hard to turn, yet very positive. Right now, I would more than settle for the previous gritty feeling. Help!
> > > >
> > > > John KD5ZGX
> > > >
> > >
> >
>

29650. Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 16:51:24 UTC
From: n9pgo@att.net
Topic: 29650 Message: 29650

Hello to all,

I was wondering why one of my 830's have HF SSB TRANCEIVER in the lower right corner and the other one has HF TRANSCEIVER??

Maybe different production dates?

thanks,

n9pgo - Sandy

29651. Re: [TS-520_820_530_830] Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 17:34:48 UTC
From: pmarkavage@juno.com
Topic: 29650 Message: 29651

TS-830's (S) sold in the U.S. were CW/SSB transceivers. TS-830's (M) sold in foreign markets were CW/AM/SSB transceivers. Maybe you have a front panel that was destined for the foreign market version. The front panel, I believe, was modified at least twice in the lifecycle of the 830. You would have to check all the issued versions of the service manual.

Pete, wa2cwa

On Sat, 05 Feb 2011 16:51:24 -0000 "n9pgo@..." <n9pgo@...>
writes:
> Hello to all,
>
> I was wondering why one of my 830's have HF SSB TRANCEIVER in the
> lower right corner and the other one has HF TRANSCEIVER??
>
> Maybe different production dates?
>
> thanks,
>
> n9pgo - Sandy

29652. Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 21:17:40 UTC
From: jon_g4fut
Topic: 29650 Message: 29652

My TS830s, bought in the UK many years ago, has "HF Transceiver" bottom right, as has my TS530sp.
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> TS-830's (S) sold in the U.S. were CW/SSB transceivers. TS-830's (M) sold
> in foreign markets were CW/AM/SSB transceivers. Maybe you have a front
> panel that was destined for the foreign market version. The front panel,
> I believe, was modified at least twice in the lifecycle of the 830. You
> would have to check all the issued versions of the service manual.
>
> Pete, wa2cwa
>
> On Sat, 05 Feb 2011 16:51:24 -0000 "n9pgo@..." <n9pgo@...>
> writes:
> > Hello to all,
> >
> > I was wondering why one of my 830's have HF SSB TRANCEIVER in the
> > lower right corner and the other one has HF TRANSCEIVER??
> >
> > Maybe different production dates?
> >
> > thanks,
> >
> > n9pgo - Sandy
>

29653. Re: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 22:07:49 UTC
From: Sandy
Topic: 29650 Message: 29653

Jon,

I am the proud owner of 2 530s', 1 530sp, and 2 830s'. Only 1 830s has
the HF SSB lettering.
I looked on the internet about it, but came up with nothing. The 2 830s'
are identical except for the SSB.
Maybe someone will shed some light.
No big deal....just wondering.

73
n9pgo - Sandy

On 2/5/2011 3:17 PM, jon_g4fut wrote:
>
> My TS830s, bought in the UK many years ago, has "HF Transceiver"
> bottom right, as has my TS530sp.
> Jon G4FUT
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>
>

[Non-text portions of this message have been removed]

29654. Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 22:14:03 UTC
From: mathprof53575
Topic: 29650 Message: 29654

I wonder if there were some early 830's, perhaps just a few, made as sort of a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830 says (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830 front panels that had both HF and SSB, and then realized that by that time SSB had become pretty standard and they did not need to include it. When the earlier rigs were made, SSB was not yet so standard so they would want to point it out.
Bob Wilson
WA9D
--- In TS-520_820_530_830@...m, "n9pgo@..." <n9pgo@...> wrote:
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> Maybe different production dates?
>
> thanks,
>
> n9pgo - Sandy
>

29655. Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 22:38:08 UTC
From: w5rkl
Topic: 29650 Message: 29655

Single sideband was used in the late 40s to early 50s and later became quite popular in the early 60s and beyond. Single sideband has been around a long time, longer than folks may think.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "mathprof53575" <wilson@...> wrote:
>
>
>
>
>
>
> I wonder if there were some early 830's, perhaps just a few, made as sort of a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830 says (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830 front panels that had both HF and SSB, and then realized that by that time SSB had become pretty standard and they did not need to include it. When the earlier rigs were made, SSB was not yet so standard so they would want to point it out.
> Bob Wilson
> WA9D
> --- In TS-520_820_530_830@yahoogroups.com, "n9pgo@" <n9pgo@> wrote:
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> >
>

29657. 830s CW filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 23:32:12 UTC
From: jon_g4fut
Topic: 29657 Message: 29657

Got my TS830s last week at long last, its sitting next to its little sister my TS530sp. Was the 830s fitted with a narrow CW filter at the factory or is that an option? Does the Wide CW filter share the same circuit as the SSB one as they both seem the same width on mine. You may gather that I haven't taken the top of the rig yet. I know the 530sp CW filter is YK 88S, will it be the same for the 830s? When using the 830 on CW I do feel the filter is rather wide compared to the 530. Or am I going to have to get a narrower one?
Jon G4FUT

29658. RE: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 23:40:42 UTC
From: Jan
Topic: 29650 Message: 29658

The photo of the TS-830S on Rigpix has HF SSB TRANSCEIVER, but the photo on www.universal-radio.com has HF TRANSCEIVER. Mine TS-830S sold in Norway new, has also HF SSB TRANSCEIVER

73

Jan - LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of mathprof53575
Sent: Saturday, February 05, 2011 11:14 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Just wondering

I wonder if there were some early 830's, perhaps just a few, made as sort of a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830 says (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830 front panels that had both HF and SSB, and then realized that by that time SSB had become pretty standard and they did not need to include it. When the earlier rigs were made, SSB was not yet so standard so they would want to point it out.
Bob Wilson
WA9D

[Non-text portions of this message have been removed]

29659. RE: [TS-520_820_530_830] Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 23:58:29 UTC
From: Walter Milton
Topic: 29638 Message: 29659

Roy,

Ken, K4EAA, has a 100 W Dummy load kit on his web site that you can build.
I think it is a lot safer then the salt water one you are looking at .
Ken's web site is at www.K4EAA.com.

Walt KA2NJF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of rkersey tds.net
Sent: Saturday, February 05, 2011 2:54 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Salt water dummy load

Hello all,

I am accumulating parts to build my antenna and finally get my TS-830 on
the
air . . . I was looking for parts to build a dummy load or a 100W dummy
load
to buy when I came across instructions to build a salt water dummy load
that
would take 100 watts. It seems that all that is required is some copper
wires for the electrodes and a suitable jar as well as some salt water of
the proper resistance and a connector (SO-239).

Is there anything wrong with using one of these to tune up my TS-830
initially rather than building one out of 20 resistors and some mineral
oil?

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29660. Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 00:10:03 UTC
From: Ken
Topic: 29650 Message: 29660

I have 4 TS830S, 3 of them have HF Transceiver 1 has HF SSB Transceiver.I had never noticed it before these post!

Ken
NZ4Q

--- In TS-520_820_530_830@yahoogroups.com, "Jan" <jan@...> wrote:
>
> The photo of the TS-830S on Rigpix has HF SSB TRANSCEIVER, but the photo on
> www.universal-radio.com has HF TRANSCEIVER. Mine TS-830S sold in Norway new,
> has also HF SSB TRANSCEIVER
>
> 73
>
> Jan - LA2XSA
>
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>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of mathprof53575
> Sent: Saturday, February 05, 2011 11:14 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Just wondering
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> earlier rigs were made, SSB was not yet so standard so they would want to
> point it out.
> Bob Wilson
> WA9D
>
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> [Non-text portions of this message have been removed]
>

29661. Electronic keyer 1553

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 00:36:07 UTC
From: Chris Parnell
Topic: 29661 Message: 29661

Hi all,

Has anyone used the TenTec Electronic 1553 kit keyer with the TS-830s? (or any hybrid for that matter).

Cheers
Chris, ZL1CDP

[Non-text portions of this message have been removed]

29662. Re: [TS-520_820_530_830] Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 00:38:36 UTC
From: Terry Wagoner
Topic: 29638 Message: 29662

Walt/Roy--This may be off topic but I built a saltwater dummy load some time ago and it works great. At 100 watts RF there is not enough current to produce any electrolysis so no hydrogen gassing occurs. I used a quart wide mouth mason jar and filled it about 3/4 full of tap water. There is only very slight warming of the water after repeated loading from my TS830s. I mounted a chassis mount SO-239 connector to the lid and left one bolt hole open for venting. I used short runs of 12 gage bare copper to a couple of copper ground straps suspended in the water. It only requires a very small amount of salt. On the order of half of a quarter teaspoon. Some would say a "pinch". You have to experiment to get the lowest SWR. You have to sneak up on it and it is easy to go past it. On 40 meters my swr is around 1.1 to 1 and on 15 meters it is 1.4 to 1. You will not read 50 ohms with your multimeter. A better way to calibrate it would be with a bridge. Only problem you will encounter is that over time the weak salt solution will corrode your copper electrodes. It is a cheap and fun project. I have pictures I can send you off line if you are interested. Terry K9TW

From: Walter Milton <wmilton@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 5, 2011 6:58:29 PM
Subject: RE: [TS-520_820_530_830] Salt water dummy load

Roy,

Ken, K4EAA, has a 100 W Dummy load kit on his web site that you can build.
I think it is a lot safer then the salt water one you are looking at .
Ken's web site is at www.K4EAA.com.

Walt KA2NJF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of rkersey tds.net
Sent: Saturday, February 05, 2011 2:54 AM
To: TS-520_820_530_830@...m
Subject: [TS-520_820_530_830] Salt water dummy load

Hello all,

I am accumulating parts to build my antenna and finally get my TS-830 on
the
air . . . I was looking for parts to build a dummy load or a 100W dummy
load
to buy when I came across instructions to build a salt water dummy load
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would take 100 watts. It seems that all that is required is some copper
wires for the electrodes and a suitable jar as well as some salt water of
the proper resistance and a connector (SO-239).

Is there anything wrong with using one of these to tune up my TS-830 initially rather than building one out of 20 resistors and some mineral oil?

73,
Roy Kersey
KI4HAG

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29663. RE: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 00:47:37 UTC
From: Jim McPhee
Topic: 29650 Message: 29663

I wonder if it is related to the age/year of manufacture. My 830s lacks the SSB designation.

It is serial number 2020347.

Regards,

Jim McPhee
Placitas, NM
W5ABA

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
Sent: Saturday, February 05, 2011 5:10 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Just wondering

I have 4 TS830S, 3 of them have HF Transceiver 1 has HF SSB Transceiver.I had never noticed it before these post!

Ken
NZ4Q

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Jan" <jan@...> wrote:
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> Jan - LA2XSA
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> From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of mathprof53575
> Sent: Saturday, February 05, 2011 11:14 PM

> To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: Just wondering
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> (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830
> front panels that had both HF and SSB, and then realized that by that time
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> earlier rigs were made, SSB was not yet so standard so they would want to
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> Bob Wilson
> WA9D
>
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> [Non-text portions of this message have been removed]
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29664. RE: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 01:06:16 UTC
From: Jan
Topic: 29650 Message: 29664

My has HF SSB Transceiver, and serial # 1070139

Regards

Jan - LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jim McPhee
Sent: Sunday, February 06, 2011 1:48 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: RE: [TS-520_820_530_830] Re: Just wondering

I wonder if it is related to the age/year of manufacture. My 830s lacks the
SSB designation.

It is serial number 2020347.

Regards,

Jim McPhee
Placitas, NM
W5ABA

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Ken
Sent: Saturday, February 05, 2011 5:10 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] Re: Just wondering

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Ken
NZ4Q

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> WA9D
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[Non-text portions of this message have been removed]

29665. Re: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 01:16:01 UTC
From: Sandy
Topic: 29650 Message: 29665

Maybe an early 830s production thing...and then later changed to just HF TRANSCEIVER.?
The one 830s that has the SSB is serial # 1050121.

The other one is # 7070003.

n9pgo - Sandy

On 2/5/2011 7:06 PM, Jan wrote:
>
> My has HF SSB Transceiver, and serial # 1070139
>
> Regards
>
> Jan - LA2XSA
>
> From: TS-520_820_530_830@yahoogroups.com
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> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Jim McPhee
> Sent: Sunday, February 06, 2011 1:48 AM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: RE: [TS-520_820_530_830] Re: Just wondering
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29666. Re: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 01:20:52 UTC
From: n6wk@n6wk.com
Topic: 29650 Message: 29666

I tend to agree.
I think the earlier serial numbered ones are labeled as HF SSB
Transceiver and the later ones dropped the SSB part.
Are all those out there with the SSB on it, the Silver editions ? ie,
before the 3 mil serial number or so?

Gordon
N6WK

On 2/5/2011 5:16 PM, Sandy wrote:
>
> Maybe an early 830s production thing...and then later changed to just HF
> TRANSCEIVER.?
> The one 830s that has the SSB is serial # 1050121.
>
> The other one is # 7070003.
>
> n9pgo - Sandy
>
> On 2/5/2011 7:06 PM, Jan wrote:
> >
> > My has HF SSB Transceiver, and serial # 1070139
> >
> > Regards
> >
> > Jan - LA2XSA
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Jim McPhee
> > Sent: Sunday, February 06, 2011 1:48 AM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: RE: [TS-520_820_530_830] Re: Just wondering
> >
> > I wonder if it is related to the age/year of manufacture. My 830s
> > lacks the
> > SSB designation.
> >
> > It is serial number 2020347.
> >

> > Regards,
> >
> > Jim McPhee
> > Placitas, NM
> > W5ABA
> >
> > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Ken
> > Sent: Saturday, February 05, 2011 5:10 PM
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: Just wondering
> >
> > I have 4 TS830S, 3 of them have HF Transceiver 1 has HF SSB
> Transceiver.I
> > had never noticed it before these post!
> >
> > Ken
> > NZ4Q
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com> , "Jan" <jan@...> wrote:
> > >
> > > The photo of the TS-830S on Rigpix has HF SSB TRANSCEIVER, but the
> photo
> > on
> > > www.universal-radio.com has HF TRANSCEIVER. Mine TS-830S sold in
> Norway
> > new,
> > > has also HF SSB TRANSCEIVER
> > >
> > > 73
> > >
> > > Jan - LA2XSA
> > >
> > >
> > >
> > >
> > >
> > >

> > >
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of
> mathprof53575
> > > Sent: Saturday, February 05, 2011 11:14 PM
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: Just wondering
> > >
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> > >
> > >
> > > I wonder if there were some early 830's, perhaps just a few, made as
> > sort
> > of
> > > a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830
> says
> > > (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch
> > of 830
> > > front panels that had both HF and SSB, and then realized that by
> > that time
> > > SSB had become pretty standard and they did not need to include
> it. When
> > the
> > > earlier rigs were made, SSB was not yet so standard so they would
> > want to
> > > point it out.
> > > Bob Wilson
> > > WA9D
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]

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> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> >
>
> [Non-text portions of this message have been removed]
>
>

29667. Pics Of My Mint TS-520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 02:13:37 UTC
From: kd8hmo
Topic: 29667 Message: 29667

Just posted a few pics of my minty 520S that I found at the local hamfest here. It is in mint condition, extremely clean inside and out. The former owner still had the original boxes, packing, manuals and hand mic with it. He also included a nice MS-50 desk mic. I was extremely lucky to find such a nice radio.

29668. Re: [TS-520_820_530_830] Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 02:49:20 UTC
From: John Davidson
Topic: 29650 Message: 29668

My TS520 (no-S original) says SSB Transceiver, that's ironic since I only use it on cw :D

From: mathprof53575 <wilson@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 5, 2011 5:14:03 PM
Subject: [TS-520_820_530_830] Re: Just wondering

I wonder if there were some early 830's, perhaps just a few, made as sort of a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830 says (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830 front panels that had both HF and SSB, and then realized that by that time SSB had become pretty standard and they did not need to include it. When the earlier rigs were made, SSB was not yet so standard so they would want to point it out.
Bob Wilson
WA9D
--- In TS-520_820_530_830@yahoogroups.com, "n9pgo@..." <n9pgo@...> wrote:
>
> Hello to all,
>
> I was wondering why one of my 830's have HF SSB TRANCEIVER in the lower right
>corner and the other one has HF TRANSCEIVER??
>
> Maybe different production dates?
>
> thanks,
>
> n9pgo - Sandy
>

[Non-text portions of this message have been removed]

29669. Re: 830s tune-up problem/question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-05 17:07:41 UTC
From: Mark
Topic: 29626 Message: 29669

Mike,

As far as I know, and my father knows, no one has been "under the hood" to make any adjustments. I have been inside to check the plastic coupler, blow years of accumulated dust and dirt from components and from inside the finals compartment(boy was that dirty!), and changed out the driver tube(seemed to increase output from radio). Beyond that, nothing has been done to it-as far as we know/he can remember. He is looking around his filing cabinet for the service manual, pretty sure he has it. Once I have my hands on it, will give it a going through.

Tnx and '73s
Mark
N5SYR

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Mark,
>
> S

ince the 830 was your fathers do you know if anyone, including your father, has mess with and/or adjusted the driver coils inside the 830? If the 40 and 10 meter driver coils have been improperly adjusted then that could lead to the symptoms you are experiencing.
>
> I seriously doubt the tubes are the source of your problem nor are resistors R15 and R16 (both 56K) on the Rectifier Unit either. You might considering checking the driver coil alignment for 40 and 10 meters as outlined in the 830 service manual. When checking the driver coil alignment make sure you follow the steps exactly as indicated in the 830 service manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Mark" <n5syr@> wrote:
> >
> > Hello everyone. My name is Mark, and I am the owner of my father's TS-830S station. I have the transceiver, SP-230 speaker, VFO-240, and AT-230. My question is this, when tuning the radio and you switch the meter switch to ALC and adjust the Drive control, all bands but 40 and 10 meters will peak with the carrier control set about 3 to 4. However, 40 and 10 require substantially more carrier. I tuned the radio on 40 meters today for the C.S.T.N. and had to crank the carrier up to bout 8. I have checked the plastic coupler on the band swith and it does not seem to have a crack in it. I am here to pick ya'll's collective brains. Have been pining for this radio for years and now that I got her, I want to get the ole girl back up to 100%. Tnx in advance for any advice you can offer.

> >
> > Mark
> > N5SYR
> >
>

29670. TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 03:54:09 UTC
From: bfabman
Topic: 29670 Message: 29670

Hello all, I hope there is someone out there that has had a similar problem with their 820 and found a remedy. My TS820 with digital display(not TS-820S) although with the display is essentially the same transceiver I believe, has a fluctuating display problem when I turn the band switch to any of the 10 meter settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the digital display without stopping, and during this action the VFO has absolutely no affect on the display if I turn it CCW or CW. I have tried to very carefully adjust the TC1 screw on the IF board and by doing this I can actually make all of the bands scroll up and down, but cannot adjust the TC1 so that once the lower bands stop schooling and the VFO has control of them normally again, the 10 meter band does its random up and down scrolling without VFO control. I have located Ken's K4EAA very nicely documented band switch repair on his website, http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could offer any other suggestions that might possibly have an effect on this problem before I start this repair on the radio. I have used spray electrical cleaner on all of the contacts hoping that would do it, but it has had no affect so far. Any suggestions would be greatly appreciated. Thank you so much, Blake

29671. Re: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 04:21:06 UTC
From: Joseph Stiles
Topic: 29670 Message: 29671

Blake,

When the frequency(s) jump around, as you say...are they indicating...say at least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has become "unlocked" for those bands. Check in the service manual, Pg 52, Section 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way more knowledgeable than me! Good luck.................

73's joe wb7uqu

_____
From: bfabman <mobilefab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 5, 2011 7:54:09 PM
Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Hello all, I hope there is someone out there that has had a similar problem with their 820 and found a remedy. My TS820 with digital display(not TS-820S) although with the display is essentially the same transceiver I believe, has a fluctuating display problem when I turn the band switch to any of the 10 meter settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the digital display without stopping, and during this action the VFO has absolutely no affect on the display if I turn it CCW or CW. I have tried to very carefully adjust the TC1 screw on the IF board and by doing this I can actually make all of the bands scroll up and down, but cannot adjust the TC1 so that once the lower bands stop schooling and the VFO has control of them normally again, the 10 meter band does its random up and down scrolling without VFO control. I have located Ken's K4EAA very nicely documented band switch repair on his website, http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could offer any other suggestions that might possibly have an effect on this problem before I start this repair on the radio. I have used spray electrical cleaner on all of the contacts hoping that would do it, but it has had no affect so far. Any suggestions would be greatly appreciated. Thank you so much, Blake

[Non-text portions of this message have been removed]

29672. Re: Salt water dummy load

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 06:03:05 UTC
From: rkersey tds.net
Topic: 29638 Message: 29672

Hello All,

Thanks for the comments on this. It struck me that this is RF, an alternating current, and I don't know whether it will produce much electrolysis . . . I wouldn't think so. I looked again at all the info I could find on this on the Internet. The most popular article on building one had a graph of water temperature vs load time [key down time] and he appeared to have held the key down for about 30 minutes and produce a manageable temperature rise, but no mention of any gases. The diagrams for these things show a vent hole to allow gases to escape, but I suppose one could use a rather large hole and any oxygen and hydrogen would diffuse into the air. Having been in chem lab in high school when the chlorine generator leaked and seen what that was like, I guarantee that if any appreciable chlorine were produced in the tests cited, we'd have heard about it, as the stuff is extremely noxious.

I'm going to mull this over some more . . .

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

29673. Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 13:31:07 UTC
From: w5rkl
Topic: 29670 Message: 29673

Hello Joe and Blake,

If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.

TC1 on the IF Unit sets the level of the CAR Unit signal to the digital display. Adjusting TC1 will not fix the problem you are experiencing on 10 meters. Although the CAR Unit signal is used on all bands, the CAR Unit signal is not band specific, meaning there isn't a different CAR signal for each band. Adjusting TC1 on the IF Unit will not fix the problem you are experiencing on 10 meter. Adjusting TC1 will affect ALL bands simultaneously as you have found out.

The problem you are experiencing on 10 meters appears to be an improperly adjusted VCO Unit 10 meter (all 10 meter settings) VCO Oscillator in the PLL Unit. The VCO Unit adjustments are covered on page 52 of the 820 service manual under "Adjustment of VCO unit". Table 2 on page 53 lists all of the VCO oscillator frequencies and each VCO oscillator coil. The 10 meter VCO oscillator coils are T7 thru 10.

Each band has an individual VCO crystal that is selected by the band switch. The 10 meter VCO crystals are located on the PD Unit and their individual crystal frequencies are as follows:

28.0 = 33.5Mhz
28.5 = 34Mhz
29.0 = 34.5Mhz
29.5 = 35Mhz

I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Blake,
>
> When the frequency(s) jump around, as you say...are they indicating...say at
> least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing
> some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has
> become "unlocked" for those bands. Check in the service manual, Pg 52, Section
> 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way

> more knowledgeable than me! Good luck.................
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: bfabman <mobilefab@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, February 5, 2011 7:54:09 PM
> Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
> fluctuating and wont stop.
>
>
> Hello all, I hope there is someone out there that has had a similar problem with
> their 820 and found a remedy. My TS820 with digital display(not TS-820S)
> although with the display is essentially the same transceiver I believe, has a
> fluctuating display problem when I turn the band switch to any of the 10 meter
> settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the
> digital display without stopping, and during this action the VFO has absolutely
> no affect on the display if I turn it CCW or CW. I have tried to very carefully
> adjust the TC1 screw on the IF board and by doing this I can actually make all
> of the bands scroll up and down, but cannot adjust the TC1 so that once the
> lower bands stop schooling and the VFO has control of them normally again, the
> 10 meter band does its random up and down scrolling without VFO control. I have
> located Ken's K4EAA very nicely documented band switch repair on his website,
> http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could
> offer any other suggestions that might possibly have an effect on this problem
> before I start this repair on the radio. I have used spray electrical cleaner on
> all of the contacts hoping that would do it, but it has had no affect so far.
> Any suggestions would be greatly appreciated. Thank you so much, Blake
>
>
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>
> [Non-text portions of this message have been removed]
>

29674. Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 14:22:54 UTC
From: w5rkl
Topic: 29670 Message: 29674

It's also quite possible all of the 10 meter VCO oscillator coils have been adjusted improperly. I also recommend performing/checking the VCO adjustment on the 820 service manual pages. The CAR signal level to the digital display is, as I mentioned before, is set by adjusting TC1.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Joe and Blake,
>
> If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.
>
> TC1 on the IF Unit sets the level of the CAR Unit signal to the digital display. Adjusting TC1 will not fix the problem you are experiencing on 10 meters. Although the CAR Unit signal is used on all bands, the CAR Unit signal is not band specific, meaning there isn't a different CAR signal for each band. Adjusting TC1 on the IF Unit will not fix the problem you are experiencing on 10 meter. Adjusting TC1 will affect ALL bands simultaneously as you have found out.
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> 29.0 = 34.5Mhz
> 29.5 = 35Mhz
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> I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands.
>
> 73s

> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Blake,
> >
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> > 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way
> > more knowledgeable than me! Good luck.................
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > _________________________________
> > From: bfabman <mobilefab@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, February 5, 2011 7:54:09 PM
> > Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
> > fluctuating and wont stop.
> >
> >
> > Hello all, I hope there is someone out there that has had a similar problem with
> > their 820 and found a remedy. My TS820 with digital display(not TS-820S)
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> > before I start this repair on the radio. I have used spray electrical cleaner on
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> > [Non-text portions of this message have been removed]
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>

29675. Re: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 06:28:55 UTC
From: Blake
Topic: 29670 Message: 29675

Hello Joseph, thanks for the reply, when I turn the band switch to the 28 position, the display is slowly fluctuating between 21 and 22 MHz, mainly 22 MHz, and the kilohertz is ranging constantly between 4++.+ kHz and 7++.+ kHz, the 28.5 position is showing 21 MHz to 22 MHz and the kilohertz range from 7++.+ to 9++.+, Band position 29 is showing 21 MHz to 22 MHz with 4++.+ to 7++.+ kHz, and band 29.5 shows 21 to 22 MHz with kHz ranging up and down between 3++.+ and 9++.+kHz. And now that I went thought all that and the radio is warning up, now when I turn the band switch from 28 through 29.5 the MHz ranges from 25 MHz, to 25MHz to 24 MHz to 29 MHz. all with the fluctuating kHz digits up and down. Whew don’t really know what to say as it seems to keep changing . Thanks Blake

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 05, 2011 8:21 PM
Subject: Re: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Blake,

When the frequency(s) jump around, as you say...are they indicating...say at least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has become "unlocked" for those bands. Check in the service manual, Pg 52, Section 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way more knowledgeable than me! Good luck.................

73's joe wb7uqu

_____
From: bfabman <mobilefab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 5, 2011 7:54:09 PM
Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Hello all, I hope there is someone out there that has had a similar problem with their 820 and found a remedy. My TS820 with digital display(not TS-820S) although with the display is essentially the same transceiver I believe, has a fluctuating display problem when I turn the band switch to any of the 10 meter settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the digital display without stopping, and during this action the VFO has absolutely no affect on the display if I turn it CCW or CW. I have tried to very carefully adjust the TC1 screw on the IF board and by doing this I can actually make all of the bands scroll up and down, but cannot adjust the TC1 so that once the lower bands stop schooling and the VFO has control of them normally again, the

10 meter band does its random up and down scrolling without VFO control. I have located Ken's K4EAA very nicely documented band switch repair on his website, http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could offer any other suggestions that might possibly have an effect on this problem before I start this repair on the radio. I have used spray electrical cleaner on all of the contacts hoping that would do it, but it has had no affect so far. Any suggestions would be greatly appreciated. Thank you so much, Blake

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29676. Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 17:26:26 UTC
From: Tom H
Topic: 29670 Message: 29676

Have you removed the digital display unit and cleaned it as described in other posts in this group? Mine did the scrolling digits on the readout until I did that. The problem started on 10 meters and gradually spread to the lower frequencies. Once I gave everything a thorough cleaning with deoxit, all went away and everything is functioning normally again. Mine is a TS-820S that had been stored in the bottom of a closet for several years, so pretty much everything was in need of a good cleaning. Tom KD7CDC

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> It's also quite possible all of the 10 meter VCO oscillator coils have been adjusted improperly. I also recommend performing/checking the VCO adjustment on the 820 service manual pages. The CAR signal level to the digital display is, as I mentioned before, is set by adjusting TC1.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Joe and Blake,
> >
> > If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.
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> > TC1 on the IF Unit sets the level of the CAR Unit signal to the digital display. Adjusting TC1 will not fix the problem you are experiencing on 10 meters. Although the CAR Unit signal is used on all bands, the CAR Unit signal is not band specific, meaning there isn't a different CAR signal for each band. Adjusting TC1 on the IF Unit will not fix the problem you are experiencing on 10 meter. Adjusting TC1 will affect ALL bands simultaneously as you have found out.
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> > Each band has an individual VCO crystal that is selected by the band switch. The 10 meter VCO crystals are located on the PD Unit and their individual crystal frequencies are as follows:
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> > Mike
> > W5RKL
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> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
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> > > least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing
> > > some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has
> > > become "unlocked" for those bands. Check in the service manual, Pg 52, Section
> > > 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way
> > > more knowledgeable than me! Good luck.................
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> > > 73's joe wb7uqu
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> > >
> > >
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> > > _________________________________
> > > From: bfabman <mobilefab@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sat, February 5, 2011 7:54:09 PM
> > > Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
> > > fluctuating and wont stop.
> > >
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> > > Hello all, I hope there is someone out there that has had a similar problem with
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> > > [Non-text portions of this message have been removed]
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29677. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 17:01:21 UTC
From: Blake
Topic: 29670 Message: 29677

Wow, thanks for such a detailed explanation Mike, you can't know just how much it is appreciated. I was truly hoping that this problem was not a major mechanical issue as much as an adjustment issue. (although I am not afraid to tackle either) I am burring my head into the service manual and will study it extensively before trying to do any adjustments. Thanks for pointing me into what appears to be the right direction. I guess I just never had any idea that someone would ever change something to receive the CB" bands, at least not on one of these beautiful pcs. of history. LOL oh well, I learn something new everyday of my life. I guess that what makes living so great. Thanks again Mike, Blake KF7HHC http://www.pnwmetalcrafters.com/Commercial.html

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 06, 2011 5:31 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Hello Joe and Blake,

If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.

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I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> 73's joe wb7uqu
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> From: bfabman <mobilefab@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, February 5, 2011 7:54:09 PM
> Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
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29678. Re: TS-520 Receiver Help Requested.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 17:45:35 UTC
From: sbonte3078
Topic: 28810 Message: 29678

Hey guys,

I just wanted to post an update to what I found in case it may help someone searching the threads in the future.

My receive problem was caused by a few things.

The first thing I found was that L1 on the Antenna Coil Unit was shorted as seen by RF so the received signal was not properly coupling
from the primary side of L1 to the secondary side of L1. This also caused my marker signal to not be seen on any band. I re-wrapped both the primary and secondary coils with a 26 gauge magnet wire and tuned the coil for maximum signal transfer. At this point I could finally see meter movement when I had the marker signal engaged and the received tone sounded good in my external speaker, but received stations were garbled.

The audio was still very distorted and reminded me of listening to FM signals over an AM receiver. I used a scope to look at the output of the balanced detector and the detected modulation looked very clean.

I then connected my Radio Shack amplified speaker to the output of the detector circuit and could barely hear it because of the lack of amplification at this point but I did hear the detected signal quite clear.

That led me to the AF Unit which had 2 extremely hot power transistors on it. This AF unit also appears to have been causing a 3 volt drop to the other cards on the 14V bus. So I ordered a known good card from Bob Mansker KE5FTF and swapped out the defective one. And voila, smooth clean audio came blaring out of the external speaker!

I'm going to rebuild the defective AF Unit to keep as a spare. I also ordered a spare Antenna Coil Unit from Bob and may even replace mine if I can't get the receiver to align to specs.

Now she just needs a good alignment and hopefully we'll be set!

Thanks Mike W5RKL for your help on this!

73
Steve KU4BY
--- In TS-520_820_530_830@yahoogroups.com, Steve Bontempo <sbontempo@...> wrote:
>
> Hello Group!
>
> I have a Kenwood Ts-520 that recently lost it's receive on all bands.
> WWV still comes in when the button is pushed. Looking for the first
> IF, I noticed all I saw was the HET OSC frequency. From this point I
> injected a signal into the back of the radio and started tracing it
> using the line level diagram @ 14.157MHz. At test point B, which is

> the return from the Antenna Coil Board where it meets up with a trap,
> I saw a decrease in signal instead of the 13db of gain that I was
> supposed to be seeing. It appears that this is the point where the
> signal enters the Antenna Coil Board. I did find R31 burned but still
> reading 56 Ohms. I replaced it. It's on the input of Q5, or the !st RF
> Amp.
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> It's going to take some time for me to get the Antenna Coil board out
> of the transceiver because of they way that it is soldered to the
> chassis so I was wondering if anyone in the forum could maybe offer
> some words of wisdom of something more simple to check to verify that
> it is the coil board. Perhaps I am missing something? Or maybe I'm
> just heading in the wrong direction?
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> Any help would be greatly appreciated!
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> Thanks in Advance!
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29679. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 18:01:48 UTC
From: Joseph Stiles
Topic: 29670 Message: 29679

Mike,

Tnx fer the extra info. International Crystals came through with flying colors on replacement xtals for the "CB HACKS" Now have 3 repaired "PLL BOXES" just in case I run into that again. Agn..tnx!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 6, 2011 6:22:54 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

It's also quite possible all of the 10 meter VCO oscillator coils have been adjusted improperly. I also recommend performing/checking the VCO adjustment on the 820 service manual pages. The CAR signal level to the digital display is, as I mentioned before, is set by adjusting TC1.

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Mike
W5RKL

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> > 73's joe wb7uqu
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> > From: bfabman <mobilefab@>

> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, February 5, 2011 7:54:09 PM
> > Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display

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29680. Re: TS-520 Receiver Help Requested.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 18:38:36 UTC
From: w5rkl
Topic: 28810 Message: 29680

I'm glad your 520 is up and working. It's always good to hear from folks after they troubleshot/tracked down the source of a problem. These are very good learning tools for owners as this helps them understand how stages work, what the signal path is and how the signal is processed throughout the transceiver in both transmit and receive. Great job Steve!!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "sbonte3078" <sbontempo@...> wrote:
>
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> Hey guys,
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> I just wanted to post an update to what I found in case it may help someone searching the threads in the future.
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29681. Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 18:49:11 UTC
From: w5rkl
Topic: 29670 Message: 29681

Blake,

All of the Kenwood hybrids, along with a number of other manufactured ham transceivers, are candidates for CB Hackers and quite a few have appeared here. Some manuals even have the modification written at the end of the manual. I have a TS-530 operators manual I downloaded from the Internet that has hand written instructions on how to modify the 530 for 11 meter operation. While it appears to some to be illegal to modify a TS-530 for 11 meter operation, it's not "illegal" to do that. It becomes "illegal" when one "transmits" on non-ham bands, excluding MARS modifications, using a modified TS-530.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Blake" <mobilefab@...> wrote:
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> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, February 06, 2011 5:31 AM
> Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.
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> > Hello all, I hope there is someone out there that has had a similar problem with
> > their 820 and found a remedy. My TS820 with digital display(not TS-820S)
> > although with the display is essentially the same transceiver I believe, has a
> > fluctuating display problem when I turn the band switch to any of the 10 meter
> > settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the
> > digital display without stopping, and during this action the VFO has absolutely
> > no affect on the display if I turn it CCW or CW. I have tried to very carefully
> > adjust the TC1 screw on the IF board and by doing this I can actually make all
> > of the bands scroll up and down, but cannot adjust the TC1 so that once the
> > lower bands stop schooling and the VFO has control of them normally again, the
> > 10 meter band does its random up and down scrolling without VFO control. I have
> > located Ken's K4EAA very nicely documented band switch repair on his website,
> > http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could
> > offer any other suggestions that might possibly have an effect on this problem
> > before I start this repair on the radio. I have used spray electrical cleaner on
> > all of the contacts hoping that would do it, but it has had no affect so far.
> > Any suggestions would be greatly appreciated. Thank you so much, Blake
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> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29682. Re: Just wondering

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-06 22:30:49 UTC
From: mathprof53575
Topic: 29650 Message: 29682

I agree SSB has been around for a long time, but it was far from the "standard" for voice QSOs that it is on HF now. Notice it was almost nonexistent in WWII equipment, and it sure did not jump into prominence instantly among those (i.e. hams) who had less money than the military!
When I was a ham in the 50's and 60's it was something most of us read about in QST but knew we would never be able to afford or build. The old articles on SSB equipment make a point of how it is the coming thing, if you go back and look at them, but like PC networking it was the coming thing for a long time! So I could imagine a marketing guy well into the 1970s thinking they needed to point out the transceiver did SSB.
Bob Wilson
WA9D
--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Single sideband was used in the late 40s to early 50s and later became quite popular in the early 60s and beyond. Single sideband has been around a long time, longer than folks may think.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "mathprof53575" <wilson@> wrote:
> >
> >
> >
> >
> >
> >
> > I wonder if there were some early 830's, perhaps just a few, made as sort of a holdover from 820's: My 820 says SSB TRANSCEIVER (no HF), my 830 says (like one of yours) HF TRANSCEIVER, no SSB. Maybe they made a batch of 830 front panels that had both HF and SSB, and then realized that by that time SSB had become pretty standard and they did not need to include it. When the earlier rigs were made, SSB was not yet so standard so they would want to point it out.
> > Bob Wilson
> > WA9D
> > --- In TS-520_820_530_830@yahoogroups.com, "n9pgo@" <n9pgo@> wrote:
> > >
> > > Hello to all,
> > >
> > > I was wondering why one of my 830's have HF SSB TRANCEIVER in the lower right corner and the other one has HF TRANSCEIVER??
> > >
> > > Maybe different production dates?

> > >
> > > thanks,
> > >
> > > n9pgo - Sandy
> > >
> >
>

29683. Re: [TS-520_820_530_830] D-104 Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 05:45:51 UTC
From: Walter Breining
Topic: 29603 Message: 29683

I usually take the "if it ain't broke don't fix it" approach. The only electrolytic cap in this amplifier is the 4.7 uf output cap. If you want to replace it, it won't hurt but I have not seen a lot of these fail. Be sure to have the replacement installed with the correct polarity.

Impedance matching of the amplified stand to the Kenwood is not an issue. Since the element is isolated from the radio by the amplifier, and the amplifier has plenty of gain, the impedance is unimportant.

My modification to a FET amplifier loads the element at a even higher impedance than the original amplifier giving the element an even more full sound.

The amplified D-104 works well with Kenwood hybrids.

Vy 73, Walt N9WB

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 02, 2011 1:57 AM
Subject: [TS-520_820_530_830] D-104 Question

I have a 520S and a 530S. Will a D-104 with the amplified T-UG8 stand match up with these radios as far as impedance goes? I read where the amp was an attempt to match the old crystal element to the newer radios. Also, would it be a good idea to replace the electrolytic caps on the amplifier of this mic?

[Non-text portions of this message have been removed]

29684. TS-830s alignment - 2 questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 08:54:13 UTC
From: Chris Parnell
Topic: 29684 Message: 29684

Hi all,

Hope to get an answer or two on this post.

Three odd things are happening on the TS-830 that I am restoring.

1. The drive from the MC-50 seems very low. I have to have the mic gain up at around 2pm (7 on the dial) AND the processor in at about 2pm (minimum) on it's gauge just to get around 45w peak talk power on my external meter.

It tunes at 100w - 120w CW no problem.

2. Although I get a reasonable level CW sidetone, I get no SSB monitor on audio out using the "MONI" button.

3. The receive on 18Mhz band is intermittent, where it drops at least 3-4 s-points randomly.

Hope I can be pointed in the right direction.

Thank you all.

Chris, ZL1CDP

Sent from my iPhone

29685. Re: [TS-520_820_530_830] TS-830s alignment - 2 questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 08:59:52 UTC
From: tnnyswy@yahoo.com
Topic: 29684 Message: 29685

Hey! You said 2 question! You Cheated.
:D (grin)
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: Chris Parnell <cparnell1001@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 07 Feb 2011 21:54:13
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830s alignment - 2 questions

Hi all,

Hope to get an answer or two on this post.

Three odd things are happening on the TS-830 that I am restoring.

1. The drive from the MC-50 seems very low. I have to have the mic gain up at around 2pm (7 on the dial) AND the processor in at about 2pm (minimum) on it's gauge just to get around 45w peak talk power on my external meter.

It tunes at 100w - 120w CW no problem.

2. Although I get a reasonable level CW sidetone, I get no SSB monitor on audio out using the "MONI" button.

3. The receive on 18Mhz band is intermittent, where it drops at least 3-4 s-points randomly.

Hope I can be pointed in the right direction.

Thank you all.

Chris, ZL1CDP

Sent from my iPhone

[Non-text portions of this message have been removed]

29686. Re: Pics Of My Mint TS-520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 12:50:20 UTC
From: Joao
Topic: 29667 Message: 29686

loooks very neat indeed. i also own one. they are very good.
versatile and i like the audio output. also the reception audio.
enjoy it.

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Just posted a few pics of my minty 520S that I found at the local hamfest here. It is in mint condition, extremely clean inside and out. The former owner still had the original boxes, packing, manuals and hand mic with it. He also included a nice MS-50 desk mic. I was extremely lucky to find such a nice radio.
>

29687. full article on filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 15:19:29 UTC
From: W8HW
Topic: 29687 Message: 29687

Sure, I will send the full article on filters (attached) to your email direct.
73, Bruce, W8HW

Bruce: Would you please e-mail me the article? 73, Chuck, WA4IIF

In a message dated 1/19/2011 4:10:51 P.M. Central Standard Time,
w8hw@... writes:

In general, there are two types of notch filters... Automatic and Manual notch filters. Regardless of type a notch filter is the opposite of a Band Pass filter. A Notch filter takes out (notch) one frequency while allowing all other frequencies to pass. An example of the use of a automatic notch filter is on SSB. If you are speaking to your ham friend using SSB and someone transmits a STRONG carrier on your frequency, it can nock out your friends signal until you engage your ANF (Automatic Notch Filter). The ANF will try to seek out the frequency that the carrier is on and "Notch" it out leaving only your friends voice.

ANF can NOT be used while operating CW or Digital because a ANF could and will destroy the very single frequency that you are trying to listen to. ANF must be turned off while using those modes. You may use a manual notch filter if needed. This is because it is manual, you can set it on a frequency that you do not wish to listen to (interfering signal) and it will not seek the signal that you wish to listen to.

Above is the short and quick answer. I have an article that is about filtering in general. Many people have requested it. If you wish to have it emailed to you, send me a email and I will send it to you. Hope that this helps.

73, Bruce, W8HW, _w8hw@..._ (mailto:w8hw@...)

[Non-text portions of this message have been removed]

29688. Re: TS-830s alignment - 2 questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 16:26:19 UTC
From: w5rkl
Topic: 29684 Message: 29688

Hello Chris,

First, the CW sidetone does not flow through the same circuit as the transmit "MON" audio does.

MON transmit audio is produced by sampling the transmit IF signal through a simple detector circuit and applying the detected audio to the audio amplifier. CW sidetone audio is applied directly to the receive audio amplifier.

Normal non-processed transmit audio with the MIC gain set between 10 and 11 o'clock will produce an average power output displayed on an average watt meter between 20 and 30 watts. If this is what you see then there's nothing wrong with your 830. Folks tend to believe it the transmitter is not producing 100 watts on a watt meter then there's something wrong. That's not true. Most watt meter are average watt meters which will not display 100 watts output in sideband but rather between 20 and 30 watts peak output on an average watt meter.

Also, if tuning the 830 up produces 100 watt output in CW mode then there is nothing wrong with the 830s ability to produce full output.

As for intermittent receive on 18Mhz, this could be caused by a dirty band switch wafer. Try cleaning the band switch wafers, don't forget the wafer switch inside the final amplifier enclosure, with contact cleaner. Apply a small amount of cleaner to the wafer switches, rotate the switch completely CW and CCW, a number of times then use canned air to remove any/all cleaner residue. Wait a few minutes (3 - 5 minutes) and test for proper operation. All contact cleaning process should be done with the transceiver tuned OFF, NEVER with the transceiver turned ON! Contact cleaner is flammable and it only takes a small spark to ignite the cleaner. Adhere to all warnings on the can of cleaner.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all,
>
> Hope to get an answer or two on this post.
>
> Three odd things are happening on the TS-830 that I am restoring.
>
> 1. The drive from the MC-50 seems very low. I have to have the mic gain up at around 2pm (7 on the dial) AND the processor in at about 2pm (minimum) on it's gauge just to get around 45w peak talk power on my external meter.
>
> It tunes at 100w - 120w CW no problem.
>
> 2. Although I get a reasonable level CW sidetone, I get no SSB monitor on audio out using

the "MONI" button.
>
> 3. The receive on 18Mhz band is intermittent, where it drops at least 3-4 s-points randomly.
>
> Hope I can be pointed in the right direction.
>
> Thank you all.
>
> Chris, ZL1CDP
>
>
>
> Sent from my iPhone
>

29689. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 16:30:52 UTC
From: Blake
Topic: 29670 Message: 29689

" I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands."

Good Morning Mike, I have been studying your email and my downloaded service manual, and a lot of Google surfing all weekend, and was wondering if you would mind answering a couple questions for me. To access the 10 meter crystals on the PD unit, do I just carefully remove the 4 corner brass hex nuts you can see in the picture, and then the board will carefully pull out. Are the crystals located on the back of this printed circuit board, under their prospective adjustment points, that is held in by the 4 hex nuts in the corners.
As none of my digital VM's read anything close to 35 MHz in the frequency mode, I am going to have purchase an inexpensive frequency counter kit online, make it and then use it to test the crystals. I am in for a real education aren't I, by the time I get everything right, and or figured out, and then get my upgrade to general next month, I will eventually be able to key up with a real big smile on my face. HA LOL,,,,,,, Thanks for your continued help. Just cause I have been fabricating and welding for almost 35 yrs doesn't mean I cant learn some new tricks, Right. !! Thanks again Blake KF7HHC

http://electronics-diy.com/product_details.php?pid=495&name=60MHz Frequency Meter / Counter Kit

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 06, 2011 5:31 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Hello Joe and Blake,

If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.

TC1 on the IF Unit sets the level of the CAR Unit signal to the digital display. Adjusting TC1 will not fix the problem you are experiencing on 10 meters. Although the CAR Unit signal is used on all bands, the CAR Unit signal is not band specific, meaning there isn't a different CAR signal for each band. Adjusting TC1 on the IF Unit will not fix the problem you are experiencing on 10 meter. Adjusting TC1 will affect ALL bands simultaneously as you have found out.

The problem you are experiencing on 10 meters appears to be an improperly adjusted VCO Unit 10 meter (all 10 meter settings) VCO Oscillator in the PLL Unit. The VCO Unit adjustments are covered on page 52 of the 820 service manual under "Adjustment of VCO unit". Table 2 on

page 53 lists all of the VCO oscillator frequencies and each VCO oscillator coil. The 10 meter VCO oscillator coils are T7 thru 10.

Each band has an individual VCO crystal that is selected by the band switch. The 10 meter VCO crystals are located on the PD Unit and their individual crystal frequencies are as follows:

28.0 = 33.5Mhz
28.5 = 34Mhz
29.0 = 34.5Mhz
29.5 = 35Mhz

I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Blake,
>
> When the frequency(s) jump around, as you say...are they indicating...say at
> least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing
> some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has
> become "unlocked" for those bands. Check in the service manual, Pg 52, Section
> 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way
> more knowledgeable than me! Good luck.................
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: bfabman <mobilefab@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, February 5, 2011 7:54:09 PM
> Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
> fluctuating and wont stop.
>
>
> Hello all, I hope there is someone out there that has had a similar problem with
> their 820 and found a remedy. My TS820 with digital display(not TS-820S)
> although with the display is essentially the same transceiver I believe, has a
> fluctuating display problem when I turn the band switch to any of the 10 meter
> settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the
> digital display without stopping, and during this action the VFO has absolutely

> no affect on the display if I turn it CCW or CW. I have tried to very carefully
> adjust the TC1 screw on the IF board and by doing this I can actually make all
> of the bands scroll up and down, but cannot adjust the TC1 so that once the
> lower bands stop schooling and the VFO has control of them normally again, the
> 10 meter band does its random up and down scrolling without VFO control. I have
> located Ken's K4EAA very nicely documented band switch repair on his website,
> http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could
> offer any other suggestions that might possibly have an effect on this problem
> before I start this repair on the radio. I have used spray electrical cleaner on
> all of the contacts hoping that would do it, but it has had no affect so far.
> Any suggestions would be greatly appreciated. Thank you so much, Blake
>
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>
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>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

29690. Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 17:45:57 UTC
From: w5rkl
Topic: 29670 Message: 29690

Morning Blake,

The PLL Unit is located on the bottom of the 820. There are 4 screws on the top 4 corners of the PLL Unit that must be removed. There are also 2 additional screws, accessed through 2 holes on the side of the chassis (820 up side down and front panel facing you) that also must be removed. Also remove the plugs connecting the PLL Unit to the wiring harness. Remove the side screws first, the wiring harness plugs next, then the 4 corner screws and the PLL Unit should lift out. Use caution when removing the wiring harness plug, you don't want to break any of the plug wires. Since this is your first time removing a module, pay attention to where the wiring harness plugs are plugged into the PLL Unit. While the plugs will generally fall next to the pins they connect to, it's always good to make a mental and/or drawing of where the plugs do so when reinstalling the PLL Unit you put the plugs back onto the right points. Make sure you do not twist the plugs 180 degrees when inserting them. They are somewhat "sailor proof", meaning they only plug in one way but just be cautious to ensure they are plugged in correctly.

Installing the PLL Unit back into the 820 simply reverse the removal steps except install the plugs "last".

There are 2 PC boards inside the PLL Unit, the "PD" and "VCO" boards. The individual band switch selected VCO oscillator crystals are mounted on the component side of the "PD Unit" PC board. They are small, about the size or slightly smaller than a "chicklet" candy, but thinner. The frequency of each crystal is typically stamped on the top of the crystal. Compare the stamped frequency on top of the crystal to the crystal frequencies shown on the PD Unit schematic in the 820 service manual page 64. The crystals are labeled "X6 thru X10" connected to the base terminals of transistors Q6 thru Q10 on the PD Unit schematic. Once the PLL Unit is removed, remove the metal enclosure screws holding the metal cover. At this point you can look at the crystals on the PD Unit board and determine whether the all of the crystal are the frequencies they should be.

While you have the PLL Unit out of the 820, clean the internal pins and sockets that connect the 2 boards together inside the metal enclosure. Remove the boards, one at a time, and clean the pins and sockets on the board using contact cleaner. Insert and remove the board a few times to allow scrubbing action to clean the pins and sockets. Do this one board at a time then install the board back into the metal case and secure the board with the mounting screws. Use canned air to remove any and all cleaner residue. Repeat the cleaning process with the other board. Make sure you remove any/all cleaner residue with canned air (available a Walmart) before you reassemble the PLL Unit and install it back into the 820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Blake" <mobilefab@...> wrote:
>
>
> " I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands."
>
>
> Good Morning Mike, I have been studying your email and my downloaded service manual, and a lot of Google surfing all weekend, and was wondering if you would mind answering a couple questions for me. To access the 10 meter crystals on the PD unit, do I just carefully remove the 4 corner brass hex nuts you can see in the picture, and then the board will carefully pull out. Are the crystals located on the back of this printed circuit board, under their prospective adjustment points, that is held in by the 4 hex nuts in the corners.
> As none of my digital VM's read anything close to 35 MHz in the frequency mode, I am going to have purchase an inexpensive frequency counter kit online, make it and then use it to test the crystals. I am in for a real education aren't I, by the time I get everything right, and or figured out, and then get my upgrade to general next month, I will eventually be able to key up with a real big smile on my face. HA LOL,,,,,,, Thanks for your continued help. Just cause I have been fabricating and welding for almost 35 yrs doesn't mean I cant learn some new tricks, Right. !! Thanks again Blake KF7HHC
>
> http://electronics-diy.com/product_details.php?pid=495&name=60MHz Frequency Meter / Counter Kit
>

29691. A question regarding tuning a TS520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 17:46:25 UTC
From: Simon Taylor
Topic: 29691 Message: 29691

Hi everyone,

I am enjoying being a member of this group and have recently taken ownership of a TS520 and like many new to hybrids, I have a question regarding the tune-up proceedure, in particular 'drive tuning'.

Having ensured that the circut bias is adjusted to 60 ma, the instruction maunal suggests the following in regards to 'drive tuning':

'Shift the METER switch to ALC and the MODE switch to TUN and peak the ALC reading (maximum meter deflection) with the DRIVE control.'

MY QUESTION THEREFORE IS THIS:
By maximum meter deflection, does it mean maximum within the ALC reading on the meter, or Maximum reading on the meter, which is obviously greater than the ALC reading?

I know I may appear a little dim, but want to ensure that I look after this lovely lady and enjoy her outstanding performance.

I look forward to any thoughts you can give me.

Thanks,

Simon

29692. Kenwood 520 repair

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 17:58:13 UTC
From: kcid51
Topic: 29692 Message: 29692

I have a 520, that I have owned since late 80's. It worked well untill I packed it away for a move to a different state, then sat in the packing box for 13 years. I recently unpacked it, hooked it up, the first time I turned it on the meter went to full scale with a hum coming from the radio. I do not know where to start on this so I am thinking that besides that problem it needs to be re-aligned as well. So I am looking for a good repair person for this vintage radio, any suggestions. I live in Oceanside Ca. Thanks for any input you may have!

Dick Ka7ayt

29693. RE: [TS-520_820_530_830] A question regarding tuning a TS520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:05:10 UTC
From: Greg Anders
Topic: 29691 Message: 29693

Hi Simon,

You tune for outright maximum (max meter deflection) in the tune position. The much smaller range is for adjustment of mic gain in SSB mode to keep the finals operating in the cormect range (no positive grid current).

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Simon Taylor
Sent: Monday, February 07, 2011 9:46 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] A question regarding tuning a TS520

Hi everyone,

I am enjoying being a member of this group and have recently taken ownership of a TS520 and like many new to hybrids, I have a question regarding the tune-up proceedure, in particular 'drive tuning'.

Having ensured that the circut bias is adjusted to 60 ma, the instruction maunal suggests the following in regards to 'drive tuning':

'Shift the METER switch to ALC and the MODE switch to TUN and peak the ALC reading (maximum meter deflection) with the DRIVE control.'

MY QUESTION THEREFORE IS THIS:
By maximum meter deflection, does it mean maximum within the ALC reading on the meter, or Maximum reading on the meter, which is obviously greater than the ALC reading?

I know I may appear a little dim, but want to ensure that I look after this lovely lady and enjoy her outstanding performance.

I look forward to any thoughts you can give me.

Thanks,

Simon

[Non-text portions of this message have been removed]

29694. Re: [TS-520_820_530_830] TS-830s alignment - 2 questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:05:53 UTC
From: Chris Parnell
Topic: 29684 Message: 29694

Thanks Grin ;-)

Sent from my iPhone

On 7/02/2011, at 9:59 PM, tnnyswy@yahoo.com wrote:

> Hey! You said 2 question! You Cheated.
> :D (grin)
> Sent from my Verizon Wireless BlackBerry
>
> -----Original Message-----
> From: Chris Parnell <cparnell1001@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Mon, 07 Feb 2011 21:54:13
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] TS-830s alignment - 2 questions
>
> Hi all,
>
> Hope to get an answer or two on this post.
>
> Three odd things are happening on the TS-830 that I am restoring.
>
> 1. The drive from the MC-50 seems very low. I have to have the mic gain up at around 2pm (7 on the dial) AND the processor in at about 2pm (minimum) on it's gauge just to get around 45w peak talk power on my external meter.
>
> It tunes at 100w - 120w CW no problem.
>
> 2. Although I get a reasonable level CW sidetone, I get no SSB monitor on audio out using the "MONI" button.
>
> 3. The receive on 18Mhz band is intermittent, where it drops at least 3-4 s-points randomly.
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> Hope I can be pointed in the right direction.
>
> Thank you all.
>
> Chris, ZL1CDP
>
>
>
> Sent from my iPhone
>

>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

29695. Re: [TS-520_820_530_830] Re: TS-830s alignment - 2 questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:08:15 UTC
From: Chris Parnell
Topic: 29684 Message: 29695

Thanks Mike. Yes I realise that the CW sidetone is different and fed through the AF.

The MONI button turned on should give me a sampled SSB audio though and doesn't.

The average PO on my LDG AT1000 is around 15-20 watts on SSB... So a little low I guess.

Good points re the 18Mhz band... Will take a look at the wafers tonight.

Thanks again.

Chris

Sent from my iPhone

On 8/02/2011, at 5:26 AM, w5rkl <w5rkl@...> wrote:

> Hello Chris,
>
> First, the CW sidetone does not flow through the same circuit as the transmit "MON" audio does.
>
> MON transmit audio is produced by sampling the transmit IF signal through a simple detector circuit and applying the detected audio to the audio amplifier. CW sidetone audio is applied directly to the receive audio amplifier.
>
> Normal non-processed transmit audio with the MIC gain set between 10 and 11 o'clock will produce an average power output displayed on an average watt meter between 20 and 30 watts. If this is what you see then there's nothing wrong with your 830. Folks tend to believe it the transmitter is not producing 100 watts on a watt meter then there's something wrong. That's not true. Most watt meter are average watt meters which will not display 100 watts output in sideband but rather between 20 and 30 watts peak output on an average watt meter.
>
> Also, if tuning the 830 up produces 100 watt output in CW mode then there is nothing wrong with the 830s ability to produce full output.
>
> As for intermittent receive on 18Mhz, this could be caused by a dirty band switch wafer. Try cleaning the band switch wafers, don't forget the wafer switch inside the final amplifier enclosure, with contact cleaner. Apply a small amount of cleaner to the wafer switches, rotate the switch completely CW and CCW, a number of times then use canned air to remove any/all cleaner residue. Wait a few minutes (3 - 5 minutes) and test for proper operation. All contact cleaning process should be done with the transceiver tuned OFF, NEVER with the transceiver turned ON! Contact cleaner is flammable and it only takes a small spark to ignite the cleaner. Adhere to all warnings on the can of cleaner.
>
> 73s
> Mike
> W5RKL

>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi all,
> >
> > Hope to get an answer or two on this post.
> >
> > Three odd things are happening on the TS-830 that I am restoring.
> >
> > 1. The drive from the MC-50 seems very low. I have to have the mic gain up at around 2pm (7 on the dial) AND the processor in at about 2pm (minimum) on it's gauge just to get around 45w peak talk power on my external meter.
> >
> > It tunes at 100w - 120w CW no problem.
> >
> > 2. Although I get a reasonable level CW sidetone, I get no SSB monitor on audio out using the "MONI" button.
> >
> > 3. The receive on 18Mhz band is intermittent, where it drops at least 3-4 s-points randomly.
> >
> > Hope I can be pointed in the right direction.
> >
> > Thank you all.
> >
> > Chris, ZL1CDP
> >
> >
> >
> > Sent from my iPhone
> >
>
>

[Non-text portions of this message have been removed]

29696. Re: A question regarding tuning a TS520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:23:52 UTC
From: w5rkl
Topic: 29691 Message: 29696

Simon and Greg,

Greg is correct, tune for maximum meter indication, not just within the ALC scale.

Greg, when ALC is indicated on the meter (meter switch set to ALC) during TUNE mode (DRIVE control adjusted for peak indicattion) and during normal sideband transmissions, the grids are already swinging "positive".

ALC is produced when grid current starts to flow in the final tubes. The more positive the final tube grids swing the more ALC voltage is produced.

The amount/level of ALC produced depends on the amount of "positive" swing of the grids in the final amplifier tube. This is all controlled by the level of RF output signal applied from the driver tube to the grids of the final tubes. If a portion of the positive half of the RF sine wave level from the driver tube is at a level that causes the grids of the final tubes to swing "positive" then a current between the final tube cathodes and grids exist. This induces a voltage that is sensed by the ALC amplifier transistor resulting in a "difference of potential" between the ALC amplifier transistors Base and Emitter. This difference of potential results in a change in the ALC amplifier transistors Collector voltage. The varying ALC amplifier Collector voltage is now the "ALC" voltage that is fed back to the IF Unit's IF amplifier to "reduce" the IF amplifiers gain which "reduces" the RF output of the transceiver. Transmitter ALC functions the same way a receiver's AGC does, controls the gain.

When ALC is produced (grid current flowing in the final tubes), power is consumed in the final tube grids which reduces the power output at the final tube plates circuit. In addition, when grid current flows in the final tubes the output signal becomes distorted since the final tubes are no longer operating in their linear state. The final amplifier in the hybrids operate in Class AB1. Class AB1 amplifier "normally" do not have grid current flowing throughout the sine wave cycle. The purpose of ALC is to bring the amplifiers back into their linear state and it accomplishes this by reducing the gain of the earlier "IF" stage. By reducing the gain of the IF amplifier the overall gain of the transmitter is also reduced resulting in reduction in RF output from the final amplifier.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> Hi Simon,
>
> You tune for outright maximum (max meter deflection) in the tune position. The much smaller range is for adjustment of mic gain in SSB mode to keep the finals operating in the cormect range (no positive grid current).
>
> Greg

>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Simon Taylor
> Sent: Monday, February 07, 2011 9:46 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] A question regarding tuning a TS520
>
>
>
> Hi everyone,
>
> I am enjoying being a member of this group and have recently taken ownership of a TS520 and like many new to hybrids, I have a question regarding the tune-up proceedure, in particular 'drive tuning'.
>
> Having ensured that the circut bias is adjusted to 60 ma, the instruction maunal suggests the following in regards to 'drive tuning':
>
> 'Shift the METER switch to ALC and the MODE switch to TUN and peak the ALC reading (maximum meter deflection) with the DRIVE control.'
>
> MY QUESTION THEREFORE IS THIS:
> By maximum meter deflection, does it mean maximum within the ALC reading on the meter, or Maximum reading on the meter, which is obviously greater than the ALC reading?
>
> I know I may appear a little dim, but want to ensure that I look after this lovely lady and enjoy her outstanding performance.
>
> I look forward to any thoughts you can give me.
>
> Thanks,
>
> Simon
>
>
>
> [Non-text portions of this message have been removed]
>

29697. Re: A question regarding tuning a TS520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:39:49 UTC
From: w5rkl
Topic: 29691 Message: 29697

One more comment.

The reason Kenwood uses the ALC meter setting in TUNE mode is because ALC has a more pronounce peak than the IP position does. The IP meter setting does show a peak BUT it will not show the "actual" peak when it occurs. The IP meter setting is more "flat" or once the IP meter peaks, any further adjustment which would cause a reduction in ALC or slight increase in ALC would not be seen in the IP setting. So to see the true peak in grid current based on the peak signal from the driver tube through adjusting the DRIVE control, the ALC meter setting is used.

In older transmitters with a "grid" meter setting, transmitters were tuned for "maximum grid drive". This meant the driver was tuned for a maximum RF signal applied to the input of the final amplifier. The "grid" meter actually displays grid current in the final tubes NOT the driver tube. The same applies in the Kenwood hybrids, ALC is indicating maximum RF drive to the final amplifier by displaying the level of ALC produced by the maximum grid current flowing in the final tube grids.

73s
Mike
W5RKL

29698. Re: [TS-520_820_530_830] Kenwood 520 repair

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 20:01:05 UTC
From: Joseph Stiles
Topic: 29692 Message: 29698

Dick,

Welcome to the world of KW hybrids. Check the "DUH FACTOR" first. I am guilty of this myself.....check that the "RF GAIN" control is fully CW...and/or the "SEND/RCV" switch is not in "SEND" I am still working on a 520 that had a CB HACK. Whom ever was in there really messed it up...I think Gordon(N6WK) who is in the group..is not too far from you...GOOD LUCK.....

73's joe wb7uqu

From: kcid51 <rwilimek@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 7, 2011 9:58:13 AM
Subject: [TS-520_820_530_830] Kenwood 520 repair

I have a 520, that I have owned since late 80's. It worked well untill I packed it away for a move to a different state, then sat in the packing box for 13 years. I recently unpacked it, hooked it up, the first time I turned it on the meter went to full scale with a hum coming from the radio. I do not know where to start on this so I am thinking that besides that problem it needs to be re-aligned as well. So I am looking for a good repair person for this vintage radio, any suggestions. I live in Oceanside Ca. Thanks for any input you may have!

Dick Ka7ayt

[Non-text portions of this message have been removed]

29699. Re: A question regarding tuning a TS520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 18:08:48 UTC
From: Simon Taylor
Topic: 29691 Message: 29699

Hi Greg,

Thank you for your advice and you have confirmed what I suspected. I would have liked to have asked my Elmer who had a Kenwood Hybrid, however he is no longer with us.

Thanks again,

Simon.

--- In TS-520_820_530_830@yahoogroups.com, Greg Anders <greg.anders@...> wrote:
>
> Hi Simon,
>
> You tune for outright maximum (max meter deflection) in the tune position. The much smaller range is for adjustment of mic gain in SSB mode to keep the finals operating in the cormect range (no positive grid current).
>
> Greg
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Simon Taylor
> Sent: Monday, February 07, 2011 9:46 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] A question regarding tuning a TS520
>
>
>
> Hi everyone,
>
> I am enjoying being a member of this group and have recently taken ownership of a TS520 and like many new to hybrids, I have a question regarding the tune-up proceedure, in particular 'drive tuning'.
>
> Having ensured that the circut bias is adjusted to 60 ma, the instruction maunal suggests the following in regards to 'drive tuning':
>
> 'Shift the METER switch to ALC and the MODE switch to TUN and peak the ALC reading (maximum meter deflection) with the DRIVE control.'
>
> MY QUESTION THEREFORE IS THIS:
> By maximum meter deflection, does it mean maximum within the ALC reading on the meter, or Maximum reading on the meter, which is obviously greater than the ALC reading?
>
> I know I may appear a little dim, but want to ensure that I look after this lovely lady and enjoy her outstanding performance.
>

> I look forward to any thoughts you can give me.
>
> Thanks,
>
> Simon
>
>
>
> [Non-text portions of this message have been removed]
>

29700. AT200 Tuner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 20:02:15 UTC
From: Alan
Topic: 29700 Message: 29700

Hi Folks,

I have come accross a AT-200 which will go nicely with my TS520. However.

The 2 Diodes in the SWR circuit are dead and I can't find replacements
listed anywhere in ZL.

Does any one out there know what the equivelent is for the 2 diodes are they
are listed as 2-1K261
If anyone has any advise please help.

73

Alan
ZL4FM

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11 07:34:00

[Non-text portions of this message have been removed]

29701. Re: [TS-520_820_530_830] AT200 Tuner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 20:17:19 UTC
From: n6wk@n6wk.com
Topic: 29700 Message: 29701

They ate NTE110 diodes. Very common
Here are the specs
http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
73,
Gordon

On 2/7/2011 12:02 PM, Alan wrote:
>
> Hi Folks,
>
> I have come accross a AT-200 which will go nicely with my TS520. However.
>
> The 2 Diodes in the SWR circuit are dead and I can't find replacements
> listed anywhere in ZL.
>
> Does any one out there know what the equivelent is for the 2 diodes
> are they
> are listed as 2-1K261
> If anyone has any advise please help.
>
> 73
>
> Alan
> ZL4FM
>
> ----------
>
> No virus found in this outgoing message.
> Checked by AVG - www.avg.com
> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
> 02/07/11 07:34:00
>
> [Non-text portions of this message have been removed]
>
>

29702. Re: [TS-520_820_530_830] AT200 Tuner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 20:57:58 UTC
From: Chris Parnell
Topic: 29700 Message: 29702

Hi Alan,

Try www.mouser.co.nz too.

Cheers
Chris, ZL1CDP

On 8/02/11 9:17 AM, "n6wk@..." <n6wk@...> wrote:

>They ate NTE110 diodes. Very common
>Here are the specs
>http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
>73,
>Gordon
>
>
>
>On 2/7/2011 12:02 PM, Alan wrote:
>>
>> Hi Folks,
>>
>> I have come accross a AT-200 which will go nicely with my TS520.
>>However.
>>
>> The 2 Diodes in the SWR circuit are dead and I can't find replacements
>> listed anywhere in ZL.
>>
>> Does any one out there know what the equivelent is for the 2 diodes
>> are they
>> are listed as 2-1K261
>> If anyone has any advise please help.
>>
>> 73
>>
>> Alan
>> ZL4FM
>>
>> ----------
>>
>> No virus found in this outgoing message.
>> Checked by AVG - www.avg.com
>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> 02/07/11 07:34:00
>>
>> [Non-text portions of this message have been removed]
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>
>Yahoo! Groups Links
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29703. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 21:38:28 UTC
From: Joseph Stiles
Topic: 29670 Message: 29703

Blake,

Check out the photo section of this group, I think it's under TS-820(S) CB HACK...by wb7uqu. I took apart the "PLL BOX", photographed the "PD BOARD" out of the "PLL UNIT" It shows the crystals that are very commonly replaced with lower MHz crystals of usually 1.5MHz - 2.0 MHz lower in the positions of X9 & X10. Most times they will jump out at you because the are all silver and do not have the blue plastic "shrink-wrap" around them with the frequency printed. I have seen however, crystal "cans" as described by Mike. What's important is that the correct frequencies are in the correct places. Also...get yourself a "HIGH -RES" "xray" view of the PD board...and check ALL the foil traces. It's a real pain in the arse...but I found 1 of the boards had been very badly soldered by the hacker...and spent way too much time trying to figure out what was wrong. Found some poor solder work, causing a couple of "solder bridges." Good luck.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 7, 2011 9:45:57 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Morning Blake,

The PLL Unit is located on the bottom of the 820. There are 4 screws on the top 4 corners of the PLL Unit that must be removed. There are also 2 additional screws, accessed through 2 holes on the side of the chassis (820 up side down and front panel facing you) that also must be removed. Also remove the plugs connecting the PLL Unit to the wiring harness. Remove the side screws first, the wiring harness plugs next, then the 4 corner screws and the PLL Unit should lift out. Use caution when removing the wiring harness plug, you don't want to break any of the plug wires. Since this is your first time removing a module, pay attention to where the wiring harness plugs are plugged into the PLL Unit. While the plugs will generally fall next to the pins they connect to, it's always good to make a mental and/or drawing of where the plugs do so when reinstalling the PLL Unit you put the plugs back onto the right points. Make sure you do not twist the plugs 180 degrees when inserting them. They are somewhat "sailor proof", meaning they only plug in one way but just be cautious to ensure they are plugged in correctly.

Installing the PLL Unit back into the 820 simply reverse the removal steps except install the plugs "last".

There are 2 PC boards inside the PLL Unit, the "PD" and "VCO" boards. The individual band switch selected VCO oscillator crystals are mounted on the component side of the "PD Unit" PC board. They are small, about the size or slightly smaller than a "chicklet" candy, but thinner. The frequency of each crystal is typically stamped on the top of the crystal. Compare the stamped frequency on top of the crystal to the crystal frequencies shown on the PD Unit schematic in the 820 service manual page 64. The crystals are labeled "X6 thru X10" connected to the base terminals of transistors Q6 thru Q10 on the PD Unit schematic. Once the PLL Unit is removed, remove the metal enclosure screws holding the metal cover. At this point you can look at the crystals on the PD Unit board and determine whether the all of the crystal are the frequencies they should be.

While you have the PLL Unit out of the 820, clean the internal pins and sockets that connect the 2 boards together inside the metal enclosure. Remove the boards, one at a time, and clean the pins and sockets on the board using contact cleaner. Insert and remove the board a few times to allow scrubbing action to clean the pins and sockets. Do this one board at a time then install the board back into the metal case and secure the board with the mounting screws. Use canned air to remove any and all cleaner residue. Repeat the cleaning process with the other board. Make sure you remove any/all cleaner residue with canned air (available a Walmart) before you reassemble the PLL Unit and install it back into the 820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Blake" <mobilefab@...> wrote:
>
>
> " I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on
>the PD Unit to ensure the crystals for all 10 meter positions have the same
>frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency
>then a previous owner had the 820 modified to operate on 11 meters or a
>frequency band other than the ham bands."
>
>
> Good Morning Mike, I have been studying your email and my downloaded
>service manual, and a lot of Google surfing all weekend, and was wondering if
>you would mind answering a couple questions for me. To access the 10 meter
>crystals on the PD unit, do I just carefully remove the 4 corner brass hex nuts
>you can see in the picture, and then the board will carefully pull out. Are the
>crystals located on the back of this printed circuit board, under their
>prospective adjustment points, that is held in by the 4 hex nuts in the corners.
>
> As none of my digital VM's read anything close to 35 MHz in the frequency
>mode, I am going to have purchase an inexpensive frequency counter kit online,
>make it and then use it to test the crystals. I am in for a real education
>aren't I, by the time I get everything right, and or figured out, and then get
>my upgrade to general next month, I will eventually be able to key up with a
>real big smile on my face. HA LOL,,,,,,, Thanks for your continued help.

>Just cause I have been fabricating and welding for almost 35 yrs doesn't mean I
>cant learn some new tricks, Right. !! Thanks again Blake KF7HHC
>
>
> http://electronics-diy.com/product_details.php?pid=495&name=60MHz Frequency
>Meter / Counter Kit
>

[Non-text portions of this message have been removed]

29704. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 20:46:58 UTC
From: Alan
Topic: 29704 Message: 29704

Hi Gordon.

Thank you very much for your reply.

secondly I have also been trying to find a replacement for the 520 DC-DC converter transistors without any luck

Q1 and Q2 T20A6 or 2N2049.

Thanks again

Alan
ZL4FM

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, February 08, 2011 9:17 AM
Subject: Re: [TS-520_820_530_830] AT200 Tuner

> They ate NTE110 diodes. Very common
> Here are the specs
> http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
> 73,
> Gordon
>
>
>
> On 2/7/2011 12:02 PM, Alan wrote:
>>
>> Hi Folks,
>>
>> I have come accross a AT-200 which will go nicely with my TS520. However.
>>
>> The 2 Diodes in the SWR circuit are dead and I can't find replacements
>> listed anywhere in ZL.
>>
>> Does any one out there know what the equivelent is for the 2 diodes
>> are they
>> are listed as 2-1K261
>> If anyone has any advise please help.
>>
>> 73
>>
>> Alan
>> ZL4FM
>>

>> ----------
>>
>> No virus found in this outgoing message.
>> Checked by AVG - www.avg.com
>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> 02/07/11 07:34:00
>>
>> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11
07:34:00

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11 07:34:00

[Non-text portions of this message have been removed]

29705. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 21:56:12 UTC
From: n6wk@n6wk.com
Topic: 29704 Message: 29705

Hi Alan,

The 2N2049 crosses to the NTE123AP

73,
Gordon
N6WK

On 2/7/2011 12:46 PM, Alan wrote:
>
> Hi Gordon.
>
> Thank you very much for your reply.
>
> secondly I have also been trying to find a replacement for the 520 DC-DC
> converter transistors without any luck
>
> Q1 and Q2 T20A6 or 2N2049.
>
> Thanks again
>
> Alan
> ZL4FM
>
> ----- Original Message -----
> From: <n6wk@... <mailto:n6wk%40n6wk.com>>
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Tuesday, February 08, 2011 9:17 AM
> Subject: Re: [TS-520_820_530_830] AT200 Tuner
>
> > They ate NTE110 diodes. Very common
> > Here are the specs
> > http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
> > 73,
> > Gordon
> >
> >
> >
> > On 2/7/2011 12:02 PM, Alan wrote:
> >>
> >> Hi Folks,
> >>
> >> I have come accross a AT-200 which will go nicely with my TS520.
> However.
> >>

> >> The 2 Diodes in the SWR circuit are dead and I can't find replacements
> >> listed anywhere in ZL.
> >>
> >> Does any one out there know what the equivelent is for the 2 diodes
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> >> are listed as 2-1K261
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> >>
> >> 73
> >>
> >> Alan
> >> ZL4FM
> >>
> >> ----------
> >>
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> >> 02/07/11 07:34:00
> >>
> >> [Non-text portions of this message have been removed]
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> > Yahoo! Groups Links
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> ----------
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> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
> 02/07/11 07:34:00
>
> [Non-text portions of this message have been removed]
>
>

29706. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 22:04:38 UTC
From: n6wk@n6wk.com
Topic: 29704 Message: 29706

Alan,
You can download the NTE cross reference software from here:
http://nte01.nteinc.com/webforms.nsf/qcsignin?openform

Just fill out the form and then download and install it.
I have been using it for years and find it is great!

73,
Gordon
N6WK

On 2/7/2011 1:56 PM, n6wk@... wrote:
> Hi Alan,
>
> The 2N2049 crosses to the NTE123AP
>
> 73,
> Gordon
> N6WK
>
>
> On 2/7/2011 12:46 PM, Alan wrote:
>> Hi Gordon.
>>
>> Thank you very much for your reply.
>>
>> secondly I have also been trying to find a replacement for the 520 DC-DC
>> converter transistors without any luck
>>
>> Q1 and Q2 T20A6 or 2N2049.
>>
>> Thanks again
>>
>> Alan
>> ZL4FM
>>
>> ----- Original Message -----
>> From:<n6wk@...<mailto:n6wk%40n6wk.com>>
>> To:<TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>>
>> Sent: Tuesday, February 08, 2011 9:17 AM
>> Subject: Re: [TS-520_820_530_830] AT200 Tuner
>>
>>> They ate NTE110 diodes. Very common
>>> Here are the specs
>>> http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf

>>> 73,
>>> Gordon
>>>
>>>
>>>
>>> On 2/7/2011 12:02 PM, Alan wrote:
>>>> Hi Folks,
>>>>
>>>> I have come accross a AT-200 which will go nicely with my TS520.
>> However.
>>>> The 2 Diodes in the SWR circuit are dead and I can't find replacements
>>>> listed anywhere in ZL.
>>>>
>>>> Does any one out there know what the equivelent is for the 2 diodes
>>>> are they
>>>> are listed as 2-1K261
>>>> If anyone has any advise please help.
>>>>
>>>> 73
>>>>
>>>> Alan
>>>> ZL4FM
>>>>
>>>> ----------
>>>>
>>>> No virus found in this outgoing message.
>>>> Checked by AVG - www.avg.com
>>>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>>>> 02/07/11 07:34:00
>>>>
>>>> [Non-text portions of this message have been removed]
>>>>
>>>>
>>>
>>> ------------------------------------
>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>> --
>>
>> No virus found in this incoming message.
>> Checked by AVG - www.avg.com
>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11
>> 07:34:00
>>
>> ----------
>>
>> No virus found in this outgoing message.

>> Checked by AVG - www.avg.com
>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> 02/07/11 07:34:00
>>
>> [Non-text portions of this message have been removed]
>>
>>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

29707. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 22:05:48 UTC
From: Alan
Topic: 29704 Message: 29707

are you sure about that

the nte123ap is a npn
the 2n2019 is a pnp

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, February 08, 2011 10:56 AM
Subject: Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

> Hi Alan,
>
> The 2N2049 crosses to the NTE123AP
>
> 73,
> Gordon
> N6WK
>
>
> On 2/7/2011 12:46 PM, Alan wrote:
>>
>> Hi Gordon.
>>
>> Thank you very much for your reply.
>>
>> secondly I have also been trying to find a replacement for the 520 DC-DC
>> converter transistors without any luck
>>
>> Q1 and Q2 T20A6 or 2N2049.
>>
>> Thanks again
>>
>> Alan
>> ZL4FM
>>
>> ----- Original Message -----
>> From: <n6wk@... <mailto:n6wk%40n6wk.com>>
>> To: <TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>>
>> Sent: Tuesday, February 08, 2011 9:17 AM
>> Subject: Re: [TS-520_820_530_830] AT200 Tuner
>>
>> > They ate NTE110 diodes. Very common
>> > Here are the specs
>> > http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf

>> > 73,
>> > Gordon
>> >
>> >
>> >
>> > On 2/7/2011 12:02 PM, Alan wrote:
>> >>
>> >> Hi Folks,
>> >>
>> >> I have come accross a AT-200 which will go nicely with my TS520.
>> However.
>> >>
>> >> The 2 Diodes in the SWR circuit are dead and I can't find replacements
>> >> listed anywhere in ZL.
>> >>
>> >> Does any one out there know what the equivelent is for the 2 diodes
>> >> are they
>> >> are listed as 2-1K261
>> >> If anyone has any advise please help.
>> >>
>> >> 73
>> >>
>> >> Alan
>> >> ZL4FM
>> >>
>> >> ----------
>> >>
>> >> No virus found in this outgoing message.
>> >> Checked by AVG - www.avg.com
>> >> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> >> 02/07/11 07:34:00
>> >>
>> >> [Non-text portions of this message have been removed]
>> >>
>> >>
>> >
>> >
>> > ------------------------------------
>> >
>> > Yahoo! Groups Links
>> >
>> >
>> >
>> >
>> --
>>
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>>
>> ----------
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>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> 02/07/11 07:34:00
>>
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>>
>>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11
07:34:00

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11 07:34:00

[Non-text portions of this message have been removed]

29708. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 22:29:35 UTC
From: n6wk@n6wk.com
Topic: 29704 Message: 29708

Well, I typed in 2N2049 as you first asked and it comes up to a NTE123AP.
But now you typed 2N2019... that's different. Which one are you looking for?

Gordon

On 2/7/2011 2:05 PM, Alan wrote:
>
> are you sure about that
>
> the nte123ap is a npn
> the 2n2019 is a pnp
>
> ----- Original Message -----
> From: <n6wk@... <mailto:n6wk%40n6wk.com>>
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Tuesday, February 08, 2011 10:56 AM
> Subject: Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon
>
> > Hi Alan,
> >
> > The 2N2049 crosses to the NTE123AP
> >
> > 73,
> > Gordon
> > N6WK
> >
> >
> > On 2/7/2011 12:46 PM, Alan wrote:
> >>
> >> Hi Gordon.
> >>
> >> Thank you very much for your reply.
> >>
> >> secondly I have also been trying to find a replacement for the 520
> DC-DC
> >> converter transistors without any luck
> >>
> >> Q1 and Q2 T20A6 or 2N2049.
> >>
> >> Thanks again
> >>
> >> Alan
> >> ZL4FM
> >>

> >> ----- Original Message -----
> >> From: <n6wk@... <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>>
> >> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> >> Sent: Tuesday, February 08, 2011 9:17 AM
> >> Subject: Re: [TS-520_820_530_830] AT200 Tuner
> >>
> >> > They ate NTE110 diodes. Very common
> >> > Here are the specs
> >> > http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
> >> > 73,
> >> > Gordon
> >> >
> >> >
> >> >
> >> > On 2/7/2011 12:02 PM, Alan wrote:
> >> >>
> >> >> Hi Folks,
> >> >>
> >> >> I have come accross a AT-200 which will go nicely with my TS520.
> >> However.
> >> >>
> >> >> The 2 Diodes in the SWR circuit are dead and I can't find
> replacements
> >> >> listed anywhere in ZL.
> >> >>
> >> >> Does any one out there know what the equivelent is for the 2 diodes
> >> >> are they
> >> >> are listed as 2-1K261
> >> >> If anyone has any advise please help.
> >> >>
> >> >> 73
> >> >>
> >> >> Alan
> >> >> ZL4FM
> >> >>
> >> >> ----------
> >> >>
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> >> >> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
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> >> >>
> >> >> [Non-text portions of this message have been removed]
> >> >>
> >> >>
> >> >
> >> >
> >> > ------------------------------------

> >> >
> >> > Yahoo! Groups Links
> >> >
> >> >
> >> >
> >>
> >> --
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> 02/07/11
> >> 07:34:00
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> >> 02/07/11 07:34:00
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> >> [Non-text portions of this message have been removed]
> >>
> >>
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
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> >
>
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> 02/07/11 07:34:00
>
> [Non-text portions of this message have been removed]
>
>

29709. Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-07 23:16:39 UTC
From: n6wk@n6wk.com
Topic: 29704 Message: 29709

Alan,
I just checked for the Specs Converter.
Q1 and Q2 are *2N4049* which crosses to a NTE28

Gordon

It shows it as an NPN

On 2/7/2011 2:29 PM, n6wk@... wrote:
> Well, I typed in 2N2049 as you first asked and it comes up to a NTE123AP.
> But now you typed 2N2019... that's different. Which one are you looking for?
>
> Gordon
>
>
>
> On 2/7/2011 2:05 PM, Alan wrote:
>> are you sure about that
>>
>> the nte123ap is a npn
>> the 2n2019 is a pnp
>>
>> ----- Original Message -----
>> From:<n6wk@...<mailto:n6wk%40n6wk.com>>
>> To:<TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>>
>> Sent: Tuesday, February 08, 2011 10:56 AM
>> Subject: Re: [TS-520_820_530_830] AT200 Tuner reply to Gordon
>>
>>> Hi Alan,
>>>
>>> The 2N2049 crosses to the NTE123AP
>>>
>>> 73,
>>> Gordon
>>> N6WK
>>>
>>>
>>> On 2/7/2011 12:46 PM, Alan wrote:
>>>> Hi Gordon.
>>>>
>>>> Thank you very much for your reply.
>>>>
>>>> secondly I have also been trying to find a replacement for the 520
>> DC-DC
>>>> converter transistors without any luck

>>>>
>>>> Q1 and Q2 T20A6 or 2N2049.
>>>>
>>>> Thanks again
>>>>
>>>> Alan
>>>> ZL4FM
>>>>
>>>> ----- Original Message -----
>>>> From:<n6wk@...<mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>>
>>>> To:<TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>>
>>>> Sent: Tuesday, February 08, 2011 9:17 AM
>>>> Subject: Re: [TS-520_820_530_830] AT200 Tuner
>>>>
>>>>> They ate NTE110 diodes. Very common
>>>>> Here are the specs
>>>>> http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
>>>>> 73,
>>>>> Gordon
>>>>>
>>>>>
>>>>>
>>>>> On 2/7/2011 12:02 PM, Alan wrote:
>>>>>> Hi Folks,
>>>>>>
>>>>>> I have come accross a AT-200 which will go nicely with my TS520.
>>>> However.
>>>>>> The 2 Diodes in the SWR circuit are dead and I can't find
>> replacements
>>>>>> listed anywhere in ZL.
>>>>>>
>>>>>> Does any one out there know what the equivelent is for the 2 diodes
>>>>>> are they
>>>>>> are listed as 2-1K261
>>>>>> If anyone has any advise please help.
>>>>>>
>>>>>> 73
>>>>>>
>>>>>> Alan
>>>>>> ZL4FM
>>>>>>
>>>>>> ----------
>>>>>>
>>>>>> No virus found in this outgoing message.
>>>>>> Checked by AVG - www.avg.com
>>>>>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>>>>>> 02/07/11 07:34:00
>>>>>>

>>>>>> [Non-text portions of this message have been removed]
>>>>>>
>>>>>>
>>>>>
>>>>> ------------------------------------
>>>>>
>>>>> Yahoo! Groups Links
>>>>>
>>>>>
>>>>>
>>>> --
>>>>
>>>> No virus found in this incoming message.
>>>> Checked by AVG - www.avg.com
>>>> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
>> 02/07/11
>>>> 07:34:00
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>>>> ----------
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>>>> 02/07/11 07:34:00
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>>>> [Non-text portions of this message have been removed]
>>>>
>>>>
>>>
>>> ------------------------------------
>>>
>>> Yahoo! Groups Links
>>>
>>>
>>>
>> --
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>> 02/07/11 07:34:00
>>
>> [Non-text portions of this message have been removed]

>>
>>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

29710. ts-830s for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 00:31:38 UTC
From: Michael
Topic: 29710 Message: 29710

Circumstances dictate that I must sell one of my most prized possessions.
This 830 was purchased in Singapore at Caltron LTD. by a US govt. radio engineer in 1982. It was used for a very short time there and then sent to Bethesda MD in it's original boxes never to be used again.(it does have it's transformer wired for 120v) I bought it from that individual(now SK). It is in pristine condition with manual and correspondence between the original owner and Kenwood/Trio (concerning wiring for 120v). There are absolutely NO scratches, mars, dents, rust, etc. I doubt that a more perfect example exsists anywhere. (other than a complete k4eaa rebuild. lol)
No, I have never powered it up, it has stayed in it's box, I use my other 830. It has the YK88S1 ssb crystal. I am going to offer it here first for a day or two and then on eham. I want $525 for it, plus shipping. I will accept PayPal or a US postal money order. Contact me at gmichaelb@... or 928-716-7788
73
G.Michael Bellis
ke7kly

29711. Re: Mini coax needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 01:56:01 UTC
From: Ken
Topic: 29639 Message: 29711

Hi Roy...

Is your QRZ address correct? I'll post a few feet of RG-174 to you tomorrow if you OK the address.

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hello all,
>
> I am building a cobweb antenna for my TS-830S and have to construct a balun
> out of RG-316 or RG174 coax.

29712. Re: Mini coax needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 02:37:57 UTC
From: Ken
Topic: 29639 Message: 29712

OOPS...

I just checkd my stock and I have RG-179 cable (75 Ohm) available in bulk and not the RG-174 (50 Ohm) that I thought I had. You might be able to use that since it's such a short amount.

I do have one piece of RG-174 that is 31 inches long, I'll send that and 10 feet of the RG-179 if that helps...

No charge.

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <atm_ken_hunter@...> wrote:
>
> Hi Roy...
>
> Is your QRZ address correct? I'll post a few feet of RG-174 to you tomorrow if you OK the address.
>
> Ken - KB7H
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@> wrote:
> >
> > Hello all,
> >
> > I am building a cobweb antenna for my TS-830S and have to construct a balun
> > out of RG-316 or RG174 coax.
>

29713. Re: AT200 Tuner reply to Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 04:21:11 UTC
From: james27613
Topic: 29704 Message: 29713

hi Alan,

have you asked KE5FTF Bob if he has them?

http://www.eham.net/classifieds/detail/334405

another solution is to power the radio using
a full sine wave ups, like the apc smartups series,
you can autostart it directly from battery without ac available.
they are cheap without the batteries on ebay.

Just add powerpole and fuses to a larger external battery
and you're good to go.

73 james ke4drn

--- In TS-520_820_530_830@...m, "Alan" <alan@...> wrote:
>
> Hi Gordon.
>
> Thank you very much for your reply.
>
> secondly I have also been trying to find a replacement for the 520 DC-DC
> converter transistors without any luck
>
> Q1 and Q2 T20A6 or 2N2049.
>
>
> Thanks again
>
> Alan
> ZL4FM
>
>
>
> ----- Original Message -----
> From: <n6wk@...>
> To: <TS-520_820_530_830@...m>
> Sent: Tuesday, February 08, 2011 9:17 AM
> Subject: Re: [TS-520_820_530_830] AT200 Tuner
>
>
> > They ate NTE110 diodes. Very common
> > Here are the specs
> > http://www.nteinc.com/specs/100to199/pdf/nte110mp.pdf
> > 73,

> > Gordon
> >
> >
> >
> > On 2/7/2011 12:02 PM, Alan wrote:
> >>
> >> Hi Folks,
> >>
> >> I have come accross a AT-200 which will go nicely with my TS520. However.
> >>
> >> The 2 Diodes in the SWR circuit are dead and I can't find replacements
> >> listed anywhere in ZL.
> >>
> >> Does any one out there know what the equivelent is for the 2 diodes
> >> are they
> >> are listed as 2-1K261
> >> If anyone has any advise please help.
> >>
> >> 73
> >>
> >> Alan
> >> ZL4FM
> >>
> >> ----------
> >>
> >> No virus found in this outgoing message.
> >> Checked by AVG - www.avg.com
> >> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date:
> >> 02/07/11 07:34:00
> >>
> >> [Non-text portions of this message have been removed]
> >>
> >>
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
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> >
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> --
>
>
>
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> 07:34:00
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> ----------
>
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> Checked by AVG - www.avg.com
> Version: 8.5.449 / Virus Database: 271.1.1/3428 - Release Date: 02/07/11 07:34:00
>
>
> [Non-text portions of this message have been removed]
>

29714. tuing coil installation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 04:43:07 UTC
From: kevin
Topic: 29714 Message: 29714

Is it possible to remove and replace the 28Mhz tuning coil from board X40-0017-00 in a 520 without removing the board? Mine looks like someone dripped solder into it. I have a donor radio.

Also did I understand from an earlier post that if you remove a board that is attached by wires which are tightly "wound" around contact posts that it is good form to solder the lead to the post when re-installing?
Best Regards,
Kevin
KD0ILM

29715. AT-200 parts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 04:59:45 UTC
From: kevin
Topic: 29715 Message: 29715

I am in need of the variable capacitor and knob mechanism for an AT-200 Antenna tuner.
Anyone have these parts or a junk AT-200 available?
Kevin
KD0ILM

29716. Re: AT-200 parts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 05:23:40 UTC
From: kevin
Topic: 29715 Message: 29716

To be more specific I need the "R Tune" cap and knob mechanism

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I am in need of the variable capacitor and knob mechanism for an AT-200 Antenna tuner. Anyone have these parts or a junk AT-200 available?
> Kevin
> KD0ILM
>

29717. Re: [TS-520_820_530_830] tuing coil installation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 05:36:44 UTC
From: Steve Bontempo
Topic: 29714 Message: 29717

Hey Kevin, don't take this the wrong way, but it really depends on your soldering skills. If you're comfortable with doing it and have the right tools then it's no problem at all. You just need to remove the metal shield between the Antenna Coil Board and the Driver Coil Board so that you can reach the solder side of the Driver Coil Board.

I had a similar situation with the Antenna Coil Board where I had to remove L1 to re-wrap it. I used wicking brade to not only to remove the solder, but to relieve the joint of some of the heat as well. If you apply too much heat for too long you can lift the trace or push the post through the coil form so you do need to be careful.

Mine was a bit tricky because whoever installed the components bent all 4 leads to the coil instead of just the two that you would need to hold the coil in place long enough to solder it in so I had to desolder the connections, straighten out the leads, and then gently pry the coil out of the holes from the underside of the coil form with a miniature flat head screwdriver.

It took about 30 minutes from start to finish but it worked out pretty well.

It would probably be just as easy and less labor intensive to just switch out the whole board and if you decide to go that route then yes you should clean all of the connections, tin them, and then solder them to make your connections. The posts I was working with were heavily oxidized and solder doesn't play well with oxidation.

Hope this helps.

73!

Steve
KU4BY

On Mon, Feb 7, 2011 at 11:43 PM, kevin <kmx888@...> wrote:

>
>
> Is it possible to remove and replace the 28Mhz tuning coil from board
> X40-0017-00 in a 520 without removing the board? Mine looks like someone
> dripped solder into it. I have a donor radio.
>
> Also did I understand from an earlier post that if you remove a board that
> is attached by wires which are tightly "wound" around contact posts that it
> is good form to solder the lead to the post when re-installing?
> Best Regards,
> Kevin

> KD0ILM
>
>
>

[Non-text portions of this message have been removed]

29718. Low pass filter identification

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 11:20:30 UTC
From: Ravi
Topic: 29718 Message: 29718

Hi

A friend gave me a Bencher YA-1 LPF and I intend using it with my TS520SE.

All markings (except manufactures label) are not visible in the LPF.

I want to know which side should I connect to TX.

Appreciate any help

73's de
4S6RAV (Ravi)

29719. Re: Low pass filter identification

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 12:29:35 UTC
From: Ken
Topic: 29718 Message: 29719

Connect the side that is closest to the TX...

(It shouldn't matter, they are built symetrical).

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi
>
> A friend gave me a Bencher YA-1 LPF and I intend using it with my TS520SE.
>
> All markings (except manufactures label) are not visible in the LPF.
>
> I want to know which side should I connect to TX.
>
> Appreciate any help
>
> 73's de
> 4S6RAV (Ravi)
>

29720. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 14:38:32 UTC
From: Blake
Topic: 29670 Message: 29720

Thanks for the info :-) , Found the pictures and made a couple copies for reference. Nice to know exactly what I will be looking for . Thanks again. Blake

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 07, 2011 1:38 PM
Subject: Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Blake,

Check out the photo section of this group, I think it's under TS-820(S) CB HACK...by wb7uqu. I took apart the "PLL BOX", photographed the "PD BOARD" out of the "PLL UNIT" It shows the crystals that are very commonly replaced with lower MHz crystals of usually 1.5MHz - 2.0 MHz lower in the positions of X9 & X10. Most times they will jump out at you because the are all silver and do not have the blue plastic "shrink-wrap" around them with the frequency printed. I have seen however, crystal "cans" as described by Mike. What's important is that the correct frequencies are in the correct places. Also...get yourself a "HIGH -RES" "xray" view of the PD board...and check ALL the foil traces. It's a real pain in the arse...but I found 1 of the boards had been very badly soldered by the hacker...and spent way too much time trying to figure out what was wrong. Found some poor solder work, causing a couple of "solder bridges." Good luck.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 7, 2011 9:45:57 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Morning Blake,

The PLL Unit is located on the bottom of the 820. There are 4 screws on the top 4 corners of the PLL Unit that must be removed. There are also 2 additional screws, accessed through 2 holes on the side of the chassis (820 up side down and front panel facing you) that also must be removed. Also remove the plugs connecting the PLL Unit to the wiring harness. Remove the side screws first, the wiring harness plugs next, then the 4 corner screws and the PLL Unit should lift out. Use caution when removing the wiring harness plug, you don't want to break any of the plug wires. Since this is your first time removing a module, pay

attention to where the wiring harness plugs are plugged into the PLL Unit. While the plugs will generally fall next to the pins they connect to, it's always good to make a mental and/or drawing of where the plugs do so when reinstalling the PLL Unit you put the plugs back onto the right points. Make sure you do not twist the plugs 180 degrees when inserting them. They are somewhat "sailor proof", meaning they only plug in one way but just be cautious to ensure they are plugged in correctly.

Installing the PLL Unit back into the 820 simply reverse the removal steps except install the plugs "last".

There are 2 PC boards inside the PLL Unit, the "PD" and "VCO" boards. The individual band switch selected VCO oscillator crystals are mounted on the component side of the "PD Unit" PC board. They are small, about the size or slightly smaller than a "chicklet" candy, but thinner. The frequency of each crystal is typically stamped on the top of the crystal. Compare the stamped frequency on top of the crystal to the crystal frequencies shown on the PD Unit schematic in the 820 service manual page 64. The crystals are labeled "X6 thru X10" connected to the base terminals of transistors Q6 thru Q10 on the PD Unit schematic. Once the PLL Unit is removed, remove the metal enclosure screws holding the metal cover. At this point you can look at the crystals on the PD Unit board and determine whether the all of the crystal are the frequencies they should be.

While you have the PLL Unit out of the 820, clean the internal pins and sockets that connect the 2 boards together inside the metal enclosure. Remove the boards, one at a time, and clean the pins and sockets on the board using contact cleaner. Insert and remove the board a few times to allow scrubbing action to clean the pins and sockets. Do this one board at a time then install the board back into the metal case and secure the board with the mounting screws. Use canned air to remove any and all cleaner residue. Repeat the cleaning process with the other board. Make sure you remove any/all cleaner residue with canned air (available a Walmart) before you reassemble the PLL Unit and install it back into the 820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Blake" <mobilefab@...> wrote:
>
>
> " I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on
>the PD Unit to ensure the crystals for all 10 meter positions have the same
>frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency
>then a previous owner had the 820 modified to operate on 11 meters or a
>frequency band other than the ham bands."
>
>
> Good Morning Mike, I have been studying your email and my downloaded
>service manual, and a lot of Google surfing all weekend, and was wondering if

>you would mind answering a couple questions for me. To access the 10 meter
>crystals on the PD unit, do I just carefully remove the 4 corner brass hex nuts
>you can see in the picture, and then the board will carefully pull out. Are the
>crystals located on the back of this printed circuit board, under their
>prospective adjustment points, that is held in by the 4 hex nuts in the corners.
>
> As none of my digital VM's read anything close to 35 MHz in the frequency
>mode, I am going to have purchase an inexpensive frequency counter kit online,
>make it and then use it to test the crystals. I am in for a real education
>aren't I, by the time I get everything right, and or figured out, and then get
>my upgrade to general next month, I will eventually be able to key up with a
>real big smile on my face. HA LOL,,,,,,, Thanks for your continued help.
>Just cause I have been fabricating and welding for almost 35 yrs doesn't mean I
>cant learn some new tricks, Right. !! Thanks again Blake KF7HHC
>
>
> http://electronics-diy.com/product_details.php?pid=495&name=60MHz Frequency
>Meter / Counter Kit
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29721. Re: Low pass filter identification

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 15:54:45 UTC
From: w5rkl
Topic: 29718 Message: 29721

Ravi,

It does not matter which side you connect to the transmitter and what side you connect to the antenna.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi
>
> A friend gave me a Bencher YA-1 LPF and I intend using it with my TS520SE.
>
> All markings (except manufactures label) are not visible in the LPF.
>
> I want to know which side should I connect to TX.
>
> Appreciate any help
>
> 73's de
> 4S6RAV (Ravi)
>

29722. r13 on rf board?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 19:29:48 UTC
From: rigg_nathan
Topic: 29722 Message: 29722

Just wanting to know if anyone elses radio is missing r13 on the rf board. This is the 2nd resistor I've found that is missing from the radio and looks to be missing from the factory looking at the board. I do see it in the component schematic and it shows where resistor is supposed to be. But in the circuit schematic it doesn't appear to be there. I can tell where it is supposed to be in the circuit but isn't there. thanks, nathan

29723. Re: r13 on rf board?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 21:13:03 UTC
From: w5rkl
Topic: 29722 Message: 29723

What model (520, 530, 820, or 830) transceiver and what board are you referring to where R13 is missing?

Kenwood appears to have more than one "version" of board(s) in the hybrids. The important thing is to make sure the number on the foil side of the board is compared with any replacement board you use. I recently replaced the AF AVR Unit board in my 820. I ordered a replacement board and when it arrived I installed it. Everything worked except there was no audio output. My first thought was the audio chip on the board had failed. However, after closer inspection, comparing the original board with the replacement board I notice there were components on the replacement board that were not present on the original board. Looking further I notice the foil side had a number. I compared the numbers on both boards. The number on the original AF AVR Unit board had a different suffix number than the replacement board had. The original board had "J25-1381-13" but the replacement board had "J25-1381-03". The difference turned out to be the circuit foil design to the pins for plug AF3 were different than the circuit foil design to the pins for plug AF3 on the original board.

For 820 owners, if you look at the 820 service manual, page 57, you will see the AF AVR Unit schematic AND the xray component image. Look closely at the xray component image and you will clearly see "J25-1381-03". If you look at the schematic and compare the AF3 plug pins to the xray image you will clearly see they are different. That means the AF AVR Unit schematic on page 57 is NOT the schematic for the xray image shown on page 57 of the 820 service manual. One of the 820 operators manuals on page 31 shows the schematic for the "J25-1381-03" AF AVR Unit board. If you have the 820 operators manual, look at the bottom of the last page. There's a number
B50-2529-00. The AF AVR Unit schematic on page 31 is for the "J25-1381-13" board. The other 820 operators manual, last page, has a number B50-1558-00 and the AF AVR Unit schematic on page 31 is the schematic for the "J25-1381-03" board.

I also replaced the RF Unit board in my 820. The foil side numbers were the same BUT, the original board had components added on the foil side that were not present on the replacement board. The original board had a 47 ohm 1/4 watt resistor between "S" terminal and ground on Q2 (receiver RF amplifier) and a pair of germanium diodes wired back to back from the "RG" plug terminal to ground. These components were not present on the replacement board. I have not found any service bulletins or modifications that discuss these additions. I can only determine their purpose by how they are installed. The 47 ohm resistor between Q2s "S" (Source) terminal and ground reduces the gain of the RF amplifier while the back to back diodes between the "RG" plug terminal and ground acts to suppress static surges from the antenna connector, protect Q2. The gain in the replacement RF Unit is clearly higher than the original RF Unit board.

Therefore, you should look closely at the schematic, xray component image, and the board itself to ensure the schematic, image, and board are the same.

73s
Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rigg_nathan" <nr5p@...> wrote:
>
> Just wanting to know if anyone elses radio is missing r13 on the rf board. This is the 2nd resistor I've found that is missing from the radio and looks to be missing from the factory looking at the board. I do see it in the component schematic and it shows where resistor is supposed to be. But in the circuit schematic it doesn't appear to be there. I can tell where it is supposed to be in the circuit but isn't there. thanks, nathan
>

29724. Re: r13 on rf board?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-08 22:41:58 UTC
From: rigg_nathan
Topic: 29722 Message: 29724

sorry its ts-520 no s

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> What model (520, 530, 820, or 830) transceiver and what board are you referring to where R13 is missing?
>
> Kenwood appears to have more than one "version" of board(s) in the hybrids. The important thing is to make sure the number on the foil side of the board is compared with any replacement board you use. I recently replaced the AF AVR Unit board in my 820. I ordered a replacement board and when it arrived I installed it. Everything worked except there was no audio output. My first thought was the audio chip on the board had failed. However, after closer inspection, comparing the original board with the replacement board I notice there were components on the replacement board that were not present on the original board. Looking further I notice the foil side had a number. I compared the numbers on both boards. The number on the original AF AVR Unit board had a different suffix number than the replacement board had. The original board had "J25-1381-13" but the replacement board had "J25-1381-03". The difference turned out to be the circuit foil design to the pins for plug AF3 were different than the circuit foil design to the pins for plug AF3 on the original board.
>
> For 820 owners, if you look at the 820 service manual, page 57, you will see the AF AVR Unit schematic AND the xray component image. Look closely at the xray component image and you will clearly see "J25-1381-03". If you look at the schematic and compare the AF3 plug pins to the xray image you will clearly see they are different. That means the AF AVR Unit schematic on page 57 is NOT the schematic for the xray image shown on page 57 of the 820 service manual. One of the 820 operators manuals on page 31 shows the schematic for the "J25-1381-03" AF AVR Unit board. If you have the 820 operators manual, look at the bottom of the last page. There's a number
> B50-2529-00. The AF AVR Unit schematic on page 31 is for the "J25-1381-13" board. The other 820 operators manual, last page, has a number B50-1558-00 and the AF AVR Unit schematic on page 31 is the schematic for the "J25-1381-03" board.
>
> I also replaced the RF Unit board in my 820. The foil side numbers were the same BUT, the original board had components added on the foil side that were not present on the replacement board. The original board had a 47 ohm 1/4 watt resistor between "S" terminal and ground on Q2 (receiver RF amplifier) and a pair of germanium diodes wired back to back from the "RG" plug terminal to ground. These components were not present on the replacement board. I have not found any service bulletins or modifications that discuss these additions. I can only determine their purpose by how they are installed. The 47 ohm resistor between Q2s "S" (Source) terminal and ground reduces the gain of the RF amplifier while the back to back diodes between the "RG" plug terminal and ground acts to suppress static surges from the antenna connector, protect Q2. The gain in the replacement RF Unit is clearly higher than the original RF Unit board.
>

> Therefore, you should look closely at the schematic, xray component image, and the board itself to ensure the schematic, image, and board are the same.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "rigg_nathan" <nr5p@> wrote:
> >
> > Just wanting to know if anyone elses radio is missing r13 on the rf board. This is the 2nd resistor I've found that is missing from the radio and looks to be missing from the factory looking at the board. I do see it in the component schematic and it shows where resistor is supposed to be. But in the circuit schematic it doesn't appear to be there. I can tell where it is supposed to be in the circuit but isn't there. thanks, nathan
> >
>

29725. Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 03:57:14 UTC
From: Peter Carter
Topic: 29725 Message: 29725

I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?

Thanks, 73
Peter

29726. Re: [TS-520_820_530_830] Re: Low pass filter identification

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 04:11:09 UTC
From: ravi sumith
Topic: 29718 Message: 29726

Thanks Mike.Got it now

Ravi

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 8, 2011 21:24:45
Subject: [TS-520_820_530_830] Re: Low pass filter identification

Ravi,

It does not matter which side you connect to the transmitter and what side you
connect to the antenna.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi
>
> A friend gave me a Bencher YA-1 LPF and I intend using it with my TS520SE.
>
> All markings (except manufactures label) are not visible in the LPF.
>
> I want to know which side should I connect to TX.
>
> Appreciate any help
>
> 73's de
> 4S6RAV (Ravi)
>

[Non-text portions of this message have been removed]

29727. Re: [TS-520_820_530_830] Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 06:16:16 UTC
From: Bob
Topic: 29725 Message: 29727

Hi Peter,

I've attached an FL-2100B user manual with all the info you'll ever need.

73,

Bob, KD5MHQ

--- On Tue, 2/8/11, Peter Carter <ve3pcd@...> wrote:

I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?

Thanks, 73
Peter

[Non-text portions of this message have been removed]

29728. accerries for the ts 820 and face plate for ts 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 06:18:26 UTC
From: mark
Topic: 29728 Message: 29728

accesseries for ts 820
face plate

29729. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 10:48:20 UTC
From: Peter Carter
Topic: 29725 Message: 29729

Sorry Bob but I dont see the attachment.

Would I need anything other than making a cable?

73
Peter

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Hi Peter,
> Â
> I've attached an FL-2100B user manual with all the info you'll ever need.
> Â
> 73,
> Â
> Bob, KD5MHQ
>
> --- On Tue, 2/8/11, Peter Carter <ve3pcd@...> wrote:
>
>
> Â
>
>
>
> I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
>
> Thanks, 73
> Peter
>
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29730. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 12:25:12 UTC
From: w5rkl
Topic: 29725 Message: 29730

Bob and Peter,

Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.

The FL-2100B operators manual can be downloaded at the following link

http://www.bcdxc.org/fl2100b_man.pdf

The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".

A 7 pin DIN plug is required and the DIN plug is wired as follows:

DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.

DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.

That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B amplifier.

If the amplifier has straps between "RY" and "E" terminals, remove the straps.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Hi Peter,
> Â
> I've attached an FL-2100B user manual with all the info you'll ever need.
> Â
> 73,
> Â
> Bob, KD5MHQ
>
> --- On Tue, 2/8/11, Peter Carter <ve3pcd@...> wrote:
>
>
> Â
>
>
>
> I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure

how I would interface it, can some send me the instructions on how to wire this up?
>
> Thanks, 73
> Peter
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29731. Re: accerries for the ts 820 and face plate for ts 820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 12:26:46 UTC
From: w5rkl
Topic: 29728 Message: 29731

Mark,

If no one has what you need, try Bob Mansker, ke5ftf at mail.com.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "mark" <marksbuffalobills@...> wrote:
>
> accesseries for ts 820
> face plate
>

29732. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 13:03:24 UTC
From: Peter Carter
Topic: 29725 Message: 29732

Hi Mike,

Thanks much appreciated, and Bob I did get your email with the attachment doc.

I have a deal on this Amp and is thinking of buying.

73 guys
Peter
ve3pcd

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bob and Peter,
>
> Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.
>
> The FL-2100B operators manual can be downloaded at the following link
>
> http://www.bcdxc.org/fl2100b_man.pdf
>
> The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".
>
> A 7 pin DIN plug is required and the DIN plug is wired as follows:
>
> DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.
>
> DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.
>
> That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B amplifier.
>
> If the amplifier has straps between "RY" and "E" terminals, remove the straps.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> >
> > Hi Peter,
> > Â

> > I've attached an FL-2100B user manual with all the info you'll ever need.
> > Â
> > 73,
> > Â
> > Bob, KD5MHQ
> >
> > --- On Tue, 2/8/11, Peter Carter <ve3pcd@> wrote:
> >
> >
> > Â
> >
> >
> >
> > I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
> >
> > Thanks, 73
> > Peter
> >
> >
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> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29733. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 13:05:50 UTC
From: Peter Carter
Topic: 29725 Message: 29733

Oh, one more thing...

Will this also work for the TS-830S?

73

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bob and Peter,
>
> Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.
>
> The FL-2100B operators manual can be downloaded at the following link
>
> http://www.bcdxc.org/fl2100b_man.pdf
>
> The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".
>
> A 7 pin DIN plug is required and the DIN plug is wired as follows:
>
> DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.
>
> DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.
>
> That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B amplifier.
>
> If the amplifier has straps between "RY" and "E" terminals, remove the straps.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> >
> > Hi Peter,
> > Â
> > I've attached an FL-2100B user manual with all the info you'll ever need.
> > Â
> > 73,
> > Â

> > Bob, KD5MHQ
> >
> > --- On Tue, 2/8/11, Peter Carter <ve3pcd@> wrote:
> >
> >
> > Â
> >
> >
> >
> > I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
> >
> > Thanks, 73
> > Peter
> >
> >
> >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29734. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 13:59:02 UTC
From: w5rkl
Topic: 29725 Message: 29734

Yes. I see I misread the original subject, TS-820.

Connect the FL-2100B "RY" terminal to the 820 rear 8 pin octal socket pin 5 and the FL-2100B "E" to the rear 8 pin octal socket pin 1 or pin 4 (ground). Connect the FL-2100B "ALC" terminal to the 820 8 pin octal socket pin "6".

Sorry for the misread.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> Oh, one more thing...
>
> Will this also work for the TS-830S?
>
> 73
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Bob and Peter,
> >
> > Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.
> >
> > The FL-2100B operators manual can be downloaded at the following link
> >
> > http://www.bcdxc.org/fl2100b_man.pdf
> >
> > The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".
> >
> > A 7 pin DIN plug is required and the DIN plug is wired as follows:
> >
> > DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.
> >
> > DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.
> >
> > That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B

amplifier.
> >
> > If the amplifier has straps between "RY" and "E" terminals, remove the straps.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@...m, Bob <bob4analog@> wrote:
> > >
> > > Hi Peter,
> > > Â
> > > I've attached an FL-2100B user manual with all the info you'll ever need.
> > > Â
> > > 73,
> > > Â
> > > Bob, KD5MHQ
> > >
> > > --- On Tue, 2/8/11, Peter Carter <ve3pcd@> wrote:
> > >
> > >
> > > Â
> > >
> > >
> > >
> > > I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
> > >
> > > Thanks, 73
> > > Peter
> > >
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> > > [Non-text portions of this message have been removed]
> > >
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29735. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 15:58:09 UTC
From: w5rkl
Topic: 29725 Message: 29735

The first response I gave contained the connection instructions for the TS-830. The second response was for the TS-820.

If you do not have an 8 pin octal plug for the TS-820 rear 8 pin octal socket you can an 8 pin male octal plug from Radio Daze, www.radiodaze.com for a couple of dollars.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> Oh, one more thing...
>
> Will this also work for the TS-830S?
>
> 73
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Bob and Peter,
> >
> > Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.
> >
> > The FL-2100B operators manual can be downloaded at the following link
> >
> > http://www.bcdxc.org/fl2100b_man.pdf
> >
> > The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".
> >
> > A 7 pin DIN plug is required and the DIN plug is wired as follows:
> >
> > DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.
> >
> > DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.
> >
> > That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B amplifier.
> >

> > If the amplifier has straps between "RY" and "E" terminals, remove the straps.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> > >
> > > Hi Peter,
> > > Â
> > > I've attached an FL-2100B user manual with all the info you'll ever need.
> > > Â
> > > 73,
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> > > Bob, KD5MHQ
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> > > --- On Tue, 2/8/11, Peter Carter <ve3pcd@> wrote:
> > >
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> > >
> > > I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
> > >
> > > Thanks, 73
> > > Peter
> > >
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> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

29736. Re: [TS-520_820_530_830] Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 19:01:20 UTC
From: Bob
Topic: 29725 Message: 29736

Great, glad it came thru after all. Looks like there's quite a bit of info on those linears. 572B's are some nice triodes. All the best on your endeavours.

73,

Bob, KD5MHQ

--- On Wed, 2/9/11, Peter Carter <ve3pcd@hotmail.com> wrote:

Hi Mike,

Thanks much appreciated, and Bob I did get your email with the attachment doc.

I have a deal on this Amp and is thinking of buying.

73 guys
Peter
ve3pcd

[Non-text portions of this message have been removed]

29737. Re: [TS-520_820_530_830] Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 19:03:30 UTC
From: Bob
Topic: 29725 Message: 29737

I don't see why it wouldn't. Hook it up!

Bob

--- On Wed, 2/9/11, Peter Carter <ve3pcd@...> wrote:

Oh, one more thing...

Will this also work for the TS-830S?

73

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bob and Peter,
>
> Attachments are not allowed when responding to posts. That's why Peter didn't see the manual.
>
> The FL-2100B operators manual can be downloaded at the following link
>
> http://www.bcdxc.org/fl2100b_man.pdf
>
> The FL-2100B rear panel has screw terminals for relay and ALC connections. The amplifier terminals labeled "E" are "ground". The relay is labeled "RY" and ALC is labeled "ALC".
>
> A 7 pin DIN plug is required and the DIN plug is wired as follows:
>
> DIN plug pin 2 is connected to the amplifier's "RY" terminal and DIN plug pin 4 is connected to the amplifier's "E" terminal.
>
> DIN Plug pin 6 is connected to the amplifier's "ALC" terminal.
>
> That is all there is to connecting the FL-2100B control lines to the TS-830 REMOTE DIN socket. The FL-2100B relay voltage is approximately 12VDC and the current is around 100ma. Therefore, you do not need an amplifier interface between the 830 and the FL-2100B amplifier.
>
> If the amplifier has straps between "RY" and "E" terminals, remove the straps.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> >

> > Hi Peter,
> > Â
> > I've attached an FL-2100B user manual with all the info you'll ever need.
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> > 73,
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> > Bob, KD5MHQ
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> > --- On Tue, 2/8/11, Peter Carter <ve3pcd@> wrote:
> >
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> >
> >
> >
> > I am planning on buying a Fl-2100B HF app to be used with my Kenwood TS-830S but not sure how I would interface it, can some send me the instructions on how to wire this up?
> >
> > Thanks, 73
> > Peter
> >
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> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

29738. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 20:27:56 UTC
From: w5rkl
Topic: 29725 Message: 29738

There is no mystery with the Yaesu FL-2100B amplifier. The FL-2100B will work with any of the Kenwood hybrids.

The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.

The amplifier relay connection is made to the exciter/transceiver's "Normally Open" relay terminals in the exciter/transceiver's rear panel REMOTE socket whether it be 8 pin octal or 7 pin DIN sockets. Again, these are shown in the exciter/transceiver's operator's manual.

The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.

The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:

http://www.bcdxc.org/fl2100b_man.pdf

Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> I don't see why it wouldn't. Hook it up!
> Â
> Bob
>
> --- On Wed, 2/9/11, Peter Carter <ve3pcd@...> wrote:Â
>
>
>
>
>
> Oh, one more thing...
>
> Will this also work for the TS-830S?
>
> 73

29739. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 20:34:53 UTC
From: w5rkl
Topic: 29725 Message: 29739

One additional comment. There is no need for diodes when using the simple ALC adjustable pot circuit I mentioned because the FL-2100B already rectifies the ALC voltage. That means the voltage at the FL-2100B "ALC" terminal is "DC", not "RF".

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@...> wrote:
>
> There is no mystery with the Yaesu FL-2100B amplifier. The FL-2100B will work with any of the Kenwood hybrids.
>
> The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.
>
> The amplifier relay connection is made to the exciter/transceiver's "Normally Open" relay terminals in the exciter/transceiver's rear panel REMOTE socket whether it be 8 pin octal or 7 pin DIN sockets. Again, these are shown in the exciter/transceiver's operator's manual.
>
> The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.
>
> The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:
>
> http://www.bcdxc.org/fl2100b_man.pdf
>
> Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC

voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> >
> > I don't see why it wouldn't. Hook it up!
> > Â
> > Bob
> >
> > --- On Wed, 2/9/11, Peter Carter <ve3pcd@> wrote:Â
> >
> >
> >
> >
> >
> > Oh, one more thing...
> >
> > Will this also work for the TS-830S?
> >
> > 73
>

29740. New file uploaded to TS-520_820_530_830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 21:08:45 UTC
From: TS-520_820_530_830@yahoogroups.com
Topic: 262 Message: 29740

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the TS-520_820_530_830
group.

File : /FL-2100B ALC adjustment mod.docx
Uploaded by : w5rkl <w5rkl@...>
Description : Simple Amplifier Adjustable ALC output circuit

You can access this file at the URL:
http://groups.yahoo.com/group/TS-520_820_530_830/files/FL-2100B%20ALC%20adjustment%20mod.d
ocx

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

w5rkl <w5rkl@...>

29741. FL-2100B ALC file

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-09 22:51:24 UTC
From: w5rkl
Topic: 29741 Message: 29741

I initially uploaded a file that shows a simple variable ALC circuit for the Yaesu FL-2100B amplifier. The original file was produced using Windows 7 Office intro. Unfortunately that file may not be compatible with XP Windows Word, it has a ".docx" suffix. I have since uploaded the same file in pdf format which can be viewed using the Adobe Acrobat reader.

The circuit is what Ameritron uses in their variable ALC output in the AL-811 and AL-811H amplifiers. I see no reason it will not work with the FL-2100B amplifier. The circuit can be built either inside the amplifier or in an external small metal box. There are only 3 components, 2 fixed resistors and one variable resistor.

73s
Mike
W5RKL

29742. Re: [TS-520_820_530_830] FL-2100B ALC file

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 00:17:16 UTC
From: HPA II
Topic: 29741 Message: 29742

XP Word converts it!

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, February 09, 2011 2:51 PM
Subject: [TS-520_820_530_830] FL-2100B ALC file

I initially uploaded a file that shows a simple variable ALC circuit for the Yaesu FL-2100B amplifier. The original file was produced using Windows 7 Office intro. Unfortunately that file may not be compatible with XP Windows Word, it has a ".docx" suffix. I have since uploaded the same file in pdf format which can be viewed using the Adobe Acrobat reader.

The circuit is what Ameritron uses in their variable ALC output in the AL-811 and AL-811H amplifiers. I see no reason it will not work with the FL-2100B amplifier. The circuit can be built either inside the amplifier or in an external small metal box. There are only 3 components, 2 fixed resistors and one variable resistor.

73s
Mike
W5RKL

[Non-text portions of this message have been removed]

29743. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 01:04:15 UTC
From: Peter Carter
Topic: 29725 Message: 29743

WOW!

Mike, you are amazing!

I was wondering if you could tell me a bit about yourself, you seem to know so much about these rigs.

Thanks again!
73 de Peter

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> One additional comment. There is no need for diodes when using the simple ALC adjustable pot circuit I mentioned because the FL-2100B already rectifies the ALC voltage. That means the voltage at the FL-2100B "ALC" terminal is "DC", not "RF".
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > There is no mystery with the Yaesu FL-2100B amplifier. The FL-2100B will work with any of the Kenwood hybrids.
> >
> > The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.
> >
> > The amplifier relay connection is made to the exciter/transceiver's "Normally Open" relay terminals in the exciter/transceiver's rear panel REMOTE socket whether it be 8 pin octal or 7 pin DIN sockets. Again, these are shown in the exciter/transceiver's operator's manual.
> >
> > The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.
> >
> > The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:

> >
> > http://www.bcdxc.org/fl2100b_man.pdf
> >
> > Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> > >
> > > I don't see why it wouldn't. Hook it up!
> > > Â
> > > Bob
> > >
> > > --- On Wed, 2/9/11, Peter Carter <ve3pcd@> wrote:Â
> > >
> > >
> > >
> > >
> > >
> > > Oh, one more thing...
> > >
> > > Will this also work for the TS-830S?
> > >
> > > 73
> >
>

29744. Re: FL-2100B ALC file

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 01:18:16 UTC
From: w5rkl
Topic: 29741 Message: 29744

That's good. I don't have an XP machine to check. My machine is a 64 bit Windows 7 with Windows Office intro. Anyway, glad to see XP office converted it.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "HPA II" <k6aom@...> wrote:
>
> XP Word converts it!
>
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, February 09, 2011 2:51 PM
> Subject: [TS-520_820_530_830] FL-2100B ALC file
>
>
>
> I initially uploaded a file that shows a simple variable ALC circuit for the Yaesu FL-2100B amplifier. The original file was produced using Windows 7 Office intro. Unfortunately that file may not be compatible with XP Windows Word, it has a ".docx" suffix. I have since uploaded the same file in pdf format which can be viewed using the Adobe Acrobat reader.
>
> The circuit is what Ameritron uses in their variable ALC output in the AL-811 and AL-811H amplifiers. I see no reason it will not work with the FL-2100B amplifier. The circuit can be built either inside the amplifier or in an external small metal box. There are only 3 components, 2 fixed resistors and one variable resistor.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29745. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 01:19:08 UTC
From: Peter Carter
Topic: 29725 Message: 29745

Hi Mike,

One more question.

Can I use the CAR control on the TS-830S to reduce the power I need to drive the Fl-2100B?

I dont want to drive the amp at full input power

73

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> One additional comment. There is no need for diodes when using the simple ALC adjustable pot circuit I mentioned because the FL-2100B already rectifies the ALC voltage. That means the voltage at the FL-2100B "ALC" terminal is "DC", not "RF".
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > There is no mystery with the Yaesu FL-2100B amplifier. The FL-2100B will work with any of the Kenwood hybrids.
> >
> > The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.
> >
> > The amplifier relay connection is made to the exciter/transceiver's "Normally Open" relay terminals in the exciter/transceiver's rear panel REMOTE socket whether it be 8 pin octal or 7 pin DIN sockets. Again, these are shown in the exciter/transceiver's operator's manual.
> >
> > The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.
> >
> > The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:

> >
> > http://www.bcdxc.org/fl2100b_man.pdf
> >
> > Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> > >
> > > I don't see why it wouldn't. Hook it up!
> > > Â
> > > Bob
> > >
> > > --- On Wed, 2/9/11, Peter Carter <ve3pcd@> wrote:Â
> > >
> > >
> > >
> > >
> > >
> > > Oh, one more thing...
> > >
> > > Will this also work for the TS-830S?
> > >
> > > 73
> >
>

29746. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 03:17:07 UTC
From: w5rkl
Topic: 29725 Message: 29746

Peter,

No. The MIC gain controls the RF output in USB and LSB modes. The CAR control has absolutely no control what so ever over RF output in USB or LSB modes! The CAR control has control over RF output in TUNE and CW modes ONLY!

ALC, a gain control voltage, that is produced when grid current flows in the final tubes, also controls RF output but ONLY when ALC is produced.

Don't believe when someone tells you that the ALC meter must always peak at the top of the ALC scale. That's NOT true! ALC, when produced, "reduces" RF output NOT increases RF output!

Just remember, ALC works in a transmitter the same way AGC works in a receiver, to control gain, period! The leter "A" in ALC stands for "Automatic", the "L in ALC stands for "Level" and the "C" stands for "Control". Put them together and ALC stands for "Automatic Level Control"!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> Hi Mike,
>
> One more question.
>
> Can I use the CAR control on the TS-830S to reduce the power I need to drive the Fl-2100B?
>
> I dont want to drive the amp at full input power
>
> 73
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > One additional comment. There is no need for diodes when using the simple ALC adjustable pot circuit I mentioned because the FL-2100B already rectifies the ALC voltage. That means the voltage at the FL-2100B "ALC" terminal is "DC", not "RF".
> >
> > 73s
> > Mike
> > W5RKL
> >

> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > There is no mystery with the Yaesu FL-2100B amplifier. The FL-2100B will work with any of the Kenwood hybrids.
> > >
> > > The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.
> > >
> > > The amplifier relay connection is made to the exciter/transceiver's "Normally Open" relay terminals in the exciter/transceiver's rear panel REMOTE socket whether it be 8 pin octal or 7 pin DIN sockets. Again, these are shown in the exciter/transceiver's operator's manual.
> > >
> > > The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.
> > >
> > > The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:
> > >
> > > http://www.bcdxc.org/fl2100b_man.pdf
> > >
> > > Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >

> > > --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> > > >
> > > > I don't see why it wouldn't. Hook it up!
> > > > Â
> > > > Bob
> > > >
> > > > --- On Wed, 2/9/11, Peter Carter <ve3pcd@> wrote:Â
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > Oh, one more thing...
> > > >
> > > > Will this also work for the TS-830S?
> > > >
> > > > 73
> > >
> >
>

29747. Re: Yeasu FL-2100B amp and TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-10 03:19:28 UTC
From: w5rkl
Topic: 29725 Message: 29747

Thank you Peter for you kind words. I'm just a ham helping other hams like yourself with their problems and in addition, provide some helpful tips and information.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Peter Carter" <ve3pcd@...> wrote:
>
> WOW!
>
> Mike, you are amazing!
>
> I was wondering if you could tell me a bit about yourself, you seem to know so much about these rigs.
>
> Thanks again!
> 73 de Peter
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > One additional comment. There is no need for diodes when using the simple ALC adjustable pot circuit I mentioned because the FL-2100B already rectifies the ALC voltage. That means the voltage at the FL-2100B "ALC" terminal is "DC", not "RF".
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> > Mike
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> >
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> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
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> > >
> > > The control connections, relay and ALC, are all straight forward and easy to connect. Depending on the exciter/transceiver used, whether it's a TS-520 series, TS-820 series, TS-530, or TS-830, determines what REMOTE socket plug is required. The TS-520 and TS-820 series requires an 8 pin male octal plug while the TS-530 and TS-830 requires a 7 pin "DIN" plug. The relay and ALC connections are shown in each exciter/transceiver manual.
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> > > The amplifier "RY" (Relay), "ALC", and "E" (ground) terminals are easy to use. Simple shield cable such as those cheap stereo inter-connecting cables used to connect VCR, DVD, and stereo amplifiers can be used. The FL-2100B relay voltage and current ratings are 13VDC at about 100ma. There is no need for an expensive and useless amplifier relay interface between the FL-2100B and hybrid exciter/transceiver.
> > >
> > > The FL-2100B amplifier operators manual can be downloaded FREE, on the Internet, by simply entering "FL-2100B manual" into your favorite search engine, "Google", "Bing" etc, as the search phrase and up comes the link:
> > >
> > > http://www.bcdxc.org/fl2100b_man.pdf
> > >
> > > Yes, I know the FL-2100B ALC output is not adjustable. However, a simple variable resistor/pot can be added to make this possible. This will allow you to vary the maximum level of ALC applied from the FL-2100B to the exciter/transceiver's REMOTE socket ALC connection in the same fashion as a volume control does in an audio amplifier. One terminal of the pot is connected to the amplifier's ALC terminal, the other pot's terminal is connected to ground "E" and the pot's "WIPER" (center pin) is connected to the exciter's REMOTE socket's ALC terminal. The pot is adjusted for zero or minimum ALC output voltage as measured with a simple DVM. The SSB signal is applied to the amplifier and the pot is adjusted until the power output from the amplifier starts to reduce or the maximum ALC voltage rating of the exciter has been achieved. This is similar to how Ameritron's AL-811 and AL-811H rear panel ALC pot is used. The Ameritron AL-811 and AL-811H ALC output gain control voltage is actually rectified "exciter/transceiver" RF drive. The rectified ALC voltage is then applied to the AL-811 or AL-811H rear panel ALC pot where the pot regulates, based on its setting, the level of ALC gain control voltage that is applied back to the exciter/transceiver, same as what I mentioned above.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
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> > > --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
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> > > > Bob
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> > > >
> > > >
> > > >
> > > >
> > > >
> > > > Oh, one more thing...
> > > >
> > > > Will this also work for the TS-830S?
> > > >

> > > > 73
> > >
> >
>

29748. TS-830S L41 coil

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 02:13:41 UTC
From: n6wk_skcc3
Topic: 29748 Message: 29748

I have a brand New in package part number L34-2004-05 coil for the Kenwood TS-830S. It is L41 on the RF board. The 160 meter coil that always burns out.
Asking $20.00 plus $2.00 shipping
Was going through my parts cabinet and came across it.
thanks,
Gordon
N6WK

29749. TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 11:34:40 UTC
From: Ton
Topic: 29749 Message: 29749

Hello dear fellow hams,

my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.

I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.

Maybe one of you has an idea where to search or check?

thanks in advance, 73's Ton pa1pxl

29750. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 14:08:03 UTC
From: w5rkl
Topic: 29749 Message: 29750

You said you replaced RL1 which I assume is RL1 on the AF Unit. You also said that RL1 is now the cause of your current low receive and no RF output.

I recommend you visually inspect the solder connections at the foil side of the relay pins and the foil runs to the relay pins. The foil on the PC boards are very thin and are easily broken/cracked by heat when soldering or desoldering. A broken foil run can affect the circuits the relay controls (receiver biasing, driver and both final tube biasing, and switching between receive and transmit).

A method I use to inspect for cracked or broken PC board foil runs is shinning a bright light on the component side of the board while looking through a magnifying glass on the foil side. The light will clearly show defective/broken/cracked foil runs.

I replaced that same relay in a TS-120 I recently worked on. When I completed the replacement I found the S meter did not work. The S meter circuit flows through one set of relay terminals. I used the method described above and found the foil to one of the relay pins was broken/cracked, opening the S meter circuit. I fixed the broken foil run and the problem was solved, the S meter worked.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@...> wrote:
>
> Hello dear fellow hams,
>
> my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
> When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
>
> I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
>
> Maybe one of you has an idea where to search or check?
>
> thanks in advance, 73's Ton pa1pxl
>

29751. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 14:17:44 UTC
From: w5rkl
Topic: 29749 Message: 29751

One additional comment.

I mentioned in my recent response that the relay on the AF Unit control receiver biasing and switching between receive and transmit. RL1 on the AF Unit controls the biasing of receiver RF amplifier Q1 on the RF Unit over the "RB1" line. If the pins of the relay on the foil side are not making good contact due to a broken or cracked foil at the relay pin then the "RB1" voltage will be missing at the RF Unit. RB1 voltage flows from AF unit plug 6 pin through the wiring harness to the RF Unit plug 8 pin 2 and finally to Q1 (receiver RF amplifier) on the RF Unit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> You said you replaced RL1 which I assume is RL1 on the AF Unit. You also said that RL1 is now the cause of your current low receive and no RF output.
>
> I recommend you visually inspect the solder connections at the foil side of the relay pins and the foil runs to the relay pins. The foil on the PC boards are very thin and are easily broken/cracked by heat when soldering or desoldering. A broken foil run can affect the circuits the relay controls (receiver biasing, driver and both final tube biasing, and switching between receive and transmit).
>
> A method I use to inspect for cracked or broken PC board foil runs is shinning a bright light on the component side of the board while looking through a magnifying glass on the foil side. The light will clearly show defective/broken/cracked foil runs.
>
> I replaced that same relay in a TS-120 I recently worked on. When I completed the replacement I found the S meter did not work. The S meter circuit flows through one set of relay terminals. I used the method described above and found the foil to one of the relay pins was broken/cracked, opening the S meter circuit. I fixed the broken foil run and the problem was solved, the S meter worked.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> >
> > Hello dear fellow hams,
> >
> > my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.

> > When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
> >
> > I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
> >
> > Maybe one of you has an idea where to search or check?
> >
> > thanks in advance, 73's Ton pa1pxl
> >
>

29752. TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 14:52:27 UTC
From: Tom
Topic: 29752 Message: 29752

Howdy to the group,

My first transcever was the TS-820. Years later, a good friend was looking for one so I traded it to him for a HQ-129x. At some point, he has a problem with it and decided to remove the wiring from the transformer to test it. That was about the time he became ill and never made any more progress until he became SK a few years ago.

I got the old 820 from the estate and put it away, thinking that I would tinker with it and try to get it working or part it out. The jumper is missing that plugs in when there is no vfo in place and I think that may have been the problem the whole time.

I aquired the 820, I was unable to get the original manual or the service manual which I sent with it. Cannot find a schematic of the transformer hookup either and although I think I can see how to hook it up, I would like to varify before putting power to the unit.

Where can I find a schematic that shows the power transformer wiring for the TS-820s?

Any help I can receive would be greatly appreciated.

Thanks,

Tom AC5JH

29753. Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 16:18:00 UTC
From: w5rkl
Topic: 29752 Message: 29753

Hi Tom,

You can download the TS-820 operator and service manual at

www.n6wk.com/kenwood/

The rear panel 9 pin socket, without a remote VFO plugged into it, must have pins 8 and 9 shorted with either the factory jumper plug or a short piece of wire.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <ac5jh@...> wrote:
>
> Howdy to the group,
>
> My first transcever was the TS-820. Years later, a good friend was looking for one so I traded it to him for a HQ-129x. At some point, he has a problem with it and decided to remove the wiring from the transformer to test it. That was about the time he became ill and never made any more progress until he became SK a few years ago.
>
> I got the old 820 from the estate and put it away, thinking that I would tinker with it and try to get it working or part it out. The jumper is missing that plugs in when there is no vfo in place and I think that may have been the problem the whole time.
>
> I aquired the 820, I was unable to get the original manual or the service manual which I sent with it. Cannot find a schematic of the transformer hookup either and although I think I can see how to hook it up, I would like to varify before putting power to the unit.
>
> Where can I find a schematic that shows the power transformer wiring for the TS-820s?
>
> Any help I can receive would be greatly appreciated.
>
> Thanks,
>
> Tom AC5JH
>

29754. Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 16:23:15 UTC
From: roberteleazer@rocketmail.com
Topic: 29752 Message: 29754

Tom:

There are a number of places where you can download the manuals and schematics for the TS-820S, including BAMA and Mods.DK.

Also the famous Ken, K4EAA, has a website with really high resolution manuals and schematics. The schematics are at:

http://www.k4eaa.com/schematics.htm

Look around Ken's site and you will find the manuals as well.

Finally, if it would help, I could take a picture of the transformer connections on my TS-820S and e-mail them to you. I think the connections will be pretty obvious if you see them but you should do some continuity checks to make sure.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <ac5jh@...> wrote:
>
> Howdy to the group,
>
> My first transcever was the TS-820. Years later, a good friend was looking for one so I traded it to him for a HQ-129x. At some point, he has a problem with it and decided to remove the wiring from the transformer to test it. That was about the time he became ill and never made any more progress until he became SK a few years ago.
>
> I got the old 820 from the estate and put it away, thinking that I would tinker with it and try to get it working or part it out. The jumper is missing that plugs in when there is no vfo in place and I think that may have been the problem the whole time.
>
> I aquired the 820, I was unable to get the original manual or the service manual which I sent with it. Cannot find a schematic of the transformer hookup either and although I think I can see how to hook it up, I would like to varify before putting power to the unit.
>
> Where can I find a schematic that shows the power transformer wiring for the TS-820s?
>
> Any help I can receive would be greatly appreciated.
>
> Thanks,
>
> Tom AC5JH
>

29755. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 16:32:07 UTC
From: Ton
Topic: 29749 Message: 29755

Hello Mike

i made a typo; i meant that RL-1 was NOT the cause of the fault!
In the meanwhile i took out the TIF connector on both sides and cleaned it and put it back
Now the 830 comes more to live!
But i noticed a strang thing i never noticed before: when i switch between usb/lsb, the 830 goes in transmit for a split second.
At the same time i hear that other "hidden relay" switching.
Is this normal?

73's Ton pa1pxl

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> One additional comment.
>
> I mentioned in my recent response that the relay on the AF Unit control receiver biasing and switching between receive and transmit. RL1 on the AF Unit controls the biasing of receiver RF amplifier Q1 on the RF Unit over the "RB1" line. If the pins of the relay on the foil side are not making good contact due to a broken or cracked foil at the relay pin then the "RB1" voltage will be missing at the RF Unit. RB1 voltage flows from AF unit plug 6 pin through the wiring harness to the RF Unit plug 8 pin 2 and finally to Q1 (receiver RF amplifier) on the RF Unit.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > You said you replaced RL1 which I assume is RL1 on the AF Unit. You also said that RL1 is now the cause of your current low receive and no RF output.
> >
> > I recommend you visually inspect the solder connections at the foil side of the relay pins and the foil runs to the relay pins. The foil on the PC boards are very thin and are easily broken/cracked by heat when soldering or desoldering. A broken foil run can affect the circuits the relay controls (receiver biasing, driver and both final tube biasing, and switching between receive and transmit).
> >
> > A method I use to inspect for cracked or broken PC board foil runs is shinning a bright light on the component side of the board while looking through a magnifying glass on the foil side. The light will clearly show defective/broken/cracked foil runs.
> >
> > I replaced that same relay in a TS-120 I recently worked on. When I completed the replacement I found the S meter did not work. The S meter circuit flows through one set of

relay terminals. I used the method described above and found the foil to one of the relay pins was broken/cracked, opening the S meter circuit. I fixed the broken foil run and the problem was solved, the S meter worked.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> > >
> > > Hello dear fellow hams,
> > >
> > > my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
> > > When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
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> > > I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
> > >
> > > Maybe one of you has an idea where to search or check?
> > >
> > > thanks in advance, 73's Ton pa1pxl
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> >
>

29756. Schottky Diodes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 18:15:40 UTC
From: wagstw46
Topic: 9980 Message: 29756

This may come under the heading of "if it aint broke dont fix it" ??

I have reviewed threads dating back to 2006 where there was flurry of activity related to replacing product detector diodes with Schottky diodes. I am thinking about doing same with my TS-830. I also found some discussion on other forums where authors state this is just a "feel good" mod.

Has anyone who performed the mod performed any actual measurements or side by side comparisons to determine if there really is any performance improvement?

I suppose it cant hurt unless I fool around and lift a foil! Suspect modern receiver design would not use the 1n60 germanium diodes today.

Thanks
Terry K9TW

29757. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 18:45:10 UTC
From: w5rkl
Topic: 29749 Message: 29757

Hi Ton,

Is the VOX turned ON? If it is, switching modes will cause the 830 to switch, briefly, into TX then back to RX.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@...> wrote:
>
> Hello Mike
>
> i made a typo; i meant that RL-1 was NOT the cause of the fault!
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> Now the 830 comes more to live!
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> Is this normal?
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> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
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> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> > > >
> > > > Hello dear fellow hams,
> > > >
> > > > my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
> > > > When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
> > > >
> > > > I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
> > > >
> > > > Maybe one of you has an idea where to search or check?
> > > >
> > > > thanks in advance, 73's Ton pa1pxl
> > > >
> > >
> > >
> >
>

29758. Neutralizing finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 18:45:55 UTC
From: churchguy_12901
Topic: 29758 Message: 29758

Hello, I recently picked up a ts530s, I replaced the hv caps with a kit from ken and then replaced the driver and the finals with a pair of 2001a's. I have set the bias and tuned into a dummy load on 28.1. I believe the only step left is to neutralize the finals. I only have a common digital volt meter here. Is there a way to test across the 50 ohm load with anything other than an o-scope? Thanks, Mike w2waw

29759. Re: Schottky Diodes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 18:58:20 UTC
From: w5rkl
Topic: 9980 Message: 29759

Terry,

How are you going to determine whether replacing the diodes actually made a difference or not? Do you have the test equipment to make accurate "before" and "after" measurements? Do you have 2 identical radios, one which will be modified and one which will not? Unless you have the test equipment to perform accurate before and after test I would not recommend changing the diodes.

I agree with your initial statement, "If it ain't broke don't fix it!".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> This may come under the heading of "if it aint broke dont fix it" ??
>
> I have reviewed threads dating back to 2006 where there was flurry of activity related to replacing product detector diodes with Schottky diodes. I am thinking about doing same with my TS-830. I also found some discussion on other forums where authors state this is just a "feel good" mod.
>
> Has anyone who performed the mod performed any actual measurements or side by side comparisons to determine if there really is any performance improvement?
>
> I suppose it cant hurt unless I fool around and lift a foil! Suspect modern receiver design would not use the 1n60 germanium diodes today.
>
> Thanks
> Terry K9TW
>

29760. Re: Neutralizing finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 19:01:16 UTC
From: roberteleazer@rocketmail.com
Topic: 29758 Message: 29760

Mike:

You need something that will convert that RF voltage into something a digital VOM can read. That means a diode that will rectify it like a 1N34 or 1N60, in other words, an RF probe. I believe that on his website Ken has the plans for one. If you are using a Heathkit Cantenna dummy load there is one built in. By the way, you do not need to load up power into a dummy load to do that, but you do need a dummy load so that the output is looking into the right impedance.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "churchguy_12901" <churchguy_12901@...> wrote:
>
> Hello, I recently picked up a ts530s, I replaced the hv caps with a kit from ken and then replaced the driver and the finals with a pair of 2001a's. I have set the bias and tuned into a dummy load on 28.1. I believe the only step left is to neutralize the finals. I only have a common digital volt meter here. Is there a way to test across the 50 ohm load with anything other than an o-scope? Thanks, Mike w2waw
>

29761. Re: Neutralizing finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 19:20:10 UTC
From: w5rkl
Topic: 29758 Message: 29761

Mike,

An RF probe and a VTVM but an o'scope is much more accurate because you can actually see the signal on the screen rather than a meter movement. What ever method you use just be sure you set the SG switch to OFF.

I have a few questions. I mean on disrespect when asking the following questions.

Why did you replace the driver and both final tubes then replace the HV filter capacitors? Did you have a problem that, through troubleshooting, that pointed to these components as the source of the problem or were they simply replaced because they were old? If age was the reason then I'm sorry to say that is a common mistake and a waste of time and money. Components should not be replaced simply because they are old. It is a form of "shot gun" component replacement which is replacing components without any supporting evidence to replace the components and typically results in no overall improvement.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "churchguy_12901" <churchguy_12901@...> wrote:
>
> Hello, I recently picked up a ts530s, I replaced the hv caps with a kit from ken and then replaced the driver and the finals with a pair of 2001a's. I have set the bias and tuned into a dummy load on 28.1. I believe the only step left is to neutralize the finals. I only have a common digital volt meter here. Is there a way to test across the 50 ohm load with anything other than an o-scope? Thanks, Mike w2waw
>

29762. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 19:25:03 UTC
From: Ton
Topic: 29749 Message: 29762

Hello Mike,

yes you were right; VOX was still on and caused a short transmit.
I saw some blue light at the tubes while switching the mode switch, but all solved now!
It seems that replacing the rl-1 relay was not necessary but okay it will last for years now ;)
The TIF cable i think caused the problem.

Thanks for your advice,

73's Ton - pa1pxl

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Ton,
>
> Is the VOX turned ON? If it is, switching modes will cause the 830 to switch, briefly, into TX then back to RX.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> >
> > Hello Mike
> >
> > i made a typo; i meant that RL-1 was NOT the cause of the fault!
> > In the meanwhile i took out the TIF connector on both sides and cleaned it and put it back
> > Now the 830 comes more to live!
> > But i noticed a strang thing i never noticed before: when i switch between usb/lsb, the 830 goes in transmit for a split second.
> > At the same time i hear that other "hidden relay" switching.
> > Is this normal?
> >
> > 73's Ton pa1pxl
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > One additional comment.
> > >
> > > I mentioned in my recent response that the relay on the AF Unit control receiver biasing and switching between receive and transmit. RL1 on the AF Unit controls the biasing

of receiver RF amplifier Q1 on the RF Unit over the "RB1" line. If the pins of the relay on the foil side are not making good contact due to a broken or cracked foil at the relay pin then the "RB1" voltage will be missing at the RF Unit. RB1 voltage flows from AF unit plug 6 pin through the wiring harness to the RF Unit plug 8 pin 2 and finally to Q1 (receiver RF amplifier) on the RF Unit.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > You said you replaced RL1 which I assume is RL1 on the AF Unit. You also said that RL1 is now the cause of your current low receive and no RF output.
> > > >
> > > > I recommend you visually inspect the solder connections at the foil side of the relay pins and the foil runs to the relay pins. The foil on the PC boards are very thin and are easily broken/cracked by heat when soldering or desoldering. A broken foil run can affect the circuits the relay controls (receiver biasing, driver and both final tube biasing, and switching between receive and transmit).
> > > >
> > > > A method I use to inspect for cracked or broken PC board foil runs is shinning a bright light on the component side of the board while looking through a magnifying glass on the foil side. The light will clearly show defective/broken/cracked foil runs.
> > > >
> > > > I replaced that same relay in a TS-120 I recently worked on. When I completed the replacement I found the S meter did not work. The S meter circuit flows through one set of relay terminals. I used the method described above and found the foil to one of the relay pins was broken/cracked, opening the S meter circuit. I fixed the broken foil run and the problem was solved, the S meter worked.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> > > > >
> > > > > Hello dear fellow hams,
> > > > >
> > > > > my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
> > > > > When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
> > > > >
> > > > > I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
> > > > >
> > > > > Maybe one of you has an idea where to search or check?
> > > > >

> > > > > thanks in advance, 73's Ton pa1pxl
> > > > >
> > > > >
> > > >
> >
>

29763. Re: [TS-520_820_530_830] Re: Schottky Diodes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 19:47:42 UTC
From: Terry Wagoner
Topic: 9980 Message: 29763

Mike --I dont have high quality lab equipment or identical rig to make any meaningful comparisons so that is why I posted the question. It appeared that quite a few people (including experienced old timers) had performed the mod and were claiming improvement. I wanted to know if this was subjective or objective. A good mechanic doesnt need empirical test to tell if multiple carburetors on an engine are balanced. He can tell by listening. I thought maybe this mod was on that order? Also, I see this mod is being performed and discussed on Yaesu forums as well. Tom Rauch W8JI has pretty much said it is bogus and he is pretty well respected. I consider you to be in his class and appreciate your response. I am bored and love to work on rigs, but absent any objective results I think I will take your counsel and leave well enough alone and find someplace else to melt some solder! Tnx Terry

---

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 11, 2011 1:58:20 PM
Subject: [TS-520_820_530_830] Re: Schottky Diodes

Terry,

How are you going to determine whether replacing the diodes actually made a difference or not? Do you have the test equipment to make accurate "before" and "after" measurements? Do you have 2 identical radios, one which will be modified and one which will not? Unless you have the test equipment to perform accurate before and after test I would not recommend changing the diodes.

I agree with your initial statement, "If it ain't broke don't fix it!".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wagstw46" <wagstw46@...> wrote:
>
> This may come under the heading of "if it aint broke dont fix it" ??
>
> I have reviewed threads dating back to 2006 where there was flurry of activity
>related to replacing product detector diodes with Schottky diodes. I am thinking
>about doing same with my TS-830. I also found some discussion on other forums
>where authors state this is just a "feel good" mod.
>
>
> Has anyone who performed the mod performed any actual measurements or side by
>side comparisons to determine if there really is any performance improvement?
>

> I suppose it cant hurt unless I fool around and lift a foil! Suspect modern
>receiver design would not use the 1n60 germanium diodes today.
>
> Thanks
> Terry K9TW
>

TV dinner still cooling?
Check out "Tonight's Picks" on Yahoo! TV.
http://tv.yahoo.com/

[Non-text portions of this message have been removed]

29764. Re: TS-830 receive and transmit loss

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 19:50:01 UTC
From: w5rkl
Topic: 29749 Message: 29764

Hi Ton,

Plug 7 on the RF Unit carries the 8Mhz "TIF" (Transmit Intermediate Frequency) signal plus driver tube plate voltage. If it's not making contact then it's quite possible the driver tube will have no plate voltage and the 8Mhz TIF signal will not appear at the input to the transmit mixer (Q6 and Q7).

With the VOX switch set to ON and changing modes noise is produced that is applied to the VOX circuit causing a momentary tripping of the relay. This will happen with all of the hybrid with the VOX switch turned ON and the Mode switch positions changed. This happens with my 820 if I turn VOX OFF.

Have fun and enjoy the 830.

73s
Mike

--- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@...> wrote:
>
> Hello Mike,
>
> yes you were right; VOX was still on and caused a short transmit.
> I saw some blue light at the tubes while switching the mode switch, but all solved now!
> It seems that replacing the rl-1 relay was not necessary but okay it will last for years now ;)
> The TIF cable i think caused the problem.
>
> Thanks for your advice,
>
> 73's Ton - pa1pxl
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Ton,
> >
> > Is the VOX turned ON? If it is, switching modes will cause the 830 to switch, briefly, into TX then back to RX.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:

> > >
> > > Hello Mike
> > >
> > > i made a typo; i meant that RL-1 was NOT the cause of the fault!
> > > In the meanwhile i took out the TIF connector on both sides and cleaned it and put it back
> > > Now the 830 comes more to live!
> > > But i noticed a strang thing i never noticed before: when i switch between usb/lsb, the 830 goes in transmit for a split second.
> > > At the same time i hear that other "hidden relay" switching.
> > > Is this normal?
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> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > One additional comment.
> > > >
> > > > I mentioned in my recent response that the relay on the AF Unit control receiver biasing and switching between receive and transmit. RL1 on the AF Unit controls the biasing of receiver RF amplifier Q1 on the RF Unit over the "RB1" line. If the pins of the relay on the foil side are not making good contact due to a broken or cracked foil at the relay pin then the "RB1" voltage will be missing at the RF Unit. RB1 voltage flows from AF unit plug 6 pin through the wiring harness to the RF Unit plug 8 pin 2 and finally to Q1 (receiver RF amplifier) on the RF Unit.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > You said you replaced RL1 which I assume is RL1 on the AF Unit. You also said that RL1 is now the cause of your current low receive and no RF output.
> > > > >
> > > > > I recommend you visually inspect the solder connections at the foil side of the relay pins and the foil runs to the relay pins. The foil on the PC boards are very thin and are easily broken/cracked by heat when soldering or desoldering. A broken foil run can affect the circuits the relay controls (receiver biasing, driver and both final tube biasing, and switching between receive and transmit).
> > > > >
> > > > > A method I use to inspect for cracked or broken PC board foil runs is shinning a bright light on the component side of the board while looking through a magnifying glass on the foil side. The light will clearly show defective/broken/cracked foil runs.
> > > > >
> > > > > I replaced that same relay in a TS-120 I recently worked on. When I completed the replacement I found the S meter did not work. The S meter circuit flows through one set of relay terminals. I used the method described above and found the foil to one of the relay

pins was broken/cracked, opening the S meter circuit. I fixed the broken foil run and the problem was solved, the S meter worked.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > > >
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Ton" <tonrijnen@> wrote:
> > > > > > >
> > > > > > Hello dear fellow hams,
> > > > > > >
> > > > > > my TS-830 has a strange fault; from one to the other moment it has a drop in receive and it does not transmit anymore.
> > > > > > When hitting the send switch it shows approx 60mA of bias, but i can't tune or get any output out of the rig. Also the receiver shows only very low signals.
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> > > > > > I suspected the RL-1 relay and replaced it, but that was the the cause of this fault.
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> > > > > > Maybe one of you has an idea where to search or check?
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> > > > > > thanks in advance, 73's Ton pa1pxl
> > > > > > >
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> >

29765. Re: Neutralizing finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-11 20:37:26 UTC
From: churchguy_12901
Topic: 29758 Message: 29765

Hello, No disrespect taken, The previous owner told me the hv caps were on the way out and the finals and driver were not in the rig when I purchased it. If you type in "shotgun" to the search engine here you will see that same advice given a few times. Thanks for the help. Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Mike,
>
> An RF probe and a VTVM but an o'scope is much more accurate because you can actually see the signal on the screen rather than a meter movement. What ever method you use just be sure you set the SG switch to OFF.
>
> I have a few questions. I mean on disrespect when asking the following questions.
>
> Why did you replace the driver and both final tubes then replace the HV filter capacitors? Did you have a problem that, through troubleshooting, that pointed to these components as the source of the problem or were they simply replaced because they were old? If age was the reason then I'm sorry to say that is a common mistake and a waste of time and money. Components should not be replaced simply because they are old. It is a form of "shot gun" component replacement which is replacing components without any supporting evidence to replace the components and typically results in no overall improvement.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "churchguy_12901" <churchguy_12901@> wrote:
> >
> > Hello, I recently picked up a ts530s, I replaced the hv caps with a kit from ken and then replaced the driver and the finals with a pair of 2001a's. I have set the bias and tuned into a dummy load on 28.1. I believe the only step left is to neutralize the finals. I only have a common digital volt meter here. Is there a way to test across the 50 ohm load with anything other than an o-scope? Thanks, Mike w2waw
> >
>

29766. TS830S bandswitch alingment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 14:53:20 UTC
From: Ken
Topic: 29766 Message: 29766

I read this article below and checked one of my TS830's it seems as if mine on the shaft is 90 deg's out! I bought this radio some time back and it has always worked great. Is the article written in stone as it is said or is there some 830's that align different? I have enjoyed reading all the post on this page and I too do believe if it ain't broke don't fix-it, but at this point I am wondering!

Ken
NZ4Q

To align the bandswitch sections;

Put the radio on 10Mhz. The flats on the shaft should be vertical.
Check the shaft in the final compartment. There should be a flat to
the outside (right side of radio viewed from front) and one to the
bottom. This is the correct alignment.

29767. Crystals for Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 15:18:24 UTC
From: ae5uu
Topic: 29767 Message: 29767

Does anyone know a good source for crystals that fit the four fixed channels within my Kenwood TS-820? I am particularly interested in 5.2MHZ, which if I calculated correctly, should give me 14.3 MHz on 20 meters. Thanks for any assistance. Russell ae5uu

29768. Re: [TS-520_820_530_830] Crystals for Kenwood TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 16:28:44 UTC
From: Joseph Stiles
Topic: 29767 Message: 29768

Russell,

Check out International Crystal Manufacturing in Oklahoma City.
800-725-1426. I had to get replacement xtals for and 820 PLL/PD unit. Excellent service..reasonable prices

73's joe wb7uqu

From: ae5uu <rmn43@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, February 12, 2011 7:18:24 AM
Subject: [TS-520_820_530_830] Crystals for Kenwood TS-820

Does anyone know a good source for crystals that fit the four fixed channels within my Kenwood TS-820? I am particularly interested in 5.2MHZ, which if I calculated correctly, should give me 14.3 MHz on 20 meters. Thanks for any assistance. Russell ae5uu

[Non-text portions of this message have been removed]

29769. Re: TS830S bandswitch alingment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 17:42:26 UTC
From: w5rkl
Topic: 29766 Message: 29769

Ken,

You said the shaft in your 830 is 90 degrees out of alignment. What symptoms, through troubleshooting, are you experiencing that suggest/points to the band switch shaft being out of alignment? Just the article or is the 830 experiencing improper/failure in transmitter tuning of the PI Network (Plate and Load controls) resulting in loss of RF output?

Unless there are problems/symptoms that through troubleshooting suggests/points to the band switch shaft being out of alignment with the final amplifier wafer switches then I recommend not messing with and making changes to the shaft alignment just because you read an article about band switch shaft and wafer switch alignment.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <nz4q@...> wrote:
>
> I read this article below and checked one of my TS830's it seems as if mine on the shaft is 90 deg's out! I bought this radio some time back and it has always worked great. Is the article written in stone as it is said or is there some 830's that align different? I have enjoyed reading all the post on this page and I too do believe if it ain't broke don't fix-it, but at this point I am wondering!
>
> Ken
> NZ4Q
>
>
>
> To align the bandswitch sections;
>
> Put the radio on 10Mhz. The flats on the shaft should be vertical.
> Check the shaft in the final compartment. There should be a flat to
> the outside (right side of radio viewed from front) and one to the
> bottom. This is the correct alignment.
>

29770. Re: [TS-520_820_530_830] Re: TS830S bandswitch alingment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 18:30:52 UTC
From: Ken Johnson
Topic: 29766 Message: 29770

Nothing wrong with my 830 I was cleaning the fan motor area and injecting a couple drops of oil, I read the article looked at mine and its not the same as the article stated. I don't intend on doing anything to my 830 just stating that maybe that article I read here may not right!
Ken
NZ4Q

On Sat, Feb 12, 2011 at 12:42 PM, w5rkl <w5rkl@...> wrote:

>
>
> Ken,
>
> You said the shaft in your 830 is 90 degrees out of alignment. What
> symptoms, through troubleshooting, are you experiencing that suggest/points
> to the band switch shaft being out of alignment? Just the article or is the
> 830 experiencing improper/failure in transmitter tuning of the PI Network
> (Plate and Load controls) resulting in loss of RF output?
>
> Unless there are problems/symptoms that through troubleshooting
> suggests/points to the band switch shaft being out of alignment with the
> final amplifier wafer switches then I recommend not messing with and making
> changes to the shaft alignment just because you read an article about band
> switch shaft and wafer switch alignment.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ken" <nz4q@...> wrote:
> >
> > I read this article below and checked one of my TS830's it seems as if
> mine on the shaft is 90 deg's out! I bought this radio some time back and it
> has always worked great. Is the article written in stone as it is said or is
> there some 830's that align different? I have enjoyed reading all the post
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> this point I am wondering!
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> > Ken
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> >
> >
> > To align the bandswitch sections;

> >
> > Put the radio on 10Mhz. The flats on the shaft should be vertical.
> > Check the shaft in the final compartment. There should be a flat to
> > the outside (right side of radio viewed from front) and one to the
> > bottom. This is the correct alignment.
> >
>
>
>

[Non-text portions of this message have been removed]

29771. TS-830s bandswitch wafers.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-12 23:51:46 UTC
From: Chris Parnell
Topic: 29771 Message: 29771

Hi all,

Anyone got any of the bandswitch wafers available to buy?
Need S1-1

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

29772. Re: [TS-520_820_530_830] TS-830s bandswitch wafers.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-13 00:09:08 UTC
From: n6wk@n6wk.com
Topic: 29771 Message: 29772

Hi Chris,
Yes, I have what you need.
S1-1 all you need? If you need anything else, it would be easy to add it
to the package :-)

73,
Gordon

On 2/12/2011 3:51 PM, Chris Parnell wrote:
>
> Hi all,
>
> Anyone got any of the bandswitch wafers available to buy?
> Need S1-1
>
> Thanks
> Chris, ZL1CDP
>
> [Non-text portions of this message have been removed]
>
>

29773. Re: [TS-520_820_530_830] TS-830s bandswitch wafers.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-13 00:49:13 UTC
From: Chris Parnell
Topic: 29771 Message: 29773

Great. Thanks Gordon. Will get in touch off the reflector.

Cheers
Chris

Sent from my iPhone

On 13/02/2011, at 1:09 PM, n6wk@... wrote:

> Hi Chris,
> Yes, I have what you need.
> S1-1 all you need? If you need anything else, it would be easy to add it
> to the package :-)
>
> 73,
> Gordon
>
>
> On 2/12/2011 3:51 PM, Chris Parnell wrote:
>>
>> Hi all,
>>
>> Anyone got any of the bandswitch wafers available to buy?
>> Need S1-1
>>
>> Thanks
>> Chris, ZL1CDP
>>
>> [Non-text portions of this message have been removed]
>>
>>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

29774. Question About 520S Crystals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-13 19:29:44 UTC
From: kd8hmo
Topic: 29774 Message: 29774

I saw a post about crystals from International Crystal earlier. Can they still supply the crystal style needed for fixed freq operation on my 520S? The 520S has a 4 position switch for this. I dont want to miss the K1MAN broadcasts LOL

29775. Re: [TS-520_820_530_830] Question About 520S Crystals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-13 20:58:25 UTC
From: Joseph Stiles
Topic: 29774 Message: 29775

kd8hmo,

International Crystal Manufacturing can supply/make just about any crystal you may want/need. They made some new crystals for me to fix a CB HACK in 2 820S's. Service is excellent and prices very fair. Look to spend about $20.00(USD) per...if it is a special order. Take a look at their catalog on-line.....

73's joe wb7uqu

From: kd8hmo <delta5_oh@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 13, 2011 11:29:44 AM
Subject: [TS-520_820_530_830] Question About 520S Crystals

I saw a post about crystals from International Crystal earlier. Can they still supply the crystal style needed for fixed freq operation on my 520S? The 520S has a 4 position switch for this. I dont want to miss the K1MAN broadcasts LOL

Now that's room service! Choose from over 150,000 hotels
in 45,000 destinations on Yahoo! Travel to find your fit.
http://farechase.yahoo.com/promo-generic-14795097

[Non-text portions of this message have been removed]

29776. ts-830 af board issue??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 03:47:28 UTC
From: tramic9z
Topic: 29776 Message: 29776

i have a ts-830 that has 3/4 scale reading on s meter in receive mode with rf gain set for maximum sensitivity. the rig receives signals however they are impacted by this. i have checked the voltages on the af board and all ok. adjusting the 3.6 volts toward a higher voltage impacts the receive signal strength and lowers the s meter reading. any help greatly appreciated.

29777. Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 08:58:55 UTC
From: dek7nrt
Topic: 29777 Message: 29777

Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...

Thanks, Nick k7nrt

29778. Re: ts-830 af board issue??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 14:15:53 UTC
From: w5rkl
Topic: 29776 Message: 29778

Do not make any adjustments to the AF Unit voltages that results in higher or lower voltage levels that are not consistent with the voltage levels indicated on page 33, step 1, in the 830 service manual!

If the voltages on the AF Unit are adjusted to the levels shown in step one on page 33 of the 830 service manual and your problem still exist, the problem is not in the AF Unit power supplies.

VR3 on the AF Unit board, with the RF gain control set fully CW and the 830 in receive, sets the receiver's 3.6VDC receive operating bias levels that controls the gain of RF Unit receiver RF amplifier Q1 and IF Unit IF amplifiers Q4 and Q8. It also sets the collector voltages for AGC amplifier Q10 and S meter amplifier Q11. By improperly adjusting VR3 on the AF Unit, causing an increase in voltage above 3.6VDC, you are affecting these amplifiers in a "negative" way and adding more problems than you already have.

The S meter responds to changes in AGC voltage changes based on the strength of the incoming signal. It also responds to the setting of the RF Gain control which varies the operating bias voltage to the amplifiers indicated above.

The voltage at IF Unit plug 15 pin 3 should be approximately 2.9VDC with the RF gain set fully CW and no signal received. Check for -6VDC at IF Unit plug 3 pin 1.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "tramic9z" <aa9z@...> wrote:
>
> i have a ts-830 that has 3/4 scale reading on s meter in receive mode with rf gain set for maximum sensitivity. the rig receives signals however they are impacted by this. i have checked the voltages on the af board and all ok. adjusting the 3.6 volts toward a higher voltage impacts the receive signal strength and lowers the s meter reading. any help greatly appreciated.
>

29779. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 15:14:01 UTC
From: mathprof53575
Topic: 29777 Message: 29779

None of these "boat anchors" has a built-in keyer. I have nothing against MFJ but there are lots of keyer kits out there, some very cheap like http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the MFJ kits, you'd have to provide some kind of a case.
Bob Wilson
WA9D

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...
>
> Thanks, Nick k7nrt
>

29780. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 15:37:06 UTC
From: Ruben Echevarria KA2HHB
Topic: 29777 Message: 29780

As far as I know MFJ sells complete assembled units, no kits.
I have a bunch of MFJ pieces and use them just about everyday with no problems.

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: mathprof53575
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 14, 2011 10:14 AM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

None of these "boat anchors" has a built-in keyer. I have nothing against MFJ but there are lots of keyer kits out there, some very cheap like http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the MFJ kits, you'd have to provide some kind of a case.
Bob Wilson
WA9D

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...
>
> Thanks, Nick k7nrt
>

[Non-text portions of this message have been removed]

29781. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 16:54:30 UTC
From: w5rkl
Topic: 29777 Message: 29781

Nick,

Since you didn't specify this, I have a question or two.

Are you just starting out, learning the code? If so then I have a few suggestions.

Do you have any experience sending and receiving code?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...
>
> Thanks, Nick k7nrt
>

29782. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 17:28:40 UTC
From: Chris and Alex
Topic: 29777 Message: 29782

You'll need a keyer interface as the voltage on the key cct of the hybrids
is too high for most keyers. There's a good but simple circuit in the files
on the site. Works a treat for me.
Chris SV0XBQ/9

On 14 February 2011 17:14, mathprof53575 <wilson@...> wrote:

>
>
>
>
> None of these "boat anchors" has a built-in keyer. I have nothing against
> MFJ but there are lots of keyer kits out there, some very cheap like
> http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
> MFJ kits, you'd have to provide some kind of a case.
> Bob Wilson
> WA9D
>
> --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
> >
> > Recently acquired a TS-530s and I would like to know if I can use a
> bencher paddle directly hooked up to the radio, or do I need an electronic
> keyer like an MFJ...
> >
> > Thanks, Nick k7nrt
> >
>
>
>

[Non-text portions of this message have been removed]

29783. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 18:48:49 UTC
From: w5rkl
Topic: 29777 Message: 29783

Hi Chris,

I'm sorry but that is not true.

The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris and Alex <alexandchrisp@...> wrote:
>
> You'll need a keyer interface as the voltage on the key cct of the hybrids
> is too high for most keyers. There's a good but simple circuit in the files
> on the site. Works a treat for me.
> Chris SV0XBQ/9
>
> On 14 February 2011 17:14, mathprof53575 <wilson@...> wrote:
>
> > >
> > >
> > >
> > >
> > > None of these "boat anchors" has a built-in keyer. I have nothing against
> > > MFJ but there are lots of keyer kits out there, some very cheap like
> > > http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
> > > MFJ kits, you'd have to provide some kind of a case.
> > > Bob Wilson
> > > WA9D
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > >
> > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > bencher paddle directly hooked up to the radio, or do I need an electronic
> > > keyer like an MFJ...
> > > >
> > > > Thanks, Nick k7nrt
> > > >
> > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >

29784. Leapin Lizards

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 18:19:12 UTC
From: kf0xo_1
Topic: 29784 Message: 29784

It's funny what you run across when you work on radio equipment. I have been a licensed ham since 1974 and have built or repaired a bunch of radios and related equipment over the years but in all that time and in all those radios I have never found anything like I found last weekend while working on a Kenwood 830-S Transceiver. I just acquired this radio from a friend of mine who was a missionary in Honduras. The VFO was catching about every turn at the top of the travel. I decided to remove the VFO to see if I had some dirt or something in the gears. I removed the knob after I got the unit out and found that it was just pressed on to tight. I readjusted the knob and it took care of the catching problem. When reassembling the radio I looked down and saw something that looked like the top of a broken pilot lamp bulb. I just let it set there and continued to put the rig back together and when I tipped it on it's side something that looked like a big bug fell out. After closer inspection I determined that it was a gecko it was about 3/4" long. What looked like the pilot lamp was it's egg shell.
I guess that goes to show you That not every radio problem is a bug...Some times it's a lizard.
Hope you enjoyed this.
73
Norb KF0XO

29785. RE: [TS-520_820_530_830] Leapin Lizards

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 19:14:55 UTC
From: Greg Anders
Topic: 29784 Message: 29785

Better call Geico for radio insurance.

Greg

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of kf0xo_1
Sent: Monday, February 14, 2011 10:19 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Leapin Lizards

It's funny what you run across when you work on radio equipment. I have been a licensed ham since 1974 and have built or repaired a bunch of radios and related equipment over the years but in all that time and in all those radios I have never found anything like I found last weekend while working on a Kenwood 830-S Transceiver. I just acquired this radio from a friend of mine who was a missionary in Honduras. The VFO was catching about every turn at the top of the travel. I decided to remove the VFO to see if I had some dirt or something in the gears. I removed the knob after I got the unit out and found that it was just pressed on to tight. I readjusted the knob and it took care of the catching problem. When reassembling the radio I looked down and saw something that looked like the top of a broken pilot lamp bulb. I just let it set there and continued to put the rig back together and when I tipped it on it's side something that looked like a big bug fell out. After closer inspection I determined that it was a gecko it was about 3/4" long. What looked like the pilot lamp was it's egg shell.
I guess that goes to show you That not every radio problem is a bug...Some times it's a lizard.
Hope you enjoyed this.
73
Norb KF0XO

[Non-text portions of this message have been removed]

29786. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 19:20:49 UTC
From: lajes67
Topic: 29777 Message: 29786

For quite a few years I used a logickeyer:
http://www.idiompress.com/

I used it for contests and regular use with no problem, I used a Brown Brothers BTL-A paddle with it.
73 John K2IZ

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...
>
> Thanks, Nick k7nrt
>

29787. Re: [TS-520_820_530_830] Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 19:34:17 UTC
From: John Davidson
Topic: 29777 Message: 29787

My choice is a simple straight key.
A bencher paddle can be used on one side as a sideways straight key with this radio.
(rather awkward to do)

From: dek7nrt <dek7nrt@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 14, 2011 3:58:55 AM
Subject: [TS-520_820_530_830] Sending CW with the TS-530s

Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...

Thanks, Nick k7nrt

TV dinner still cooling?
Check out "Tonight's Picks" on Yahoo! TV.
http://tv.yahoo.com/

[Non-text portions of this message have been removed]

29788. Re: Leapin Lizards

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 19:35:53 UTC
From: Daniel TOESCA
Topic: 29784 Message: 29788

Hi Norb,

This reminds me another story : I once bought a R-599 Rx on Epay from a German fellow. When it came home, I checked it and thereafter made some cleaning job to discover a dead spider in a corner of the chassis. Beside that, the set worked well.

I gave the seller a good feedback, but reported him what I had found in his set.

He replied that he had counted all of his spiders, that all were at home, and that the extra one could no be his.....

Hi hi hi !!!

73 - Daniel, ON5PY

[Non-text portions of this message have been removed]

29789. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 19:49:50 UTC
From: John Davidson
Topic: 29777 Message: 29789

I have built two MFJ Cub kits, 40 and 80 M within the last two years.
They work just fine and I have made contacts all across the continent.
A teriffic deal for $99 each.

From: Ruben Echevarria KA2HHB <ka2hhb_2000@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 14, 2011 10:37:06 AM
Subject: Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

As far as I know MFJ sells complete assembled units, no kits.
I have a bunch of MFJ pieces and use them just about everyday with no problems.

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: mathprof53575
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 14, 2011 10:14 AM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

None of these "boat anchors" has a built-in keyer. I have nothing against MFJ
but there are lots of keyer kits out there, some very cheap like
http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the MFJ
kits, you'd have to provide some kind of a case.
Bob Wilson
WA9D

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher
>paddle directly hooked up to the radio, or do I need an electronic keyer like an
>MFJ...
>
> Thanks, Nick k7nrt
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29790. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 20:49:52 UTC
From: John Davidson
Topic: 29777 Message: 29790

My old MFJ Grandmaster keyer has both + and - outputs on the back.
The + works on my TS440s solid state rig and the - works on my hybrid TS520,
just fine.

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 14, 2011 1:48:49 PM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Hi Chris,

I'm sorry but that is not true.

The grid block keying voltage at the CW key socket is approximately -61VDC which
is well within the maximum CW keying voltage of all CW keyers.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris and Alex <alexandchrisp@...>
wrote:
>
> You'll need a keyer interface as the voltage on the key cct of the hybrids
> is too high for most keyers. There's a good but simple circuit in the files
> on the site. Works a treat for me.
> Chris SV0XBQ/9
>
> On 14 February 2011 17:14, mathprof53575 <wilson@...> wrote:
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> > > None of these "boat anchors" has a built-in keyer. I have nothing against
> > > MFJ but there are lots of keyer kits out there, some very cheap like
> > > http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
> > > MFJ kits, you'd have to provide some kind of a case.
> > > Bob Wilson
> > > WA9D
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > >
> > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > bencher paddle directly hooked up to the radio, or do I need an electronic

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> > >
> > > Thanks, Nick k7nrt
> > >
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>
> [Non-text portions of this message have been removed]
>

Expecting? Get great news right away with email Auto-Check.
Try the Yahoo! Mail Beta.
http://advision.webevents.yahoo.com/mailbeta/newmail_tools.html

[Non-text portions of this message have been removed]

29791. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 21:20:25 UTC
From: Joseph Stiles
Topic: 29777 Message: 29791

Nick,

When you bought the radio from me, you asked about the "straight key" that was connected. Since I had lost(I knew where it was--blown down) my antenna, I had the straight key connected for demonstration purposes. You inquired about a "keyer." I told you that I used a very simple MFR electronic keyer with my "rock-n-roll" keyer...ie rock one way...roll the other...but due to a shoulder/arm injury that has been difficult to use. Other than using the straight key then and on "straight key night," I have used the electronic keyer and "paddle." Hope the rig is working for you!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 14, 2011 8:54:30 AM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Nick,

Since you didn't specify this, I have a question or two.

Are you just starting out, learning the code? If so then I have a few suggestions.

Do you have any experience sending and receiving code?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> Recently acquired a TS-530s and I would like to know if I can use a bencher
>paddle directly hooked up to the radio, or do I need an electronic keyer like
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>
> Thanks, Nick k7nrt
>

[Non-text portions of this message have been removed]

29792. Kenwood / Japanese Sig Gen settings / readings

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-14 21:23:37 UTC
From: Chris Parnell
Topic: 29792 Message: 29792

Hi all,

Just a quick question☐.

Some time back I remember reading on a website, an excerpt from one of the the Kenwood service manuals (may have been the TS-430s or something like that)☐ that showed their dB service manual ratings against the western testing measurements (dBm or uV, can't quite remember)☐.

Does anyone know where I can find this info please? I have a sig gen that will generate an RF signal in terms of either dBm or uV☐.. Not dB as asked for in the service manuals of the TS-830s.

Thanks in anticipation.

Chris, ZL1CDP

[Non-text portions of this message have been removed]

29793. Re: [TS-520_820_530_830] Kenwood / Japanese Sig Gen settings / readings

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-15 00:02:18 UTC
From: Dennis Windle
Topic: 29792 Message: 29793

Take a look at the Kenwood R-1000 service manual on the page labled "LEVEL DIAGRAM" which has a conversion chart of the Japanese SG to American SG readings.
KD8OXQ
Dennis
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 14, 2011 4:23 PM
Subject: [TS-520_820_530_830] Kenwood / Japanese Sig Gen settings / readings

Hi all,

Just a quick questionS.

Some time back I remember reading on a website, an excerpt from one of the the Kenwood service manuals (may have been the TS-430s or something like that)S that showed their dB service manual ratings against the western testing measurements (dBm or uV, can't quite remember)S.

Does anyone know where I can find this info please? I have a sig gen that will generate an RF signal in terms of either dBm or uVS.. Not dB as asked for in the service manuals of the TS-830s.

Thanks in anticipation.

Chris, ZL1CDP

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29794. Re: [TS-520_820_530_830] Kenwood / Japanese Sig Gen settings / readings

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-15 00:22:20 UTC
From: Chris Parnell
Topic: 29792 Message: 29794

Perfect Dennis☐ Case now closed.

Thank you,
Chris, ZL1CDP

From: Dennis Windle <denniswindle@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Mon, 14 Feb 2011 19:02:18 -0500
To: <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Kenwood / Japanese Sig Gen settings / readings

Take a look at the Kenwood R-1000 service manual on the page labled "LEVEL DIAGRAM" which has a conversion chart of the Japanese SG to American SG readings.
KD8OXQ
Dennis
----- Original Message -----
From: Chris Parnell
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Monday, February 14, 2011 4:23 PM
Subject: [TS-520_820_530_830] Kenwood / Japanese Sig Gen settings / readings

Hi all,

Just a quick questionS.

Some time back I remember reading on a website, an excerpt from one of the the Kenwood service manuals (may have been the TS-430s or something like that)S that showed their dB service manual ratings against the western testing measurements (dBm or uV, can't quite remember)S.

Does anyone know where I can find this info please? I have a sig gen that will generate an RF signal in terms of either dBm or uVS.. Not dB as asked for in the service manuals of the TS-830s.

Thanks in anticipation.

Chris, ZL1CDP

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29795. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 02:47:19 UTC
From: Ken
Topic: 29777 Message: 29795

I LOVE MY PICO-KEYER !

Enough to use all caps.

;0)

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "mathprof53575" <wilson@...> wrote:
>
>
>
> None of these "boat anchors" has a built-in keyer. I have nothing against MFJ but there are lots of keyer kits out there, some very cheap like http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the MFJ kits, you'd have to provide some kind of a case.
> Bob Wilson
> WA9D
>
> --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> >
> > Recently acquired a TS-530s and I would like to know if I can use a bencher paddle directly hooked up to the radio, or do I need an electronic keyer like an MFJ...
> >
> > Thanks, Nick k7nrt
> >
>

29796. Output Tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 03:20:00 UTC
From: Frank VK5KV
Topic: 29796 Message: 29796

Probably been asked before many times, however I dont feel like searching through 29000+ posts,

Can the 6146W be used in place of a 6146B in a 520S, I think the answer is yes but I'll ask you Kenwood Guru's to be sure....And is Surpluss Sales about the only place that has these left in stock?

thanks in advance

Frank VK5KV..

29797. Complete TS-830s RF Board required.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 08:25:54 UTC
From: Chris Parnell
Topic: 29797 Message: 29797

Must be complete and working.

Thanks
Chris, ZL1CDP

Sent from my iPhone

29798. Re: Output Tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 10:53:33 UTC
From: w5rkl
Topic: 29796 Message: 29798

Frank,

There are 2 versions (dates) of the 6146W

1. 6146W manufactured before 1964 is a replacement for the 6146A.

2. 6146W manufactured after 1964 is a replacement for the 6146B.

Some will say the 6146A and 6146B has "significant differences" in inter-electrode capacitance and the "A" should not be used in place of the "B". However, when comparing the differences in inter-electrode capacitance, the ONLY difference between the "A" and the "B" is the "Grid #1 to Plate" capacitance

6146A - .22pf
6146B - .24pf

Difference = .02pf

All of the other inter-electrode capacitance values in the 6146A and the 6146B are the same.

A difference of ".02pf", in my opinion, when operating in the tubes in the HF frequency spectrum, is not a "significant difference" in inter-electrode capacitance between the 6146A and the 6146B.

Maximum plate dissipation CSS rating

6146A - 20 watts
6146B - 27 watts

Maximum plate dissipation ICAS rating
6146A - 25 watts
6146B - 35 watts

The different maximum plate dissipation between the "A" and the "B" is due to a heavier plate in the "B".

Legend:
CCS = "Continuous Commercial Service"
ICAS = "Intermittent Commercial Amateur Service"

It is, however, widely accepted "not" to mix 6146A and 6146B tubes. This means you should not use 1 6146A and 1 6146B. The tubes should be in pairs, 2 x 6146A or 2 x 6146B.

You will have to neutralize the final amplifier regardless of the tube version you use.

I am aware of, and have read, Glen Zook's (K9STH) article titled, "The 6146 Family of Tubes", in the files section of this group.

You can review, for your own satisfaction or peace of mind, the specifications for both 6146 versions by entering "6146A specifications" or "6146B specifications" search phrase in your favorite search engine.

It is entirely up to you which version of 6146 you use. I can only provide the specification (inter-electrode capacitance) differences as I see them.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Frank VK5KV" <frankwoolfe@...> wrote:
>
> Probably been asked before many times, however I dont feel like searching through 29000+ posts,
>
> Can the 6146W be used in place of a 6146B in a 520S, I think the answer is yes but I'll ask you Kenwood Guru's to be sure....And is Surpluss Sales about the only place that has these left in stock?
>
> thanks in advance
>
> Frank VK5KV..
>

29799. Re: Complete TS-830s RF Board required.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 10:54:34 UTC
From: w5rkl
Topic: 29797 Message: 29799

Contact Bob Mansker, ke5ftf at mail.com for details.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Must be complete and working.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>

29800. Re: Output Tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 11:30:26 UTC
From: w5rkl
Topic: 29796 Message: 29800

I forgot to answer your question referring to vendors that sell the 6146W.

RF Parts (rfparts.com)
Surplus Sales (surplussales.com)
Vacuum Tubes (vacuumtubes.net)
The Tube Store (thetubestore.com)
The Tube Depot (tubedepot.com)

Radio Daze (radiodaze.com) no longer sells vacuum tubes. They sold their entire vacuum tube inventory to "Vacuum Tubes" (vacuumtubes.com).

There may be others but the list above are a few that I am aware of.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Frank VK5KV" <frankwoolfe@...> wrote:
>
> Probably been asked before many times, however I dont feel like searching through 29000+ posts,
>
> Can the 6146W be used in place of a 6146B in a 520S, I think the answer is yes but I'll ask you Kenwood Guru's to be sure....And is Surpluss Sales about the only place that has these left in stock?
>
> thanks in advance
>
> Frank VK5KV..
>

29801. replacement for damaged knob

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 12:18:45 UTC
From: Rick
Topic: 29801 Message: 29801

The "Drive" knob on my beloved TS 530SP is damaged and I would like to replace it. I believe it is the same as the "load, RIT/XIT, IF Shift, Notch, and Mic Gain," knobs on my radio. I have Googled unsuccessfully trying to find a supplier. Does anyone know where I could buy one or more of these knobs?

Rick KF7JFU

29802. Re: replacement for damaged knob

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 16:58:14 UTC
From: w5rkl
Topic: 29801 Message: 29802

Write Bob Mansker, ke5ftf at mail.com, he may have one.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Rick" <rick@...> wrote:
>
> The "Drive" knob on my beloved TS 530SP is damaged and I would like to replace it. I believe it is the same as the "load, RIT/XIT, IF Shift, Notch, and Mic Gain," knobs on my radio. I have Googled unsuccessfully trying to find a supplier. Does anyone know where I could buy one or more of these knobs?
>
> Rick KF7JFU
>

29803. need speaker grill

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 17:34:41 UTC
From: yash@aol.com
Topic: 29803 Message: 29803

Have a sp-230 speaker that got its grill smashed in during transit. case and controls ok, need grill or would consider another complete speaker or ???
thanks
dale wt4t

[Non-text portions of this message have been removed]

29804. Re: replacement for damaged knob

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 21:15:49 UTC
From: james27613
Topic: 29801 Message: 29804

Hi,

Bob filled my parts order fast! Good to deal with.

73 james ke4drn

> Write Bob Mansker, ke5ftf at mail.com, he may have one.
>
> 73s
> Mike
> W5RKL

29805. Re: Output Tubes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 21:18:02 UTC
From: james27613
Topic: 29796 Message: 29805

Hi,

Surplus Sales has NOS Circa 1985
GE USA Made finals in B and W
plus the driver tube 12BY7A.

I have used the 6146W in both of my 520 and 530.

Some of the other sellers have tubes imported from China.

73 james ke4drn

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I forgot to answer your question referring to vendors that sell the 6146W.
>
> RF Parts (rfparts.com)
> Surplus Sales (surplussales.com)
> Vacuum Tubes (vacuumtubes.net)
> The Tube Store (thetubestore.com)
> The Tube Depot (tubedepot.com)
>
> Radio Daze (radiodaze.com) no longer sells vacuum tubes. They sold their entire vacuum tube inventory to "Vacuum Tubes" (vacuumtubes.com).
>
> There may be others but the list above are a few that I am aware of.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Frank VK5KV" <frankwoolfe@> wrote:
> >
> > Probably been asked before many times, however I dont feel like searching through 29000+ posts,
> >
> > Can the 6146W be used in place of a 6146B in a 520S, I think the answer is yes but I'll ask you Kenwood Guru's to be sure....And is Surpluss Sales about the only place that has these left in stock?
> >
> > thanks in advance
> >
> > Frank VK5KV..
> >
>

29806. DS-1A DC-DC Converter FS

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 21:52:00 UTC
From: jsloss
Topic: 29806 Message: 29806

Exc. condx. For TS-520, 520S, & 820S. $57 including USPS. Can send photos. Pls reply direct.
Joe k7mks

[Non-text portions of this message have been removed]

29807. Fwd: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 23:15:32 UTC
From: w9aba@aim.com
Topic: 29807 Message: 29807

-----Original Message-----
From: w9aba <w9aba@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, Feb 16, 2011 5:10 pm
Subject: ts-830s

HI I HAVE A KENWOOD TS-830S THAT HAVEING SOME PROBLEMS WITH EVERY TIME I GO TO TURN IT ON I DON'T GET ANYTHING THE RADIO TURN ON ..OK BUT NO SOUND COMES FROM THE RADIO AFTER ABOUT 15MIN
I GET SOUND ITS JUST LIKE SOMETHING IS STICKING MAYBE A RELAY OR SOMETHING CAN SOMEONE HELP ME ON THIS

THANK YOU

Ed w9aba

[Non-text portions of this message have been removed]

29808. Re: Fwd: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-16 23:58:54 UTC
From: w5rkl
Topic: 29807 Message: 29808

Hi Ed,

If you have access to an o'scope, connect the o'scope to the AF Unit plug 1 pin 2 (DET). Tune in a signal off the air, watch the S meter for an increase or fluctuation etc. If there is nothing indicated on the o'scope then there's no detector recovered audio from the IF Unit.

Do this before you turn the 830 on. You want the problem to be occurring when you watch the o'scope.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
>
>
>
>
>
>
>
>
>
> -----Original Message-----
> From: w9aba <w9aba@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Wed, Feb 16, 2011 5:10 pm
> Subject: ts-830s
>
>
>
>
> HI I HAVE A KENWOOD TS-830S THAT HAVEING SOME PROBLEMS WITH EVERY TIME I GO TO TURN IT ON
> I DON'T GET ANYTHING THE RADIO TURN ON ..OK BUT NO SOUND COMES FROM THE RADIO AFTER ABOUT 15MIN
> I GET SOUND ITS JUST LIKE SOMETHING IS STICKING MAYBE A RELAY OR SOMETHING CAN SOMEONE HELP ME ON THIS
>
>
> THANK YOU
>
> Ed w9aba
>

>
>
>
>
> [Non-text portions of this message have been removed]
>

29809. warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 02:29:41 UTC
From: w9aba@aim.com
Topic: 29809 Message: 29809

HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT CAN'T
TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE
ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
AND IS THAT ALL YOU HAVE TO DO

THANK YOU

ED W9ABA

[Non-text portions of this message have been removed]

29810. Re: [TS-520_820_530_830] warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 04:05:40 UTC
From: Joseph Stiles
Topic: 29809 Message: 29810

Ed,

I will try and get a pic up-loaded tomorrow..but in the mean time..the "WARC MOD" has nothing to do with 10m, just 12, 17 & 30meters. You will have to removed the top and bottom covers..be careful of the speaker lead. Turn rig upside down with front facing you. Look on the left side, front for the AF-AVR board #X49-1140-00...really can't miss it. You are looking for CONNECTOR 6..you should be able to see a 6 next to the connector. That area is kind of crowded..so take your time and use some bright light and a magnifier if needed. Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of slack...then cut. Go to N6WK web site, download a High-resolution manual.....good luck....oh.....you may also have to "tweak" up the antenna, mix, and drive coils..

73's joe wb7uqu

From: "w9aba@..." <w9aba@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Wed, February 16, 2011 6:29:41 PM
Subject: [TS-520_820_530_830] warc bands

HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT CAN'T

TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE AND IS THAT ALL YOU HAVE TO DO

THANK YOU

ED W9ABA

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29811. Heathkit SB-610 or SB-614

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 04:06:23 UTC
From: ae5uu
Topic: 29811 Message: 29811

Does anyone have experience using either a Heathkit SB-610 or a SB-614 with a TS-820 radio? If so, I would appreciate knowing which Heathkit is the more compatible model. Are they compatible at all? Are different crystals required in these Heathkits?

I have looked through these posts and have not found this issue addressed clearly. Thank you.

73,
Russell Nilson
ae5uu

29812. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 04:39:20 UTC
From: w5rkl
Topic: 29809 Message: 29812

Just because the 830 doesn't transmit on those bands, and as been stated before, 10 meters is not a WARC band, does not mean the WARC bands have not already been enabled. There may be something else that is causing this problem. Therefore, before you cut any wires, you should check the 830 to see if the WARC bands have already been enabled. The possibility your 830 WARC bands have not been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830 operator's manual, page 27 section 6.5, but, again, do not cut any wires before you check the WARC band enabling steps in the 830 operators manual.

If the WARC bands have already been enabled, further steps will have to be taken to track down the source of your problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Ed,
>
> I will try and get a pic up-loaded tomorrow..but in the mean time..the "WARC
> MOD" has nothing to do with 10m, just 12, 17 & 30meters. You will have to
> removed the top and bottom covers..be careful of the speaker lead. Turn rig
> upside down with front facing you. Look on the left side, front for the AF-AVR
> board #X49-1140-00...really can't miss it. You are looking for CONNECTOR 6..you
> should be able to see a 6 next to the connector. That area is kind of
> crowded..so take your time and use some bright light and a magnifier if needed.
> Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of
> slack...then cut. Go to N6WK web site, download a High-resolution
> manual.....good luck....oh.....you may also have to "tweak" up
> the antenna, mix, and drive coils..
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: "w9aba@..." <w9aba@...>
> To: ts-520_820_530_830@yahoogroups.com
> Sent: Wed, February 16, 2011 6:29:41 PM
> Subject: [TS-520_820_530_830] warc bands
>
>
>
>

>
> HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT
> CAN'T
>
> TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE
> ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
> DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
> AND IS THAT ALL YOU HAVE TO DO
>
> THANK YOU
>
> ED W9ABA
>
> [Non-text portions of this message have been removed]
>
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>
>
>
> [Non-text portions of this message have been removed]
>

29813. Re: Heathkit SB-610 or SB-614

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 05:08:34 UTC
From: w5rkl
Topic: 29811 Message: 29813

The SB-610 and SB-614 are both RF monitoring scopes that, when connected between the exciter (TS-820) RF output and the antenna, displays the transmit RF envelope of the exciter (TS-820).

While the SB-610 can display limited IF signals from the transceiver, it will not display the type of information the SB-620 does. The SB-610 must have the correct IF transformer installed in order to display the TS-820 8Mhz IF signal.

The SB-614, to the best of my knowledge, does not have the ability to display the IF signal. I could be wrong but I believe it's simply a transmit RF signal monitor and very basic limited bandwidth o'scope.

If you are looking to monitor signals either side of your operating frequency like a Spectrum Analyzer in modern transceivers, the better scope is the SB-620. I wouldn't count on the SB-620 to display signals as well as the modern day Spectrum Analyzers do.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Does anyone have experience using either a Heathkit SB-610 or a SB-614 with a TS-820 radio? If so, I would appreciate knowing which Heathkit is the more compatible model. Are they compatible at all? Are different crystals required in these Heathkits?
>
> I have looked through these posts and have not found this issue addressed clearly. Thank you.
>
> 73,
> Russell Nilson
> ae5uu
>

29814. Heathkit SB-610/614 use with TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 12:05:17 UTC
From: ae5uu
Topic: 29814 Message: 29814

Thank you for your evaluation Mike. I should have also asked your opinion of the Kenwood SM-220 with and/or without the BS-8 Pan Adapter. Once again, I am appreciative of your assistance.

73,
Russell Nilson
ae5uu

29815. Re: Heathkit SB-610/614 use with TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 15:17:51 UTC
From: w5rkl
Topic: 29814 Message: 29815

Hi Russell,

I have an SM-220 but without the BS5 or BS8 Pan Adaptor module installed. There is room for only "1" band scope adaptor in the SM-220. Selecting and installing the band scope (BS) adaptor depends on the receiver or transceiver used. The band scope adaptors are no longer available from Kenwood. They do appear from time to time on eBay either as an individual module or installed in an SM-220.

The BS-5 Pan Adaptor module, when installed in the SM-220, has an IF frequency of 3.395Mhz which makes it compatible with the Kenwood R-599 receiver, TS-511, TS-520, and TS-900 series transceivers. It also is compatible with numerous Heathkit transceivers and receivers such as the SB-300, SB-301 and SB-303 line of ham band receives and the HW-100, HW-101, SB-100, SB-101, and SB-102 line of ham band transceivers all of which have a 3.395Mhz IF frequency.

The BS-8 has an IF frequency of 8.830Mhz which makes it compatible with the TS-530, TS-820, TS-830, TS-120, TS-130, and a number of other line of Kenwood transceivers with 8.8Mhz IF frequencies.

Regardless of the band scope module installed in the SM-220, modifications to the receiver or transceiver will be required to connect the band scope to the receiver or transceiver.

No modifications to the transceiver or transmitter are required if you simply monitor the transmitter or transceiver's RF output.

You can download the SM-220 operators manual at Gordon's website

n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Thank you for your evaluation Mike. I should have also asked your opinion of the Kenwood SM-220 with and/or without the BS-8 Pan Adapter. Once again, I am appreciative of your assistance.
>
> 73,
> Russell Nilson
> ae5uu
>

29816. Re: [TS-520_820_530_830] Re: replacement for damaged knob

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 15:40:24 UTC
From: Steve Bontempo
Topic: 29801 Message: 29816

The last communication that I had with Bob was that he was going to be out of the area until the 14th so depending on how backed up he is he should get back up with you pretty quick and I am certain he has all the knobs you could want because the last time I checked he had about 50 hybrid radios on his shelves just waiting to be parted out.

He also ships very quickly, even if he has been pummeled by a snow storm!

Steve
KU4BY

On Wed, Feb 16, 2011 at 4:15 PM, james27613 <james27613@...>wrote:

>
>
> Hi,
>
> Bob filled my parts order fast! Good to deal with.
>
> 73 james ke4drn
>
>
> > Write Bob Mansker, ke5ftf at mail.com, he may have one.
> >
> > 73s
> > Mike
> > W5RKL
>
>
>

[Non-text portions of this message have been removed]

29817. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 16:10:52 UTC
From: w5rkl
Topic: 29809 Message: 29817

One additional comment. If you use the high resolution TS-830 schematic, D4 is not shown on the schematic. The 830's operators manual says to cut both end of the "TOF" line between the IF and AF unit or clip diodes D4, D5, and D6. If you search for D4 on the high resolution schematic you won't find it. D4 is, however, shown on the 830 RF Unit schematic in the 830 service manual which is directly above D5 on the RF unit schematic.

There was no mention whether receive on the bands in question is working. Therefore, if loss of receive on the bands in question has also occurred, then it's possible wafer switch S1-1 on the RF Unit as a possible suspect.

The RF Unit band switch wafer S1-1 controls the selecting of the individual band's PLL Unit VCO oscillator by applying a voltage (9VDC) to the individual band's VCO oscillator selection diodes. Loss of individual band's VCO oscillator diode select voltage, through switch wafer S1-1, will result in loss of VCO oscillator signal to the RF Unit. When this happens both transmit and receive fail on the bands in question.

I recommend checking RF Unit plugs 1 and 2 and plug 4 on the Counter Unit to ensure they are clean and mounted flush with the RF and Counter Unit boards. I also recommend checking S7 to ensure it's in the correct position and plug 5 on the Counter Unit to ensure it is clean and mounted flush with the Counter Unit board. In addition, check plug 3 on the Counter Unit is clean and flush with the Counter Unit board and plug 1 on the PLL Unit is also clean and flush with the PLL Unit board. Also clean the bandswitch wafers, including switch wafer S1-1, using contact cleaner. Use only enough to do the job. Rotate the bandswitch fully CCW and CW a number of times. The use canned air to remove any/all contact cleaner residue. Wait a few minutes (see warnings on the contact cleaner can) then test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Just because the 830 doesn't transmit on those bands, and as been stated before, 10 meters is not a WARC band, does not mean the WARC bands have not already been enabled. There may be something else that is causing this problem. Therefore, before you cut any wires, you should check the 830 to see if the WARC bands have already been enabled. The possibility your 830 WARC bands have not been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830 operator's manual, page 27 section 6.5, but, again, do not cut any wires before you check the WARC band enabling steps in the 830 operators manual.
>
> If the WARC bands have already been enabled, further steps will have to be taken to track down the source of your problem.
>
> 73s
> Mike

> W5RKL
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Ed,
> >
> > I will try and get a pic up-loaded tomorrow..but in the mean time..the "WARC
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> > upside down with front facing you. Look on the left side, front for the AF-AVR
> > board #X49-1140-00...really can't miss it. You are looking for CONNECTOR 6..you
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> > Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of
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> > manual.....good luck....oh.....you may also have to "tweak" up
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> > 73's joe wb7uqu
> >
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> >
> > _____
> > From: "w9aba@" <w9aba@>
> > To: ts-520_820_530_830@yahoogroups.com
> > Sent: Wed, February 16, 2011 6:29:41 PM
> > Subject: [TS-520_820_530_830] warc bands
> >
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> >
> > HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT
> > CAN'T
> >
> > TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE
> > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
> > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
> > AND IS THAT ALL YOU HAVE TO DO
> >
> > THANK YOU
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> > ED W9ABA
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29818. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 16:32:09 UTC
From: w5rkl
Topic: 29809 Message: 29818

Switch "S7" I mentioned is the front panel ".5" push button switch. Make sure it is in the correct "pressed" or "not pressed" position for the selected 10 meter band. See the 830 operators manual for details on how to use this switch.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> One additional comment. If you use the high resolution TS-830 schematic, D4 is not shown on the schematic. The 830's operators manual says to cut both end of the "TOF" line between the IF and AF unit or clip diodes D4, D5, and D6. If you search for D4 on the high resolution schematic you won't find it. D4 is, however, shown on the 830 RF Unit schematic in the 830 service manual which is directly above D5 on the RF unit schematic.
>
> There was no mention whether receive on the bands in question is working. Therefore, if loss of receive on the bands in question has also occurred, then it's possible wafer switch S1-1 on the RF Unit as a possible suspect.
>
> The RF Unit band switch wafer S1-1 controls the selecting of the individual band's PLL Unit VCO oscillator by applying a voltage (9VDC) to the individual band's VCO oscillator selection diodes. Loss of individual band's VCO oscillator diode select voltage, through switch wafer S1-1, will result in loss of VCO oscillator signal to the RF Unit. When this happens both transmit and receive fail on the bands in question.
>
> I recommend checking RF Unit plugs 1 and 2 and plug 4 on the Counter Unit to ensure they are clean and mounted flush with the RF and Counter Unit boards. I also recommend checking S7 to ensure it's in the correct position and plug 5 on the Counter Unit to ensure it is clean and mounted flush with the Counter Unit board. In addition, check plug 3 on the Counter Unit is clean and flush with the Counter Unit board and plug 1 on the PLL Unit is also clean and flush with the PLL Unit board. Also clean the bandswitch wafers, including switch wafer S1-1, using contact cleaner. Use only enough to do the job. Rotate the bandswitch fully CCW and CW a number of times. The use canned air to remove any/all contact cleaner residue. Wait a few minutes (see warnings on the contact cleaner can) then test for proper operation.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>

> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Just because the 830 doesn't transmit on those bands, and as been stated before, 10 meters is not a WARC band, does not mean the WARC bands have not already been enabled. There may be something else that is causing this problem. Therefore, before you cut any wires, you should check the 830 to see if the WARC bands have already been enabled. The possibility your 830 WARC bands have not been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830 operator's manual, page 27 section 6.5, but, again, do not cut any wires before you check the WARC band enabling steps in the 830 operators manual.
> >
> > If the WARC bands have already been enabled, further steps will have to be taken to track down the source of your problem.
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> > 73s
> > Mike
> > W5RKL
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> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
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> > > To: ts-520_820_530_830@yahoogroups.com
> > > Sent: Wed, February 16, 2011 6:29:41 PM
> > > Subject: [TS-520_820_530_830] warc bands
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29819. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 14:16:52 UTC
From: cszathma@comcast.net
Topic: 29809 Message: 29819

Hi All

I'm new to the list and have a question. I'm about to do the same thing to my 530S and have this question. I have read the up grade in the manual and it sounds like cutting this one blue wire will enable all of the WARC bands is this what happens? I also read that by cutting two diodes, D5&D6, out that it will also enable the WARC bands, but only 12 & 17 meters. After this is done the drive will have to be set on the two enabled bands.

Carl Szathmary
cszathma @comcast.net
Burlington Lodge #32 F&AM
WB2DGJ NAQCC #3807

----- Original Message -----
From: "w5rkl" <w5rkl@...>
To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
Sent: Wednesday, February 16, 2011 11:39:20 PM
Subject: [TS-520_820_530_830] Re: warc bands

Just because the 830 doesn't transmit on those bands, and as been stated before, 10 meters is not a WARC band, does not mean the WARC bands have not already been enabled. There may be something else that is causing this problem. Therefore, before you cut any wires, you should check the 830 to see if the WARC bands have already been enabled. The possibility your 830 WARC bands have not been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830 operator's manual, page 27 section 6.5, but, again, do not cut any wires before you check the WARC band enabling steps in the 830 operators manual.

If the WARC bands have already been enabled, further steps will have to be taken to track down the source of your problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@ yahoogroups .com , Joseph Stiles < stilesjoseph @...> wrote:
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> To: ts-520_820_530_830@ yahoogroups .com
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29820. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 16:55:54 UTC
From: n6wk_skcc3
Topic: 29809 Message: 29820

Carl,
I uploaded a file that shows exactly which wire to cut on the TS-830/530 to enable the WARC bands it if in the files section here.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, cszathma@... wrote:
>
>
>
> Hi All
>
> I'm new to the list and have a question.Â I'm about to do the same thing to my 530S and haveÂ this question.Â I have read the up grade in the manual and it sounds like cutting this one blue wire will enable all of the WARC bands is this what happens?Â I also read that by cutting two diodes,Â D5&D6, Â out that it will also enable the WARC bands, but only 12 & 17 meters.Â After this is done the drive will have to be set on the two enabled bands.Â
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Wednesday, February 16, 2011 11:39:20 PM
> Subject: [TS-520_820_530_830] Re: warc Â bands
>
> Â
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29821. Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 18:57:52 UTC
From: Tom
Topic: 29752 Message: 29821

Howdy Guys,

Thanks for the info on the 820s. After some tinkering, looks like the transformer may be the culprate.

If I thought it was a cheap/easy fix, I would be interested in working on it. I would love the have the old rig in my shack. But, looks like it ain't and I already have too many projects.

I live near Okla City and have a daughter living in Dallas. Anyone in my area that might be interested in a TS-820s, in need of some work or for parts, can contact me and maybe we can figger out some kind of swap. I would be happy to meet you somewhere along the way or in my immediate area and turn it over to you.

Email me at ac5jh@...

Tom AC5JH

29822. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 20:28:54 UTC
From: w5rkl
Topic: 29809 Message: 29822

I would have thought most, if not all, hybrids, TS-530 and TS-830, have their WARC bands already enabled by now. However, I would at least check, using Gordon's picture and the operator's manual as a guide, to determine if the WARC bands have already been enabled. If they have already been enabled then there's no need to cut any wires.

It sure is nice outside today, partly sunny and 75. All the snow is long gone. Suppose to stay like this until at least next week. It could stay like this all summer long!! Reminds me of Germany during the spring and early summer, nice with medium temperatures. Great for sitting on the back patio enjoying the squirrels and birds eating at the bird feeders. We have one old brown squirrel, he's big and fat, who has been around for the past 3 or 4 years and he loves to hang from one of the feeders and chow down. When it snows the big black birds come by the dozens to feed. So many the smaller Cardinals and other birds don't have a chance. The dogs chase the black birds away so the smaller birds can have a nibble or two.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, cszathma@... wrote:
>
>
>
> Hi All
>
> I'm new to the list and have a question.Â I'm about to do the same thing to my 530S and haveÂ this question.Â I have read the up grade in the manual and it sounds like cutting this one blue wire will enable all of the WARC bands is this what happens?Â I also read that by cutting two diodes,Â D5&D6, Â out that it will also enable the WARC bands, but only 12 & 17 meters.Â After this is done the drive will have to be set on the two enabled bands.Â
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Wednesday, February 16, 2011 11:39:20 PM
> Subject: [TS-520_820_530_830] Re: warc Â bands
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> Just because the 830 doesn't transmit on those bands, and as been stated before, 10 meters is not a WARC band, does not mean the WARC bands have not already been enabled. There may be something else that is causing this problem. Therefore, before you cut any wires, you should check the 830 to see if the WARC bands have already been enabled. The possibility your 830 WARC bands have not been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830 operator's manual, page 27 section 6.5, but, again, do not cut any wires before you check the WARC band enabling steps in the 830 operators manual.
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29823. Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 20:40:59 UTC
From: w5rkl
Topic: 29752 Message: 29823

Tom,

Have you measured the resistance of both primary windings? It should be low resistance across each individual primary winding, somewhere around 8 ohms or so. If you have completely disconnected the transformer from the Rectifier Unit and dial lamps and and heater etc then when power is applied to the primaries the fuse blows, then you are probably right, the transformer is bad. It could be any one of the windings that's shorted, whether between the windings themselves or between separate windings. An ohm meter connected between separate windings will give you an idea where the short may be.

What are you looking for a trade?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <ac5jh@...> wrote:
>
>
>
> Howdy Guys,
>
> Thanks for the info on the 820s. After some tinkering, looks like the transformer may be the culprate.
>
> If I thought it was a cheap/easy fix, I would be interested in working on it. I would love the have the old rig in my shack. But, looks like it ain't and I already have too many projects.
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> I live near Okla City and have a daughter living in Dallas. Anyone in my area that might be interested in a TS-820s, in need of some work or for parts, can contact me and maybe we can figger out some kind of swap. I would be happy to meet you somewhere along the way or in my immediate area and turn it over to you.
>
> Email me at ac5jh@...
>
> Tom AC5JH
>

29824. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 20:45:46 UTC
From: Tracy Ringering
Topic: 29809 Message: 29824

Awesome! Thanks so much, Gordon. I too wondered about the diodes. Cutting one wire is certainly simpler.

Tracy Ringering, N7FPI
TS-530S & TL-922
Icom IC-725
Swan 1200X
Hallifcrafters S-20R

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, February 17, 2011 8:55:54 AM
Subject: [TS-520_820_530_830] Re: warc bands

Carl,
I uploaded a file that shows exactly which wire to cut on the TS-830/530 to enable the WARC bands it if in the files section here.

73,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, cszathma@... wrote:
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> Hi All
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> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Wednesday, February 16, 2011 11:39:20 PM

> Subject: [TS-520_820_530_830] Re: warc Â bands
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> 73s
> Mike
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>
> > should be able to see a 6 next to the connector. That area is kind of
> > crowded..so take your time and use some bright light and a magnifier if
>needed.
>
> > Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of
>
> > slack...then cut. Go to N6WK web site, download a High-resolution
> > manual.....good luck....oh.....you may also have to "tweak"
>up

>
> > the antenna, mix, and drive coils..
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > _____
> > From: "w9aba@" <w9aba@>
> > To: ts-520_820_530_830@ yahoogroups .com
> > Sent: Wed, February 16, 2011 6:29:41 PM
> > Subject: [TS-520_820_530_830] warc bands
> >
> >
> >
> >
> >
> > HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT
> > CAN'T
> >
> > TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE
> > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
> > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
> > AND IS THAT ALL YOU HAVE TO DO
> >
> > THANK YOU
> >
> > ED W9ABA
> >
> > [Non-text portions of this message have been removed]
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29825. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 21:41:11 UTC
From: cszathma@comcast.net
Topic: 29809 Message: 29825

Gordon and group

I cut the blue this afternoon and the radio loaded right up on all of the WARC bands. Also thanks for the email about how to do it and yes I did read the manual , but it always makes me feel better when I hear that someone else had did it and there weren't any surprises .

Thanks again

Carl

Carl Szathmary
cszathma @...
Burlington Lodge #32 F&AM
WB2DGJ NAQCC #3807

Carl Szathmary
cszathma @...
Burlington Lodge #32 F&AM
WB2DGJ NAQCC #3807

----- Original Message -----
From: "Tracy Ringering " <r2herman@yahoo.com>
To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
Sent: Thursday, February 17, 2011 3:45:46 PM
Subject: Re: [TS-520_820_530_830] Re: warc bands

Awesome! Thanks so much, Gordon. I too wondered about the diodes. Cutting one wire is certainly simpler.

Tracy Ringering , N7FPI
TS-530S & TL-922
Icom IC-725
Swan 1200X
Hallifcrafters S-20R

From: n6wk_skcc3 < n6wk@... >
To: TS-520_820_530_830@ yahoogroups .com
Sent: Thu, February 17, 2011 8:55:54 AM
Subject: [TS-520_820_530_830] Re: warc bands

Carl,
I uploaded a file that shows exactly which wire to cut on the TS-830/530 to enable the WARC bands it if in the files section here.

73,
Gordon
N6WK

--- In TS-520_820_530_830@ yahoogroups .com , cszathma @... wrote:
>
>
>
> Hi All
>
> I'm new to the list and have a question.Â I'm about to do the same thing to my
>530S and haveÂ this question.Â I have read the up grade in the manual and it
>sounds like cutting this one blue wire will enable all of the WARC bands is this
>what happens?Â I also read that by cutting two diodes,Â D5&D6, Â out that it
>will also enable the WARC bands, but only 12 & 17 meters.Â After this is done
>the drive will have to be set on the two enabled bands.Â
>
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Wednesday, February 16, 2011 11:39:20 PM
> Subject: [TS-520_820_530_830] Re: warc Â bands
>
> Â
>
>
>
>
> Just because the 830 doesn't transmit on those bands, and as been stated
>before, 10 meters is not a WARC band, does not mean the WARC bands have not
>already been enabled. There may be something else that is causing this problem.
>Therefore, before you cut any wires, you should check the 830 to see if the WARC
>bands have already been enabled. The possibility your 830 WARC bands have not
>been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830
>operator's manual, page 27 section 6.5, but, again, do not cut any wires before
>you check the WARC band enabling steps in the 830 operators manual.
>
>
> If the WARC bands have already been enabled, further steps will have to be
>taken to track down the source of your problem.
>
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@ yahoogroups .com , Joseph Stiles < stilesjoseph
>@...> wrote:
>

> >
> > Ed,
> >
> > I will try and get a pic up-loaded tomorrow..but in the mean time..the " WARC
>
> > MOD" has nothing to do with 10m, just 12, 17 & 30meters. You will have to
> > removed the top and bottom covers..be careful of the speaker lead. Turn rig
> > upside down with front facing you. Look on the left side, front for the
>AF-AVR
>
> > board #X49-1140-00...really can't miss it. You are looking for CONNECTOR
>6..you
>
> > should be able to see a 6 next to the connector. That area is kind of
> > crowded..so take your time and use some bright light and a magnifier if
>needed.
>
> > Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of
>
> > slack...then cut. Go to N6WK web site, download a High-resolution
> > manual.....good luck....oh.....you may also have to "tweak"
>up
>
> > the antenna, mix, and drive coils..
> >
> > 73's joe wb7uqu
> >
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> >
> >
> >
> > _____
> > From: "w9aba@" <w9aba@>
> > To: ts-520_820_530_830@ yahoogroups .com
> > Sent: Wed, February 16, 2011 6:29:41 PM
> > Subject: [TS-520_820_530_830] warc bands
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> >
> > HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT
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> >
> > TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A WIRE
> > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
> > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
> > AND IS THAT ALL YOU HAVE TO DO
> >
> > THANK YOU

> >
> > ED W9ABA
> >
> > [Non-text portions of this message have been removed]
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29826. Re: [TS-520_820_530_830] Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-17 23:00:49 UTC
From: W8HW
Topic: 29752 Message: 29826

Hello Tom,

I buy (or repair) BROKE radios. How much do you want for it?

73, Bruce, W8HW, w8hw@...

----- Original Message -----
From: Tom
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, February 17, 2011 1:57 PM
Subject: [TS-520_820_530_830] Re: TS-820s xformer hookup

Howdy Guys,

Thanks for the info on the 820s. After some tinkering, looks like the transformer may be the culprate.

If I thought it was a cheap/easy fix, I would be interested in working on it. I would love the have the old rig in my shack. But, looks like it ain't and I already have too many projects.

I live near Okla City and have a daughter living in Dallas. Anyone in my area that might be interested in a TS-820s, in need of some work or for parts, can contact me and maybe we can figger out some kind of swap. I would be happy to meet you somewhere along the way or in my immediate area and turn it over to you.

Email me at ac5jh@...

Tom AC5JH

[Non-text portions of this message have been removed]

29827. Heathkit SB-620 vs. Kenwood Sm-220 for Kenwood TS-820 radio

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 03:33:21 UTC
From: ae5uu
Topic: 29827 Message: 29827

Hello all and particularly you Mike W5RKL. I have a Kenwood TS-820 radio. Given the choice of either or would you recommend a Kenwood SM-220 with the BS-8 Pan Adapter or a Heathkit SB-620 set for 455KHz IF ?

Thanks
73,
Russell
ae5uu

29828. Re: Heathkit SB-620 vs. Kenwood Sm-220 for Kenwood TS-820 radio

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 12:57:31 UTC
From: w5rkl
Topic: 29827 Message: 29828

Good morning Russell,

If it were me I would go with the SM-220 with the BS-8 band scope installed.

The IF frequency in the 820 is *8Mhz". A Heathkit monitor scope with a 455Khz IF can will not work with the 820 as a Band Scope.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Hello all and particularly you Mike W5RKL. I have a Kenwood TS-820 radio. Given the choice of either or would you recommend a Kenwood SM-220 with the BS-8 Pan Adapter or a Heathkit SB-620 set for 455KHz IF ?
>
> Thanks
> 73,
> Russell
> ae5uu
>

29829. AGC Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 11:29:28 UTC
From: k3bmk
Topic: 29829 Message: 29829

I have a baffling agc problem which I need some assistance in figuring out.

When my AGC switch is flipped to "off" I get a high pitched tone. When the mode switch is USB the pitch of the tone is a bit lower than when the switch is in LSB.

When the AGC switch is flipped to fast or slow the tone goes away.

Not really sure where to start at troubleshooting this issue.

Any assistance would be appreciated!

Thanks!

Brian
K3BMK

29830. tune up ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 12:48:42 UTC
From: w9aba@aim.com
Topic: 29830 Message: 29830

CAN SOMEONE TELL ME THE RIGHT SETTING FOR THE MIC&CAR CONTROLS FOR TRANMITING ON THE TS-830S

THANK YOU

ED W9ABA

[Non-text portions of this message have been removed]

29831. Re: [TS-520_820_530_830] tune up ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 16:48:09 UTC
From: Charles Coffee
Topic: 29830 Message: 29831

Ed, Go to Ken's website and download the tuning instructions - they are good to use.

http://www.k4eaa.com/tune-up.htm

Chuck, KJ4GU

On Fri, Feb 18, 2011 at 7:48 AM, <w9aba@...> wrote:

> CAN SOMEONE TELL ME THE RIGHT SETTING FOR THE MIC&CAR CONTROLS FOR
> TRANMITING ON THE TS-830S
>
>
>
> THANK YOU
>
> ED W9ABA
>
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29832. Re: AGC Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 17:38:18 UTC
From: w5rkl
Topic: 29829 Message: 29832

Brian,

When the tone appears, with the AGC switch turned OFF, tuning the VFO to a higher or lower frequency, does the tone vary in frequency and/or disappear?

The AGC switch has nothing to do with receive frequency control or anything other than the receiver's gain control.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@...> wrote:
>
> I have a baffling agc problem which I need some assistance in figuring out.
>
> When my AGC switch is flipped to "off" I get a high pitched tone. When the mode switch is USB the pitch of the tone is a bit lower than when the switch is in LSB.
>
> When the AGC switch is flipped to fast or slow the tone goes away.
>
> Not really sure where to start at troubleshooting this issue.
>
> Any assistance would be appreciated!
>
> Thanks!
>
> Brian
> K3BMK
>

29833. Re: tune up ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 17:49:19 UTC
From: w5rkl
Topic: 29830 Message: 29833

Hi Ed,

First, the CAR control is only used in TUNE and CW modes, never in SSB mode. The CAR control is disabled in USB and LSB modes.

The CAR control, when used in TUNE mode during tuning of the transmitter, controls the level of RF signal applied to the driver tube. Normally an initial CAR control setting between 9 and 11 o'clock will produce an initial increase in ALC meter indication. When that happens, adjust the DRIVE control for a peak ALC meter indication. If the meter pegs fully CW, rotate the CAR control CCW so the meter points to about 12 o'clock then continue adjusting the DRIVE control for a peak indication on the meter (meter switch set to ALC). Once you have peaked the ALC meter, switch the meter switch to IP. Rotate the PLATE control for the lowest (dip) IP meter indication. At this point, if your 830 is connected to a watt meter, the watt meter should display an increase in RF output. While watching the watt meter, adjust the LOAD control for a peak RF indication on the watt meter. The IP meter will most likely not be indicating 225ma but an IP current indication somewhat less. Unkey the transmitter. Set the MODE switch to CW. If you have a plug inserted into the rear CW socket, remove it. Key the transmitter with the SEND switch and with the meter in IP, adjust the PLATE control slightly for any further reduction in meter indication. If the meter exceeds 225ma, rotate the CAR control so the meter is 225ma. At this point the watt meter should display 100 watts output. If it does, you are done, don't touch anything, unkey the transmitter.

The MIC gain should be set, in USB or LSB modes, so normal voice levels at a distance of a couple of inches from the microphone, with the meter set to ALC, should result in the ALC meter just kicking up above zero. The ALC meter should not be constantly at the maximum ALC scale. If it is, rotate the MIC gain so the ALC meter just kicks up above zero. That is the best setting for lowest distortion and best sounding transmit signal. This is assuming you are not using an amplified microphone such as an amplified D-104 or some other amplified microphone with the microphone gain set too high.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
> CAN SOMEONE TELL ME THE RIGHT SETTING FOR THE MIC&CAR CONTROLS FOR TRANMITING ON THE TS-830S
>
>
>
> THANK YOU
>
> ED W9ABA

>
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>
> [Non-text portions of this message have been removed]
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29834. Re: [TS-520_820_530_830] tune up ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 17:31:38 UTC
From: yash@aol.com
Topic: 29830 Message: 29834

ED
read the tune up procedure for the rig in the manual.Mic and Carrier settings will depend on what mic you use and proper meter readings on tuneup. If you don't have a copy of the manual,unplug the rig till you get one.'
thanks
dale wt4t

-----Original Message-----
From: w9aba@...m
To: ts-520_820_530_830@yahoogroups.com
Sent: Fri, Feb 18, 2011 7:48 am
Subject: [TS-520_820_530_830] tune up ts-830s

CAN SOMEONE TELL ME THE RIGHT SETTING FOR THE MIC&CAR CONTROLS FOR TRANMITING ON THE TS-830S

THANK YOU

ED W9ABA

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29835. Re: AGC Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 19:48:11 UTC
From: k3bmk
Topic: 29829 Message: 29835

Mike,

The tone remains unchanged when spinning the VFO.

73
Brian

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Brian,
>
> When the tone appears, with the AGC switch turned OFF, tuning the VFO to a higher or lower frequency, does the tone vary in frequency and/or disappear?
>
> The AGC switch has nothing to do with receive frequency control or anything other than the receiver's gain control.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@> wrote:
> >
> > I have a baffling agc problem which I need some assistance in figuring out.
> >
> > When my AGC switch is flipped to "off" I get a high pitched tone. When the mode switch is USB the pitch of the tone is a bit lower than when the switch is in LSB.
> >
> > When the AGC switch is flipped to fast or slow the tone goes away.
> >
> > Not really sure where to start at troubleshooting this issue.
> >
> > Any assistance would be appreciated!
> >
> > Thanks!
> >
> > Brian
> > K3BMK
> >
>

29836. Re: [TS-520_820_530_830] tune up ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 21:10:19 UTC
From: John Davidson
Topic: 29830 Message: 29836

The carrier control for CW; advance to The point you get power and after tuning up,reduce the setting until you get a slight drop of power output.

This control has No effect on SSB.
Mic. setting; advance while speaking into a mic and with Meter set for ALC reading When you reach the point where meter moves up slightly into the ALC area on the meter on voice peaks and stop there. This will have different positions for different microfones.
This control has no effect in CW mode

From: Charles Coffee <chascoffee@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 18, 2011 11:48:09 AM
Subject: Re: [TS-520_820_530_830] tune up ts-830s

Ed, Go to Ken's website and download the tuning instructions - they are good to use.

http://www.k4eaa.com/tune-up.htm

Chuck, KJ4GU

On Fri, Feb 18, 2011 at 7:48 AM, <w9aba@...> wrote:

> CAN SOMEONE TELL ME THE RIGHT SETTING FOR THE MIC&CAR CONTROLS FOR TRANMITING ON THE TS-830S
>
> THANK YOU
>
> ED W9ABA
>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links

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29837. Two-Tone Test for SSB (700 & 1900 Hz) mp3

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 21:16:45 UTC
From: Bob
Topic: 29837 Message: 29837

Say, if anybody's interested, I have a Two-Tone Test for SSB (700 & 1900 Hz) in mp3 format that I can email. It's about 5MB mp3 file.

73,

Bob, KD5MHQ

29838. Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 21:49:17 UTC
From: Ken
Topic: 29809 Message: 29838

Just thinnk, This may have been the only WARC band radio that hadn't been freed to work the WARC bands....

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, cszathma@... wrote:
>
>
>
> Gordon and group
>
>
>
> I cut the blue this afternoon and the radio loaded right up on all of the WARC bands.Â Also thanks for the emailÂ about how to do it and yes I did read the manual , but it always makes me feel better when I hear that someone else had did it and there weren't any surprises .
>
>
>
> Thanks again
>
> Carl
>
>
>
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
>
>
>
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "Tracy Ringering " <r2herman@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Thursday, February 17, 2011 3:45:46 PM

> Subject: Re: [TS-520_820_530_830] Re: warc Â bands
>
> Â
>
>
>
>
> Awesome! Thanks so much, Gordon. I too wondered about the diodes. Cutting one
> wire is certainly simpler.
>
> Tracy Ringering , N7FPI
> TS-530S & TL-922
> Icom IC-725
> Swan 1200X
> Hallifcrafters S-20R
>
> _____
> From: n6wk_skcc3 < n6wk@... >
> To: TS-520_820_530_830@ yahoogroups .com
> Sent: Thu, February 17, 2011 8:55:54 AM
> Subject: [TS-520_820_530_830] Re: warc bands
>
> Carl,
> I uploaded a file that shows exactly which wire to cut on the TS-830/530 to
> enable the WARC bands it if in the files section here.
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> 73,
> Gordon
> N6WK
>
> --- In TS-520_820_530_830@ yahoogroups .com , cszathma @... wrote:
> >
> >
> >
> > Hi All
> >
> > I'm new to the list and have a question.Ã☐ I'm about to do the same thing to my
> >530S and haveÃ☐ this question.Ã☐ I have read the up grade in the manual and it
> >sounds like cutting this one blue wire will enable all of the WARC bands is this
> >what happens?Ã☐ I also read that by cutting two diodes,Ã☐ D5&D6, Ã☐ out that it
> >will also enable the WARC bands, but only 12 & 17 meters.Ã☐ After this is done
> >the drive will have to be set on the two enabled bands.Ã☐
> >
> >
> > Carl Szathmary
> > cszathma @...
> > Burlington Lodge #32 F&AM
> > WB2DGJ Ã☐ NAQCC #3807
> >

> > ----- Original Message -----
> > From: "w5rkl" <w5rkl@>
> > To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> > Sent: Wednesday, February 16, 2011 11:39:20 PM
> > Subject: [TS-520_820_530_830] Re: warc Ã□ bands
> >
> > Ã□
> >
> >
> >
> >
> > Just because the 830 doesn't transmit on those bands, and as been stated
> >before, 10 meters is not a WARC band, does not mean the WARC bands have not
> >already been enabled. There may be something else that is causing this problem.
> >Therefore, before you cut any wires, you should check the 830 to see if the WARC
> >bands have already been enabled. The possibility your 830 WARC bands have not
> >been enabled are slim. The steps to enable all 3 WARCC bands are in the TS-830
> >operator's manual, page 27 section 6.5, but, again, do not cut any wires before
> >you check the WARC band enabling steps in the 830 operators manual.
> >
> >
> > If the WARC bands have already been enabled, further steps will have to be
> >taken to track down the source of your problem.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@ yahoogroups .com , Joseph Stiles < stilesjoseph
> >@...> wrote:
> >
> > >
> > > Ed,
> > >
> > > I will try and get a pic up-loaded tomorrow..but in the mean time..the " WARC
> >
> > > MOD" has nothing to do with 10m, just 12, 17 & 30meters. You will have to
> > > removed the top and bottom covers..be careful of the speaker lead. Turn rig
> > > upside down with front facing you. Look on the left side, front for the
> >AF-AVR
> >
> > > board #X49-1140-00...really can't miss it. You are looking for CONNECTOR
> >6..you
> >
> > > should be able to see a 6 next to the connector. That area is kind of
> > > crowded..so take your time and use some bright light and a magnifier if
> >needed.
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> > > Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a bit of
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> > > slack...then cut. Go to N6WK web site, download a High-resolution
> > > manual.....good luck....oh.....you may also have to "tweak"
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> > > the antenna, mix, and drive coils..
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> > >
> > >
> > > _____
> > > From: "w9aba@" <w9aba@>
> > > To: ts-520_820_530_830@ yahoogroups .com
> > > Sent: Wed, February 16, 2011 6:29:41 PM
> > > Subject: [TS-520_820_530_830] warc bands
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> > > HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND OUT
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> > > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT WIRE
> > > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS LIKE
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29839. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 21:57:51 UTC
From: n6wk@n6wk.com
Topic: 29809 Message: 29839

Ken,
about 1/4 of the ones I get in here for repair have never had the WARC bands activated.
I have no idea why either. It is such a simple thing to do.

73,
Gordon

On 2/18/2011 1:49 PM, Ken wrote:
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> Just thinnk, This may have been the only WARC band radio that hadn't
> been freed to work the WARC bands....
>
> Ken - KB7H
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, cszathma@... wrote:
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> > From: "Tracy Ringering " <r2herman@...>
> > To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> > Sent: Thursday, February 17, 2011 3:45:46 PM
> > Subject: Re: [TS-520_820_530_830] Re: warc ? bands
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> > TS-530S & TL-922
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> > From: n6wk_skcc3 < n6wk@... >
> > To: TS-520_820_530_830@ yahoogroups .com
> > Sent: Thu, February 17, 2011 8:55:54 AM
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> > > From: "w5rkl" <w5rkl@>
> > > To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> > > Sent: Wednesday, February 16, 2011 11:39:20 PM
> > > Subject: [TS-520_820_530_830] Re: warc Â bands
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> this problem.
> > >Therefore, before you cut any wires, you should check the 830 to
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> > > > _____
> > > From: "w9aba@" <w9aba@>

> > > > To: ts-520_820_530_830@ yahoogroups .com
> > > > Sent: Wed, February 16, 2011 6:29:41 PM
> > > > Subject: [TS-520_820_530_830] warc bands
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29840. Re: TS-820s xformer hookup

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 23:42:03 UTC
From: roberteleazer@rocketmail.com
Topic: 29752 Message: 29840

Tom:

Look up Jim, AF4AT, here on QRZ and ask him if he still has the transformer for the TS-820 he was parting out.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <ac5jh@...> wrote:
>
>
>
> Howdy Guys,
>
> Thanks for the info on the 820s. After some tinkering, looks like the transformer may be the culprate.
>
> If I thought it was a cheap/easy fix, I would be interested in working on it. I would love the have the old rig in my shack. But, looks like it ain't and I already have too many projects.
>
> I live near Okla City and have a daughter living in Dallas. Anyone in my area that might be interested in a TS-820s, in need of some work or for parts, can contact me and maybe we can figger out some kind of swap. I would be happy to meet you somewhere along the way or in my immediate area and turn it over to you.
>
> Email me at ac5jh@...
>
> Tom AC5JH
>

29841. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 23:43:52 UTC
From: Tracy Ringering
Topic: 29809 Message: 29841

No, mine still needs to be freed, and I bought it new back in 1981! :-)

Tracy Ringering, N7FPI

From: Ken <atm_ken_hunter@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 18, 2011 1:49:17 PM
Subject: [TS-520_820_530_830] Re: warc bands

Just thinnk, This may have been the only WARC band radio that hadn't been freed
to work the WARC bands....

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, cszathma@... wrote:
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> Carl Szathmary
> cszathma @comcast.net
> Burlington Lodge #32 F&AM
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29842. Re: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 23:45:49 UTC
From: Tracy Ringering
Topic: 29809 Message: 29842

Just call me lazy. :-) I'll probably get around to it this summer.

Tracy Ringering, N7FPI

From: "n6wk@...m" <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 18, 2011 1:57:51 PM
Subject: Re: [TS-520_820_530_830] Re: warc bands

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> > > > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO
> WHAT WIRE
> > > > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT
> LOOKS LIKE
> > > > AND IS THAT ALL YOU HAVE TO DO
> > > >
> > > > THANK YOU
> > > >
> > > > ED W9ABA
> > > >
> > > > [Non-text portions of this message have been removed]
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>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

29843. Re: Two-Tone Test for SSB (700 & 1900 Hz) mp3

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-18 23:11:02 UTC
From: Mike
Topic: 29837 Message: 29843

Hello Bob, mike duke here. would like to request the mp3 file for the ssb test. thanks.

mike
kj4pom

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Say, if anybody's interested, I have a Two-Tone Test for SSB (700 & 1900 Hz) in mp3 format that I can email. It's about 5MB mp3 file.
>
> 73,
>
> Bob, KD5MHQ
>

29844. Re: [TS-520_820_530_830] Re: Two-Tone Test for SSB (700 & 1900 Hz) mp3

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 00:09:09 UTC
From: Chris Parnell
Topic: 29837 Message: 29844

Send it to me too please Bob☐.

Cheers
Chris Parnell, ZL1CDP
zl1cdp@...m

From: Mike <kj4pom@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Fri, 18 Feb 2011 23:11:02 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: Two-Tone Test for SSB (700 & 1900 Hz) mp3

Hello Bob, mike duke here. would like to request the mp3 file for the ssb
test. thanks.

mike
kj4pom

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Bob <bob4analog@...> wrote:
>
> Say, if anybody's interested, I have a Two-Tone Test for SSB (700 & 1900 Hz)
in mp3 format that I can email. It's about 5MB mp3 file.
>
> 73,
>
> Bob, KD5MHQ
>

[Non-text portions of this message have been removed]

29845. RE: [TS-520_820_530_830] Two-Tone Test for SSB (700 & 1900 Hz) mp3

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 00:22:21 UTC
From: John Struemph
Topic: 29837 Message: 29845

Hey Bob. Can you send me one. Thanks.John

k1jhs@...

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
Sent: Friday, February 18, 2011 3:17 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Two-Tone Test for SSB (700 & 1900 Hz) mp3

Say, if anybody's interested, I have a Two-Tone Test for SSB (700 & 1900 Hz)
in mp3 format that I can email. It's about 5MB mp3 file.

73,

Bob, KD5MHQ

[Non-text portions of this message have been removed]

29846. RE: [TS-520_820_530_830] Re: warc bands

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 00:24:03 UTC
From: John Struemph
Topic: 29809 Message: 29846

Mine has not been done either and I am too stubborn to bother!

John- K1JHS

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ken
Sent: Friday, February 18, 2011 3:49 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: warc bands

Just thinnk, This may have been the only WARC band radio that hadn't been
freed to work the WARC bands....

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , cszathma@... wrote:
>
>
>
> Gordon and group
>
>
>
> I cut the blue this afternoon and the radio loaded right up on all of the
WARC bands.Â Also thanks for the emailÂ about how to do it and yes I did
read the manual , but it always makes me feel better when I hear that
someone else had did it and there weren't any surprises .
>
>
>
> Thanks again
>
> Carl
>
>
>
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
>
>

>
>
> Carl Szathmary
> cszathma @...
> Burlington Lodge #32 F&AM
> WB2DGJ Â NAQCC #3807
>
> ----- Original Message -----
> From: "Tracy Ringering " <r2herman@...>
> To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> Sent: Thursday, February 17, 2011 3:45:46 PM
> Subject: Re: [TS-520_820_530_830] Re: warc Â bands
>
> Â
>
>
>
>
> Awesome! Thanks so much, Gordon. I too wondered about the diodes. Cutting
one
> wire is certainly simpler.
>
> Tracy Ringering , N7FPI
> TS-530S & TL-922
> Icom IC-725
> Swan 1200X
> Hallifcrafters S-20R
>
> _____
> From: n6wk_skcc3 < n6wk@... >
> To: TS-520_820_530_830@ yahoogroups .com
> Sent: Thu, February 17, 2011 8:55:54 AM
> Subject: [TS-520_820_530_830] Re: warc bands
>
> Carl,
> I uploaded a file that shows exactly which wire to cut on the TS-830/530
to
> enable the WARC bands it if in the files section here.
>
> 73,
> Gordon
> N6WK
>
> --- In TS-520_820_530_830@ yahoogroups .com , cszathma @... wrote:
> >
> >
> >
> > Hi All
> >

> > I'm new to the list and have a question.Ã☐ I'm about to do the same
thing to my
> >530S and haveÃ☐ this question.Ã☐ I have read the up grade in the manual
and it
> >sounds like cutting this one blue wire will enable all of the WARC bands
is this
> >what happens?Ã☐ I also read that by cutting two diodes,Ã☐ D5&D6, Ã☐ out
that it
> >will also enable the WARC bands, but only 12 & 17 meters.Ã☐ After this is
done
> >the drive will have to be set on the two enabled bands.Ã☐
> >
> >
> > Carl Szathmary
> > cszathma @...
> > Burlington Lodge #32 F&AM
> > WB2DGJ Ã☐ NAQCC #3807
> >
> > ----- Original Message -----
> > From: "w5rkl" <w5rkl@>
> > To: "TS-520 820 530 830" <TS-520_820_530_830@ yahoogroups .com>
> > Sent: Wednesday, February 16, 2011 11:39:20 PM
> > Subject: [TS-520_820_530_830] Re: warc Ã☐ bands
> >
> > Ã☐
> >
> >
> >
> >
> > Just because the 830 doesn't transmit on those bands, and as been stated

> >before, 10 meters is not a WARC band, does not mean the WARC bands have
not
> >already been enabled. There may be something else that is causing this
problem.
> >Therefore, before you cut any wires, you should check the 830 to see if
the WARC
> >bands have already been enabled. The possibility your 830 WARC bands have
not
> >been enabled are slim. The steps to enable all 3 WARCC bands are in the
TS-830
> >operator's manual, page 27 section 6.5, but, again, do not cut any wires
before
> >you check the WARC band enabling steps in the 830 operators manual.
> >
> >
> > If the WARC bands have already been enabled, further steps will have to
be
> >taken to track down the source of your problem.
> >

> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@ yahoogroups .com , Joseph Stiles <
stilesjoseph
> >@...> wrote:
> >
> > >
> > > Ed,
> > >
> > > I will try and get a pic up-loaded tomorrow..but in the mean time..the
" WARC
> >
> > > MOD" has nothing to do with 10m, just 12, 17 & 30meters. You will have
to
> > > removed the top and bottom covers..be careful of the speaker lead.
Turn rig
> > > upside down with front facing you. Look on the left side, front for
the
> >AF-AVR
> >
> > > board #X49-1140-00...really can't miss it. You are looking for
CONNECTOR
> >6..you
> >
> > > should be able to see a 6 next to the connector. That area is kind of
> > > crowded..so take your time and use some bright light and a magnifier
if
> >needed.
> >
> > > Find PIN 4 (TOF) it's a small gauge BLUE wire. See if you can pull a
bit of
> >
> > > slack...then cut. Go to N6WK web site, download a High-resolution
> > > manual.....good luck....oh.....you may also have to
"tweak"
> >up
> >
> > > the antenna, mix, and drive coils..
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > _____
> > > From: "w9aba@" <w9aba@>

> > > To: ts-520_820_530_830@ yahoogroups .com
> > > Sent: Wed, February 16, 2011 6:29:41 PM
> > > Subject: [TS-520_820_530_830] warc bands
> > >
> > >
> > >
> > >
> > >
> > > HI NAME IS ED CALL W9ABA I JUST GOT THIS KENWOOD TS-830S GO TO FOND
OUT
> > > CAN'T
> > >
> > > TRANSMIT ON THE 18,24,OR THE 10METER SOMETHING ABOUT YOU HAVE TO CUT A
WIRE
> > > ON THE BOTTOM OF THE RADIO FOR THIS TO WORK THE WARC BANDS SO WHAT
WIRE
> > > DO I CUT AND WERE IS IT CAN SOMEONE SEND ME A PICTURE OF WHAT IT LOOKS
LIKE
> > > AND IS THAT ALL YOU HAVE TO DO
> > >
> > > THANK YOU
> > >
> > > ED W9ABA
> > >
> > > [Non-text portions of this message have been removed]
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29847. Automated RX antenna switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 15:21:13 UTC
From: pakjan830
Topic: 29847 Message: 29847

Hi all,

I would like to be able to use a separate RX antenna (small loop) with my TS-830S which I need to switch over automatically to the TX antenna whenever PTT is activated.

How I was hoping to do that is by utilizing the RX-TX relay contacts at the rear accessory connector to switch a coaxial relay which connects the other antenna to the antenna input. I am a little bit concerned about hot switching the signal and thereby damaging relay or radio.

Are there any specs as to the timing between when the relay switches and when power is present at the antenna plug or does this happen in the same instant?

How does an external PA handle this? Does it reduce output power via ALC until it has completed its switching cycle?

73 de Jan, DK3LJ

29848. What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 17:12:48 UTC
From: Ken
Topic: 29848 Message: 29848

RADIOHF - Kenwood TS830S Gold With ESP Mods

Kenwood TS-830 Gold with ESP (Electronic Service Professionals ESP Mods)
cost of mods $485.00
Expanded Receive audio Mod > Expanded transmit audio Mod > Tunable peak IF filter Mod >Unlocked IF shift /VBT Mod
The radio performs perfectly it will receive and transmit at 3.1k wide has new set of 6146 tubes and new driver tube 100 Watts on all bands just a great radio no marks or dents from non smoker (no smell of smoke) I use a MXL R144 Ribbon Microphone with the radio not included with the radio,(But is also for sale)I have the manual . $750.00 +cost of shipping no Paypal USPS Money order of personal check Ok you will have to wait till the check clears before I ship

Listing #891216 by K2BUR
Submitted on 02/19/11
Click Here to Email
Back to Previous Page

29849. Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 18:36:51 UTC
From: kd8hmo
Topic: 29848 Message: 29849

Sounds like the infamous cb "whack-pack" mod to me... LOL

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <nz4q@...> wrote:
>
> RADIOHF - Kenwood TS830S Gold With ESP Mods
>
> Kenwood TS-830 Gold with ESP (Electronic Service Professionals ESP Mods)
> cost of mods $485.00
> Expanded Receive audio Mod > Expanded transmit audio Mod > Tunable peak IF filter Mod
>Unlocked IF shift /VBT Mod
> The radio performs perfectly it will receive and transmit at 3.1k wide has new set of 6146 tubes and new driver tube 100 Watts on all bands just a great radio no marks or dents from non smoker (no smell of smoke) I use a MXL R144 Ribbon Microphone with the radio not included with the radio,(But is also for sale)I have the manual . $750.00 +cost of shipping no Paypal USPS Money order of personal check Ok you will have to wait till the check clears before I ship
>
>
> Listing #891216 by K2BUR
> Submitted on 02/19/11
> Click Here to Email
> Back to Previous Page
>

29850. Basket-Case TS-530S Restoration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 18:42:03 UTC
From: kd8hmo
Topic: 29473 Message: 29850

Well, my basket-case 530S is finally on its way to Gordon's shop. Lets hope the dirt gremlins and whatever other nasties are lurking inside dont eat him alive... LOL He has his work cut out for him on this one.

29851. Re: [TS-520_820_530_830] What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 18:43:45 UTC
From: Joe
Topic: 29848 Message: 29851

I ***NEVER** trust anyone who will not take PayPal. Right..send a M.O. for $700.00 plus dollars....Someone think I am nuts? Here ....take my money and run.

I have used PayPal since their start and have never had a problem. Those who have issues with PayPal, have ~usually~ created them themselves. Sure, they charge me a fee, but to me, it is worth it to get my money when I sell something. Needless to say, anything I have sold, has been advertised honestly and guaranteed.

Joe Wolfe
WA6RKN
Reno, Nevada

----- Original Message -----
From: "Ken" <nz4q@...>
Subject: [TS-520_820_530_830] What kind of mod is this? 11 meters!

$750.00 +cost of shipping no Paypal USPS Money order of personal check Ok you will have to wait till the check clears before I ship

29853. Re: Automated RX antenna switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 19:27:33 UTC
From: w5rkl
Topic: 29847 Message: 29853

First, unless there is power output when the relay switches, there will be no damage.

Second, with zero power output to an external amplifier then there will be "zero" ALC produced and fed from the amplifier. ALC is not a "constant" gain control voltage from a power supply. The TS-830's ALC is produce ONLY when grid current flows in the final tubes and that requires an RF signal being applied at a level that causes the final tube grids to swing "positive" during a portion of the positive half of the RF cycle. Some, not all, external amplifiers produce ALC by rectifying the RF driving signal then feeding that rectified voltage back across the ALC connection to the TS-830 to reduce the gain. If the TS-830 is not providing any RF output then there will be no ALC produced or fed back from the amplifier to the TS-830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
>
> Hi all,
>
> I would like to be able to use a separate RX antenna (small loop) with my TS-830S which I need to switch over automatically to the TX antenna whenever PTT is activated.
>
> How I was hoping to do that is by utilizing the RX-TX relay contacts at the rear accessory connector to switch a coaxial relay which connects the other antenna to the antenna input. I am a little bit concerned about hot switching the signal and thereby damaging relay or radio.
>
> Are there any specs as to the timing between when the relay switches and when power is present at the antenna plug or does this happen in the same instant?
>
> How does an external PA handle this? Does it reduce output power via ALC until it has completed its switching cycle?
>
> 73 de Jan, DK3LJ
>

29854. SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 20:34:05 UTC
From: Charles
Topic: 29854 Message: 29854

I was repairing my SM-220 and the CRT fell to a carpeted floor. Apparently, the impact was enough to kill the tube. (I will not drop the CRT, I will not drop the CRT, I will not drop...)Hey, it happens.
Anyway, does anyone know of a source for a replacement? I've Googled my clumsy digits to the bone but have come up empty.
I imagine that I'll just end up buying another one on ebay, but I thought that I'd give this group a shot first.
Anybody?

73
Charlie Shaw
KB3BTO

29855. Re: SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 21:44:23 UTC
From: sceneryguru
Topic: 29854 Message: 29855

Good Afternoon Charlie:

Just a thought... I do remember seeing new old stock CRT's for the SM-220 on eBay... as recently as the last quarter of 2010. It maybe worthwhile to place an ad on the usual... QRZ, EHAM and QTH. You never know, you may just get lucky.

Good hunting...

tnx es 73

Tom G, Sr.
K3SSB

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
> I was repairing my SM-220 and the CRT fell to a carpeted floor. Apparently, the impact was enough to kill the tube. (I will not drop the CRT, I will not drop the CRT, I will not drop...)Hey, it happens.
> Anyway, does anyone know of a source for a replacement? I've Googled my clumsy digits to the bone but have come up empty.
> I imagine that I'll just end up buying another one on ebay, but I thought that I'd give this group a shot first.
> Anybody?
>
> 73
> Charlie Shaw
> KB3BTO
>

29856. Re: SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 21:47:23 UTC
From: kd8hmo
Topic: 29854 Message: 29856

If someone could give me a part number for this CRT, I can poke around at Fair Radio Sales.

--- In TS-520_820_530_830@yahoogroups.com, "Charles" <cshaw@...> wrote:
>
> I was repairing my SM-220 and the CRT fell to a carpeted floor. Apparently, the impact was enough to kill the tube. (I will not drop the CRT, I will not drop the CRT, I will not drop...)Hey, it happens.
> Anyway, does anyone know of a source for a replacement? I've Googled my clumsy digits to the bone but have come up empty.
> I imagine that I'll just end up buying another one on ebay, but I thought that I'd give this group a shot first.
> Anybody?
>
> 73
> Charlie Shaw
> KB3BTO
>

29857. Re: [TS-520_820_530_830] SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 21:53:38 UTC
From: pmarkavage@juno.com
Topic: 29854 Message: 29857

Someone had the same issue back in 2007
http://groups.yahoo.com/group/TS-520_820_530_830/message/14995

Pete, wa2cwa

On Sat, 19 Feb 2011 20:34:05 -0000 "Charles" <cshaw@...> writes:
> I was repairing my SM-220 and the CRT fell to a carpeted floor.
> Apparently, the impact was enough to kill the tube. (I will not drop
> the CRT, I will not drop the CRT, I will not drop...)Hey, it
> happens.
> Anyway, does anyone know of a source for a replacement? I've
> Googled my clumsy digits to the bone but have come up empty.
> I imagine that I'll just end up buying another one on ebay, but I
> thought that I'd give this group a shot first.
> Anybody?
>
> 73
> Charlie Shaw
> KB3BTO

29858. Re: [TS-520_820_530_830] SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 21:58:41 UTC
From: Bob
Topic: 29854 Message: 29858

I have a few sources, What's the crt #?

Bob

--- On Sat, 2/19/11, Charles <cshaw@...> wrote:

I was repairing my SM-220 and the CRT fell to a carpeted floor. Apparently, the impact was enough to kill the tube. (I will not drop the CRT, I will not drop the CRT, I will not drop...)Hey, it happens.
Anyway, does anyone know of a source for a replacement? I've Googled my clumsy digits to the bone but have come up empty.
I imagine that I'll just end up buying another one on ebay, but I thought that I'd give this group a shot first.
Anybody?

73
Charlie Shaw
KB3BTO

29859. Re: [TS-520_820_530_830] SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 22:50:26 UTC
From: pmarkavage@juno.com
Topic: 29854 Message: 29859

CRT: Toshiba 75ARB31

On Sat, 19 Feb 2011 13:58:41 -0800 (PST) Bob <bob4analog@...>
writes:
> I have a few sources, What's the crt #?
>
> Bob
>
> --- On Sat, 2/19/11, Charles <cshaw@...> wrote:
>
> I was repairing my SM-220 and the CRT fell to a carpeted floor.
> Apparently, the impact was enough to kill the tube. (I will not drop
> the CRT, I will not drop the CRT, I will not drop...)Hey, it
> happens.
> Anyway, does anyone know of a source for a replacement? I've Googled
> my clumsy digits to the bone but have come up empty.
> I imagine that I'll just end up buying another one on ebay, but I
> thought that I'd give this group a shot first.
> Anybody?
>
> 73
> Charlie Shaw
> KB3BTO

[Non-text portions of this message have been removed]

29860. Re: SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-19 23:21:48 UTC
From: kd8hmo
Topic: 29854 Message: 29860

Here are some stock numbers that might be useful that I found for this CRT.

National Item Identification Number

01-211-8344
012118344
5960-01-211-8344
5960012118344

National Stock Number

Item Name

ELECTRON TUBE

Federal Supply Class

5960

Description

An inclosure, including two or more electrodes, in which a flow of electrons may occur through a vacuum or a contained gas. The electronic conduction takes place either by means of electrons emitted from a cathode or by ionization of the contained gas. Includes phototubes (photoemissive type only), Geiger-Mueller tubes, traveling wave tubes, cathode ray tubes and microwave tubes (Klystron, magnetron, or the like). Excludes items whose primary purpose is to produce light energy. Also excludes PHOTOELECTRIC CELL; and SEMICONDUCTOR DEVICE (as modified).

Commercial and Government Entity Code (Supplier Data)

Click Here to locate Parts

0X7J3

SIMRAD ROBERTSON INC
19210 33RD AVE W
LYNNWOOD
WA
98036
425-778-8821

1Y735

KONGSBERG SIMRAD INC
DBA RESEARCH & DEVELOPMENT
19210 33RD AVE W
LYNNWOOD
WA
98036
713-934-8885

S5342

TOSHIBA CORPORATION
1 KOMUKAI TOSHIBA-CHO
SAIWA-KU
KAWASAKI
JAPAN

Reference Numbers (Part Numbers)

T75ARB1
T75ARB1
75ARB31

Required Categories

Required Description

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> CRT: Toshiba 75ARB31
>
> On Sat, 19 Feb 2011 13:58:41 -0800 (PST) Bob <bob4analog@...>
> writes:
> > I have a few sources, What's the crt #?
> >
> > Bob
> >
> > --- On Sat, 2/19/11, Charles <cshaw@...> wrote:
> >
> > I was repairing my SM-220 and the CRT fell to a carpeted floor.
> > Apparently, the impact was enough to kill the tube. (I will not drop
> > the CRT, I will not drop the CRT, I will not drop...)Hey, it
> > happens.
> > Anyway, does anyone know of a source for a replacement? I've Googled
> > my clumsy digits to the bone but have come up empty.

> > I imagine that I'll just end up buying another one on ebay, but I
> > thought that I'd give this group a shot first.
> > Anybody?
> >
> > 73
> > Charlie Shaw
> > KB3BTO
>
> [Non-text portions of this message have been removed]
>

29861. Re: SM-220 replacement CRT?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 00:21:32 UTC
From: Charles
Topic: 29854 Message: 29861

Darn! I figured that this would turn out to be another "unicorn hunt." Discontinued parts are rather annoying at times, aren't they?
Oh, well, it's part of the hobby.
I see that someone already supplied the part number (Toshiba 75ARB31), so it looks like I'll just start sniffing around on eBay or QTH.
Thanks, guys.

73
Charlie
KB3BTO

29862. Parting out Kenwood ts820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 02:11:55 UTC
From: kf5elo
Topic: 29862 Message: 29862

I am parting out a 820s, I have vfo,transformer, all boards switches,chokes, variables ect. email me with an offer. will sell chasis and harnesses and case covers.

Tommy

29863. Sale TS-520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 02:34:20 UTC
From: Chris
Topic: 29863 Message: 29863

I just got a rig with WARC bands and what not. Don't want to see my faithful 520S sitting around gathering dust. I am a minimalist and don't believe in keeping stuff I don't use around. It is in excellent condition, and I am currently using it, till the new rig arrives. I operate mostly digital with it, so I will throw in the signalink interface cable with it. Along with a Shure 450 microphone, and Yaesu mike that I use on SSB with it. I will send you the manuals as well. $300 plus $50 shipping. I will be at the Sussex, DE Ham Fest in April with it, if it doesn't sell by then. You can power it up, and test it all you like there. Thanks. Chris KG4AZN

29864. Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 17:39:04 UTC
From: sceneryguru
Topic: 29864 Message: 29864

Good Morning Group:

I for one, spend more time then I would care to admit, in front of a computer monitor. And thought that it might be nice to have something enjoyable to look at to break the monotony during the day.

I wanted to float a proposition to the group, regarding the idea of a professionally produced screen saver dedicated to our prized Kenwood hybrids, encompassing all the various models.

I would be happy to coordinate the collection effort required in obtaining the (high resolution) photographs. Once satisfied that the best images are in hand, I will proceed to fabricate the screen saver software. The photos will include the equipment model numbers, station call and QTH.

The finished software will be compatible across the spectrum of Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.

In closing, the proposed screen saver would be available exclusively, to all group members at no cost, via a download from the groups Yahoo Website.

I look forward to any and all constructive feedback regarding this initiative. Here's your opportunity to immortalize the ol' station, as well as to share it with your peers.

tnx es 73

Tom G, Sr.

29865. Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 18:54:17 UTC
From: kevin
Topic: 29848 Message: 29865

I purchased a radio and paid with PayPal. The guy never sent the radio and dropped out of sight. After trying to resolve it myself I filed a claim with PayPal. I be darned if after 30 days I didn't get a full refund. Made a believer out of me. Others may have different experiences.
Kevin
KD0ILM

29866. Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 18:56:13 UTC
From: kd8hmo
Topic: 29848 Message: 29866

Why didnt you drag him into small claims court?

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I purchased a radio and paid with PayPal. The guy never sent the radio and dropped out of sight. After trying to resolve it myself I filed a claim with PayPal. I be darned if after 30 days I didn't get a full refund. Made a believer out of me. Others may have different experiences.
> Kevin
> KD0ILM
>

29867. Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 19:09:12 UTC
From: Joe
Topic: 29848 Message: 29867

That only works in the same state the 'fraud' was committed in. If the guy lived in, say, California, and you lived in, say, New York, the cost of going to California to sue him (or to hire an attorney to represent you in court) would be cost prohibitive.

Joe - WA6RKN

----- Original Message -----
From: "kd8hmo" <delta5_oh@...>
Subject: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

> Why didnt you drag him into small claims court?

29868. Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 19:28:29 UTC
From: Jim S
Topic: 29848 Message: 29868

Pretty hard to do if a guy "drops out of sight!"

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 20, 2011 1:56 PM
Subject: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Why didnt you drag him into small claims court?

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> I purchased a radio and paid with PayPal. The guy never sent the radio and dropped out of sight. After trying to resolve it myself I filed a claim with PayPal. I be darned if after 30 days I didn't get a full refund. Made a believer out of me. Others may have different experiences.
> Kevin
> KD0ILM
>

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com
=======

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com/
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29869. RE: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 19:38:07 UTC
From: Rick Hicks
Topic: 29848 Message: 29869

OK, so I had to look it up, but here's my experience: I have made 933 purchases over the last 2 or 3 years and two of them have gone bad (purchase not delivered). In both cases the loss was covered by PayPal and I have not lost a dime. I wish all of life was that satisfactory. YMMV, but if anyone wants to sell me something they will need to accept PayPal.

Rick, KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jim S
Sent: Sunday, February 20, 2011 11:28 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Pretty hard to do if a guy "drops out of sight!"

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, February 20, 2011 1:56 PM
Subject: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Why didnt you drag him into small claims court?

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "kevin" <kmx888@...> wrote:
>
> I purchased a radio and paid with PayPal. The guy never sent the radio and dropped out of sight. After trying to resolve it myself I filed a claim with PayPal. I be darned if after 30 days I didn't get a full refund. Made a believer out of me. Others may have different experiences.
> Kevin
> KD0ILM
>

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http://www.pctools.com
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http://www.pctools.com/
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29870. Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 21:06:49 UTC
From: Jim S
Topic: 29848 Message: 29870

I agree, I have heard stories about bad transactions involving Pay Pal, but I have never experienced more than one. In that case, a fellow sent me a stereo set and used hard plastic videocassette cases to "cushion" the unit. It was fairly banged up when it arrived, but worked quite well. I am just sorry that it had a dinged corner on it, because I had always wanted that Marantz stereo !

But that was his ignorance, and not a Pay Pal issue. So I really don't know what all the grief is all about.

73, Jim AG3Y

----- Original Message -----
From: Rick Hicks
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 20, 2011 2:38 PM
Subject: RE: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

OK, so I had to look it up, but here's my experience: I have made 933 purchases over the last 2 or 3 years and two of them have gone bad (purchase not delivered). In both cases the loss was covered by PayPal and I have not lost a dime. I wish all of life was that satisfactory. YMMV, but if anyone wants to sell me something they will need to accept PayPal.

Rick, KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jim S
Sent: Sunday, February 20, 2011 11:28 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Pretty hard to do if a guy "drops out of sight!"

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, February 20, 2011 1:56 PM
Subject: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Why didnt you drag him into small claims court?

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "kevin" <kmx888@...> wrote:
>
> I purchased a radio and paid with PayPal. The guy never sent the radio and dropped out of sight. After trying to resolve it myself I filed a claim with

PayPal. I be darned if after 30 days I didn't get a full refund. Made a
believer out of me. Others may have different experiences.
> Kevin
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>

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29871. Lost 9VDC

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 23:45:25 UTC
From: ae5uu
Topic: 29871 Message: 29871

I have lost the 9 VDC that belongs on the pin 8-pin 9 jumper for jack 17 on my TS-820. This is the 9 pin panel jack on the upper right back of the radio that is used for the VFO-820 cable interface. Does anyone have any suggestions as to what has gone wrong?
Thanks
73,
Russell
ae5uu

29872. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-20 23:54:49 UTC
From: kd8hmo
Topic: 29864 Message: 29872

This sounds like a great idea. I would love to also see some nice hybrid wallpapers too. Check out the Icom papers for an idea of what I am talking about. You would need to somehow find someone that has perfect condition examples of every model radio.

--- In TS-520_820_530_830@yahoogroups.com, "sceneryguru" <k3ssb@...> wrote:
>
> Good Morning Group:
>
> I for one, spend more time then I would care to admit, in front of a computer monitor. And thought that it might be nice to have something enjoyable to look at to break the monotony during the day.
>
> I wanted to float a proposition to the group, regarding the idea of a professionally produced screen saver dedicated to our prized Kenwood hybrids, encompassing all the various models.
>
> I would be happy to coordinate the collection effort required in obtaining the (high resolution) photographs. Once satisfied that the best images are in hand, I will proceed to fabricate the screen saver software. The photos will include the equipment model numbers, station call and QTH.
>
> The finished software will be compatible across the spectrum of Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.
>
> In closing, the proposed screen saver would be available exclusively, to all group members at no cost, via a download from the groups Yahoo Website.
>
> I look forward to any and all constructive feedback regarding this initiative. Here's your opportunity to immortalize the ol' station, as well as to share it with your peers.
>
> tnx es 73
>
> Tom G, Sr.
>

29873. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 00:09:21 UTC
From: churchguy_12901
Topic: 29864 Message: 29873

Tom, sounds like a great idea, I have my 530s station up on mine as a background.
Thanks,Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> This sounds like a great idea. I would love to also see some nice hybrid wallpapers too. Check out the Icom papers for an idea of what I am talking about. You would need to somehow find someone that has perfect condition examples of every model radio.
>
> --- In TS-520_820_530_830@yahoogroups.com, "sceneryguru" <k3ssb@> wrote:
> >
> > Good Morning Group:
> >
> > I for one, spend more time then I would care to admit, in front of a computer monitor. And thought that it might be nice to have something enjoyable to look at to break the monotony during the day.
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> > I look forward to any and all constructive feedback regarding this initiative. Here's your opportunity to immortalize the ol' station, as well as to share it with your peers.
> >
> > tnx es 73
> >
> > Tom G, Sr.
> >
>

29874. Re: [TS-520_820_530_830] Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 00:10:51 UTC
From: n6wk@n6wk.com
Topic: 29864 Message: 29874

I have some Original Brochures for the 830 Silver and Gold.
I will scan them and make them ready to share

73,
Gordon
N6WK

On 2/20/2011 3:54 PM, kd8hmo wrote:
>
> This sounds like a great idea. I would love to also see some nice
> hybrid wallpapers too. Check out the Icom papers for an idea of what I
> am talking about. You would need to somehow find someone that has
> perfect condition examples of every model radio.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> <k3ssb@...> wrote:
> >
> > Good Morning Group:
> >
> > I for one, spend more time then I would care to admit, in front of a
> computer monitor. And thought that it might be nice to have something
> enjoyable to look at to break the monotony during the day.
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> > I wanted to float a proposition to the group, regarding the idea of
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> > I would be happy to coordinate the collection effort required in
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> software. The photos will include the equipment model numbers, station
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> > In closing, the proposed screen saver would be available
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> groups Yahoo Website.
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> > I look forward to any and all constructive feedback regarding this
> initiative. Here's your opportunity to immortalize the ol' station, as
> well as to share it with your peers.
> >

> > tnx es 73
> >
> > Tom G, Sr.
> >
>
>

29875. Re: [TS-520_820_530_830] Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 00:32:23 UTC
From: Jojo Vicencio DU1VHY
Topic: 29864 Message: 29875

shouldn't the pictures we posted in the photo section be usable for this?

73,

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 21, 2011 8:10:51 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood Screen Saver

I have some Original Brochures for the 830 Silver and Gold.
I will scan them and make them ready to share

73,
Gordon
N6WK

On 2/20/2011 3:54 PM, kd8hmo wrote:
>
> This sounds like a great idea. I would love to also see some nice
> hybrid wallpapers too. Check out the Icom papers for an idea of what I
> am talking about. You would need to somehow find someone that has
> perfect condition examples of every model radio.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> <k3ssb@...> wrote:
> >
> > Good Morning Group:
> >
> > I for one, spend more time then I would care to admit, in front of a
> computer monitor. And thought that it might be nice to have something
> enjoyable to look at to break the monotony during the day.
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> > I would be happy to coordinate the collection effort required in
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> software. The photos will include the equipment model numbers, station
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> Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.
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> well as to share it with your peers.
> >
> > tnx es 73
> >
> > Tom G, Sr.
> >
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

29876. Re: [TS-520_820_530_830] Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 00:35:52 UTC
From: n6wk@n6wk.com
Topic: 29864 Message: 29876

I haven't looked, but if the quality is good enough, then Yes !

Gordon
N6WK

On 2/20/2011 4:32 PM, Jojo Vicencio DU1VHY wrote:
>
> shouldn't the pictures we posted in the photo section be usable for this?
>
> 73,
>
> jojo
>
> Jojo Vicencio - DU1VHY
> +639178501759
> +6325020674
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, February 21, 2011 8:10:51 AM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Screen Saver
>
> I have some Original Brochures for the 830 Silver and Gold.
> I will scan them and make them ready to share
>
> 73,
> Gordon
> N6WK
>
> On 2/20/2011 3:54 PM, kd8hmo wrote:
> >
> > This sounds like a great idea. I would love to also see some nice
> > hybrid wallpapers too. Check out the Icom papers for an idea of what I
> > am talking about. You would need to somehow find someone that has
> > perfect condition examples of every model radio.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> > <k3ssb@...> wrote:
> > >
> > > Good Morning Group:

> > >
> > > I for one, spend more time then I would care to admit, in front of a
> > computer monitor. And thought that it might be nice to have something
> > enjoyable to look at to break the monotony during the day.
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> > > I would be happy to coordinate the collection effort required in
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> > > tnx es 73
> > >
> > > Tom G, Sr.
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
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>

29877. Re: [TS-520_820_530_830] Re: Kenwood TK260 Help to program without using a computer

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 00:37:56 UTC
From: Prof. Arnaldo Coro Antich
Topic: 29864 Message: 29877

Hi amigos !
Have a Kenwood FM rig TK260 25 Watts 2 meters band
I need to program it using the front panel buttons, not
the computer interface.
Anyone here has an idea how this can be done...
BTW... my TS820 is working fine on receive after the
Noise Limiter switch is kept in the turned OFF position !!!

73 and DX
Arnie Coro
CO2KK

29878. Update on lost 9VDC

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 01:43:23 UTC
From: ae5uu
Topic: 29878 Message: 29878

I should have mentioned in my earlier post concerning no 9VDC at the pin 8-pin 9 jumper of the VFO jack, that I do have the 900v main supply present. At first I had 60ma idle current and then, when I tried to maximum the Drive control with the meter on ALC, the needle pinned and the 6A fuse blew. I replaced the fuse, once again I have 900V, but now I don't have 60ma idle current. Thanks for any ideas.

73,
Russell
ae5uu

29879. RE: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 02:34:10 UTC
From: brad
Topic: 29848 Message: 29879

So what does all this paypal talk have to do with a mod of a radio?

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Jim S
Sent: Sunday, February 20, 2011 16:07
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

I agree, I have heard stories about bad transactions involving Pay Pal, but I have never experienced more than one. In that case, a fellow sent me a stereo set and used hard plastic videocassette cases to "cushion" the unit. It was fairly banged up when it arrived, but worked quite well. I am just sorry that it had a dinged corner on it, because I had always wanted that Marantz stereo !

But that was his ignorance, and not a Pay Pal issue. So I really don't know what all the grief is all about.

73, Jim AG3Y

----- Original Message -----
From: Rick Hicks
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, February 20, 2011 2:38 PM
Subject: RE: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

OK, so I had to look it up, but here's my experience: I have made 933 purchases over the last 2 or 3 years and two of them have gone bad (purchase not delivered). In both cases the loss was covered by PayPal and I have not lost a dime. I wish all of life was that satisfactory. YMMV, but if anyone wants to sell me something they will need to accept PayPal.

Rick, KF7JFU

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Jim S
Sent: Sunday, February 20, 2011 11:28 AM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Pretty hard to do if a guy "drops out of sight!"

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, February 20, 2011 1:56 PM
Subject: [TS-520_820_530_830] Re: What kind of mod is this? 11 meters!

Why didnt you drag him into small claims court?

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
<mailto:TS-520_820_530_830%40yahoogroups.com> , "kevin" <kmx888@...> wrote:
>
> I purchased a radio and paid with PayPal. The guy never sent the radio and
dropped out of sight. After trying to resolve it myself I filed a claim with
PayPal. I be darned if after 30 days I didn't get a full refund. Made a
believer out of me. Others may have different experiences.
> Kevin
> KD0ILM
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16940)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29880. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 03:15:30 UTC
From: W2FID
Topic: 29864 Message: 29880

Tom:
Great idea. GO FOR IT!!
Marshall
W2FID

[Non-text portions of this message have been removed]

29881. Re: Update on lost 9VDC

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 11:39:10 UTC
From: w5rkl
Topic: 29878 Message: 29881

What model radio is this Russell?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> I should have mentioned in my earlier post concerning no 9VDC at the pin 8-pin 9 jumper of the VFO jack, that I do have the 900v main supply present. At first I had 60ma idle current and then, when I tried to maximum the Drive control with the meter on ALC, the needle pinned and the 6A fuse blew. I replaced the fuse, once again I have 900V, but now I don't have 60ma idle current. Thanks for any ideas.
>
> 73,
> Russell
> ae5uu
>

29882. TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 12:32:26 UTC
From: ae5uu
Topic: 2059 Message: 29882

Hello Mike...My radio is a TS-820. One further bit of information; whatever my problem is it was caused by some contacting mistake that I made while replacing that useless 9 pin VFO jack with an 8 pin microphone jack. To venture a guess, I must have inadvertently shorted pin 8 or pin 9 to ground briefly by mistake. I have read the past posts on this subject, but have not as yet come up with the solution. Thanks for your help.
73,
Russell
ae5uu

29883. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 13:42:28 UTC
From: sceneryguru
Topic: 29864 Message: 29883

Good Morning Group:

Thanks for the positive feedback regarding the Kenwood Vintage Screen Saver project.

To clarify a couple of issues that were raised by the group;

Yes... the photographs on the groups website can be used if, they are high resolution images, no smaller than 1024 W x 768 H. Which begs the question... which images? shall I comb through them and select the best or would the members like to pick the candidate and forward to me as an attachment vis e-mail?.

I would like to ID each graphic: Equipment featured, Call and QTH.

In closing; Gordon your offer of the scanned spec'sheets is perfect. We can interspace the station photos with spec' sheets. Please send them and all other graphics to me as attachments to my e-mail. Please keep the Kenwood Screen Saver as the subject line.

tnx es 73

Tom G, Sr.

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> I haven't looked, but if the quality is good enough, then Yes !
>
> Gordon
> N6WK
>
> On 2/20/2011 4:32 PM, Jojo Vicencio DU1VHY wrote:
> >
> > shouldn't the pictures we posted in the photo section be usable for this?
> >
> > 73,
> >
> > jojo
> >
> > Jojo Vicencio - DU1VHY
> > +639178501759
> > +6325020674
> >
> > _____
> > From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> > <mailto:n6wk%40n6wk.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, February 21, 2011 8:10:51 AM
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Screen Saver

> >
> > I have some Original Brochures for the 830 Silver and Gold.
> > I will scan them and make them ready to share
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 2/20/2011 3:54 PM, kd8hmo wrote:
> > >
> > > This sounds like a great idea. I would love to also see some nice
> > > hybrid wallpapers too. Check out the Icom papers for an idea of what I
> > > am talking about. You would need to somehow find someone that has
> > > perfect condition examples of every model radio.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> > > <k3ssb@> wrote:
> > > >
> > > > Good Morning Group:
> > > >
> > > > I for one, spend more time then I would care to admit, in front of a
> > > computer monitor. And thought that it might be nice to have something
> > > enjoyable to look at to break the monotony during the day.
> > > >
> > > > I wanted to float a proposition to the group, regarding the idea of
> > > a professionally produced screen saver dedicated to our prized Kenwood
> > > hybrids, encompassing all the various models.
> > > >
> > > > I would be happy to coordinate the collection effort required in
> > > obtaining the (high resolution) photographs. Once satisfied that the
> > > best images are in hand, I will proceed to fabricate the screen saver
> > > software. The photos will include the equipment model numbers, station
> > > call and QTH.
> > > >
> > > > The finished software will be compatible across the spectrum of
> > > Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.
> > > >
> > > > In closing, the proposed screen saver would be available
> > > exclusively, to all group members at no cost, via a download from the
> > > groups Yahoo Website.
> > > >
> > > > I look forward to any and all constructive feedback regarding this
> > > initiative. Here's your opportunity to immortalize the ol' station, as
> > > well as to share it with your peers.
> > > >
> > > > tnx es 73
> > > >
> > > > Tom G, Sr.

> > > >
> > >
> > >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> > [Non-text portions of this message have been removed]
> >
> >
>

29884. Re: TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 14:32:46 UTC
From: w5rkl
Topic: 2059 Message: 29884

HI Russell,

Measure the voltage on the AF Unit plug AF1 pins 1 and 2, it should be 9VDC +/- .5VDC.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Hello Mike...My radio is a TS-820. One further bit of information; whatever my problem is it was caused by some contacting mistake that I made while replacing that useless 9 pin VFO jack with an 8 pin microphone jack. To venture a guess, I must have inadvertently shorted pin 8 or pin 9 to ground briefly by mistake. I have read the past posts on this subject, but have not as yet come up with the solution. Thanks for your help.
> 73,
> Russell
> ae5uu
>

29885. freq counter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 15:34:35 UTC
From: robert
Topic: 29885 Message: 29885

I need a freq counter for my 520s any ideas thanks Robert

29886. Re: freq counter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 16:28:48 UTC
From: Ken Johnson
Topic: 29885 Message: 29886

I have seen some on QTH.com and ebay, happy hunting!!!

Ken
NZ4Q

[Non-text portions of this message have been removed]

29887. Re: freq counter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 16:37:05 UTC
From: kd8hmo
Topic: 29885 Message: 29887

If you cant find a DG-5, check this guy out. He is building custom "DG-5" displays.
http://www.aade.com/C520/C520.htm

--- In TS-520_820_530_830@yahoogroups.com, "robert" <ke4dyg@...> wrote:
>
> I need a freq counter for my 520s any ideas thanks Robert
>

29888. TS-820 AF-1 voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 17:19:01 UTC
From: ae5uu
Topic: 29888 Message: 29888

Mike,

I have no voltage at pins 1 & 2 at the AF-1 plug on the AF unit.

Thanks for your continued help.

73,
Russell
ae5uu

29889. Re: [TS-520_820_530_830] Re: freq counter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 17:37:53 UTC
From: W LEWIS
Topic: 29885 Message: 29889

DG-5's become available on ebay all the time. They sell anywhere from below $100 to $170+. At least four have sold in the last three weeks. I got the one I use (flawless) for $80 plus shipping. Go to ebay, do a search for Kenwood DG-5 then save the search. You will get instant notification when one is listed. It looks much better than the after market one and down the road if you decide to sell the 520S it will be alot easier to sell with the "correct" frequency display. Collectors are very serious about having correct parts or attachments for their their collections, whether their passion be radios, cars, airplanes, cycles or what ever. Get the Kenwood.
Regards,
Butch Lewis
KØPSA

--- On Mon, 2/21/11, kd8hmo <delta5_oh@...> wrote:

From: kd8hmo <delta5_oh@...>
Subject: [TS-520_820_530_830] Re: freq counter
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, February 21, 2011, 10:37 AM

If you cant find a DG-5, check this guy out. He is building custom "DG-5" displays.
http://www.aade.com/C520/C520.htm

--- In TS-520_820_530_830@yahoogroups.com, "robert" <ke4dyg@...> wrote:
>
> I need a freq counter for my 520s any ideas thanks Robert
>

[Non-text portions of this message have been removed]

29890. Re: TS-820 AF-1 voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 17:47:36 UTC
From: w5rkl
Topic: 29888 Message: 29890

If you have zero voltage at plug AF1 pins 1 or 2 check for 14VDC at the AF Unit's plug AF1 pin 3, it should be approximately 14VDC. Lost of 14VDC at AF1 pin 3 can be traced to the 14VDC supply filter circuit on the Relay Unit (X43-1110-00).

The 9VDC from the AF Unit provides LV for all the solid state circuits. Since you have no 9VDC I suspect the VFO, RIT, FIX-R, and RIT LEDs no longer illuminate. Receive and transmit also have failed. You may hear some low level noise with the volume control turned up all the way but that's no indication the receiver's working! You also loss the 3.3VDC receiver bias voltage on AF2 pin 6 as well.

If the 14VDC supply is working, you measure 14VDC at AF1 pin 3, then it's possible Q4, Q5, Q6, and/or Q7 have failed on the AF Unit. Q4 thru Q7 are the 9VDC supply transistor that reduce the 14VDC down to 9VDC and regulate the 9VDC output. Pot VR4 on the AF Unit board adjusts the level of 9VDC at AF1 pins 1 and 2. It also regulates the 3.3VDC receiver bias voltage. The 3.3VDC bias voltage is obtained through pot VR1 on the AF Unit board. VR1 simply reduces the 9VDC down to 3.3VDC through VR1 by adjusting VR1 for 3.3VDC on AF3 pin 6.

Remove your AF AVR Unit board. Look on the foil side for a number. The number will either be "J25-1381-03" or "J25-1381-13". This is the AF AVR Unit board "design" number. Not all AF AVR Unit boards for the 820 are the same!! A replacement board must have the same "J25" foil side number as the one in your 820 otherwise it will NOT work in your 820! I know because I just replaced the AF AVR Unit board in my 820 and found this out! The AF AVR Unit board in the 820 service manual that shows the component and foil image is is NOT the same as the 820 service manual's AF AVR Unit schematic! The foil/component view is a "J25-1381-03" board while the AF AVR Unit schematic is for the "J25-1381-13" board!

You can either replace the defective component(s), Q4, Q5, Q6, or Q7 and possibly D5 (6.1 volt zener) on the AF AVR Unit board or you can purchase a replacement AF AVR Unit board from Bob Mansker, ke5ftf at mail.com.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> I have no voltage at pins 1 & 2 at the AF-1 plug on the AF unit.
>
> Thanks for your continued help.
>
> 73,
> Russell
> ae5uu

>

29891. Voltages on AF-1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 18:35:23 UTC
From: ae5uu
Topic: 29891 Message: 29891

Mike, I was mistaken earlier (bad test lead.) I have the following:

pin 1 to ground 11.82vdc
pin 2 to ground 11.82vdc
pin 3 to ground 14.98vdc

73,
Russell
ae5uu

29892. Re: Voltages on AF-1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 21:07:09 UTC
From: w5rkl
Topic: 29891 Message: 29892

Russell,

Okay, first connect your volt meter to AF1 pin 1 or 2. Next, adjust VR4 on the AF AVR Unit for 9VDC +/- .5VDC. Next, connect your volt meter to AF2 pin 6 and adjust VR1 for 3.3VDC. Recheck AF1 pin 1 or 2, voltage should still be 9VDC. If so then you are done with the LV adjustment.

Make sure you adjust VR4 for the "9 volts" FIRST followed by VR1 for the 3.3VDC. Do NOT adjust VR1 first then VR4 as that will make the 3.3VDC receiver operating bias voltage level "too high"!!

Check for the presence of 9VDC at the following plug and pins in receive:

IF Unit IF1 pin 5
CAR Unit CJ2 "USB" (mode switch set to TUNE, CW, and USB)
CAR Unit CJ2 "LSB" (Mode switch set to LSB and FSK)
PLL Unit terminal labeled "9"
FIX VOX Unit "FX3" pin 1
Relay Unit RL2 pins 10 and 14, RL1 pins 1, 2, and 3
RF Unit RF2 pin 1

Set the FUNCTION switch to "FIX-R" and note the FIX LED lites. Set the FUNCTION switch to VFO, FIX LED should extinguish.

Push RIT button, RIT LED should lite. Reset (release) RIT button, RIT LED should extinguish.

Push RF ATT push button, ATT LED should lite. Reset (release) RF ATT button, ATT LED should extinguish.

Next, remove the 2 prong plug on the rear of the VFO. Connect one ohm meter lead to the "LARGE" pin and the other meter lead to one of the wires on the rear 8 pin socket you replaced the external VFO socket with. One will show continuity, zero ohms. That wire also connects to pin "8" on the normal 9 pin remote VFO socket on the rear panel.

If you have a 9 volt battery you can connect the "+" battery terminal to the wire that connects to the "LARGE" VFO plug pin and the "-" battery terminal to ground. Plug the 2 prong plug back into the VFO. The 820, when powered up, should receive and if the 820 has the digital display, the digital display should light up showing the frequency. If you try this battery test, make absolutely sure you have the correct wire to the "LARGE" pin on the VFO plug!!!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>

> Mike, I was mistaken earlier (bad test lead.) I have the following:
>
> pin 1 to ground 11.82vdc
> pin 2 to ground 11.82vdc
> pin 3 to ground 14.98vdc
>
> 73,
> Russell
> ae5uu
>

29893. Voltage record in my TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 21:08:59 UTC
From: ae5uu
Topic: 29893 Message: 29893

Mike,

You have suggested that I should have:

VF-1 pin 1 9vdc to ground I have 11.82vdc
VF-1 pin 2 9vdc to ground I have 11.82vdc
VF-1 pin 3 14vdc to ground I have 14.98vdc
VF-2 pin 6 3.3vdc to ground I have 4.65vdc

It seems that all of my voltages are a little hot. I have checked the calibration on my meter; it is accurate.

Moving right along, the orange and the red wire from that miserable VFO panel jack (that is responsible for all this) are soldered together. However I also tap off the expected 9vdc from this point for the Electronic Specialty Products DD-103 Universal Digital Dial that I have always used with success in this fashion (Signal and shield are also taken from the VFO panel jack, pin 1 signal, pin 2 shield.) There is NO voltage at this point at the junction of the red and the orange wires.

I still have 900 volts from the high voltage supply. I do not show the 60 ma current that I am looking for. None of the rest of the normal tune up controls are functional today.

No LEDs light up. The only lights that do light up are the panel meter lights.

After that I am dead in the water. I keep reading the posts on this issue, but have not made sense of it yet. What do you think of my voltage readings and the fact there is no 9vdc at the VFO panel jack orange and red wires?

73,

Russell
ae5uu

29894. coax rf connector needed for TS-930 (and possibly others)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 21:16:56 UTC
From: Chris Parnell
Topic: 29894 Message: 29894

Kenwood part number E04-0157-05 is the RF coax in and out sockets (mini jack) on the PA final unit of the TS-930s / 940s and probably other older radios too (hence me posting it to the hybrid group too).
.
They are angled mini coax receptacles that solder to the PCB to accept coax input from the Signal unit (930s) to the PA unit and the coax out from the PA unit to the ANT tuner unit (930s).

I need to obtain 4☐. Does anyone have any?

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

29895. Re: Voltage record in my TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 21:25:00 UTC
From: w5rkl
Topic: 29893 Message: 29895

Russell,

You either misread or missed the segment of my response where I said to "adjust" VR4 on the AF AVR Unit for 9VDC at AF1 pin 1 or 2 and adjust "VR1" on the AF AVR Unit for 3.3VDC on AF2 pin 6!

Okay on the LEDs not lighting up. We can work on those later.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> You have suggested that I should have:
>
> VF-1 pin 1 9vdc to ground I have 11.82vdc
> VF-1 pin 2 9vdc to ground I have 11.82vdc
> VF-1 pin 3 14vdc to ground I have 14.98vdc
> VF-2 pin 6 3.3vdc to ground I have 4.65vdc
>
> It seems that all of my voltages are a little hot. I have checked the calibration on my meter; it is accurate.
>
> Moving right along, the orange and the red wire from that miserable VFO panel jack (that is responsible for all this) are soldered together. However I also tap off the expected 9vdc from this point for the Electronic Specialty Products DD-103 Universal Digital Dial that I have always used with success in this fashion (Signal and shield are also taken from the VFO panel jack, pin 1 signal, pin 2 shield.) There is NO voltage at this point at the junction of the red and the orange wires.
>
> I still have 900 volts from the high voltage supply. I do not show the 60 ma current that I am looking for. None of the rest of the normal tune up controls are functional today.
>
> No LEDs light up. The only lights that do light up are the panel meter lights.
>
> After that I am dead in the water. I keep reading the posts on this issue, but have not made sense of it yet. What do you think of my voltage readings and the fact there is no 9vdc at the VFO panel jack orange and red wires?
>
> 73,
>
> Russell
> ae5uu

>

29896. Re: Voltage record in my TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-21 21:40:26 UTC
From: w5rkl
Topic: 29893 Message: 29896

Russell,

After you adjust the 9VDC (VR4 on the AF AVR UNIT) and the 3.3VDC (VR1 on the AF AVR UNIT), measure the final tube grid voltage.

Make sure the rear panel SG switch is set to ON.

Measure the Rectifier Unit's "-C" bias voltage at RF Unit plug RF2 pin 7. It should be approximately "-110VDC" or so.

Next, measure the bias voltage at the Final Unit PC board's "FG" terminal. The voltage should be approximately "-100VDC" in receive and in transmit, "-55VDC". In transmit, this voltage, with no RF applied from the driver tube, should "vary" when the rear panel's BIAS POT is rotated CW or CCW.

Measure the Final Unit's screen voltage at the "SG" terminal on the Final Unit PC board. The voltage should be approximately "+255VDC" in receive and approximately "+210VDC" in transmit.

If the "FG" and "SG" Final Unit PC board terminal voltages do NOT change, remain the same whether in receive or transmit, the final tubes are NOT conducting!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> You have suggested that I should have:
>
> VF-1 pin 1 9vdc to ground I have 11.82vdc
> VF-1 pin 2 9vdc to ground I have 11.82vdc
> VF-1 pin 3 14vdc to ground I have 14.98vdc
> VF-2 pin 6 3.3vdc to ground I have 4.65vdc
>
> It seems that all of my voltages are a little hot. I have checked the calibration on my meter; it is accurate.
>
> Moving right along, the orange and the red wire from that miserable VFO panel jack (that is responsible for all this) are soldered together. However I also tap off the expected 9vdc from this point for the Electronic Specialty Products DD-103 Universal Digital Dial that I have always used with success in this fashion (Signal and shield are also taken from the VFO panel jack, pin 1 signal, pin 2 shield.) There is NO voltage at this point at the junction of the red and the orange wires.
>

> I still have 900 volts from the high voltage supply. I do not show the 60 ma current that I am looking for. None of the rest of the normal tune up controls are functional today.
>
> No LEDs light up. The only lights that do light up are the panel meter lights.
>
> After that I am dead in the water. I keep reading the posts on this issue, but have not made sense of it yet. What do you think of my voltage readings and the fact there is no 9vdc at the VFO panel jack orange and red wires?
>
> 73,
>
> Russell
> ae5uu
>

29897. Suggested tests

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 01:32:09 UTC
From: ae5uu
Topic: 29897 Message: 29897

Mike,

1) First off, I now have 9vdc and 3.3vdc in the radio. I still have no 9vdc at the VFO panel jack pins 8 & 9.
2) At the IF unit, pin 5 I had nothing but my schematic indicated that I would find 14vdc on pin 4, which I did (15.24vdc.)
3) At the PLL Unit terminal 9 I had nothing, no matter what mode the radio was switched on.
4) At the FIX VOX Unit FX3 pin 1 I had 13.21vdc.
5) In the Relay Unit RL2 I found 15.22vdc on pin 10, and nothing on pin 14. However I did find 5vdc on pin 13. RL1, pins 1, 2, and 3 I had nothing.
6) In the RF Unit RF2 pin 1 I found nothing.
7) No LED lights anywhere.
8) The VFO resistance measurement were a little confusing. When the radio was turned off, the resistance was 2.52KOhms. When the radio was turned on, the resistance read high ohms.
9) No joy using a 12vdc battery.
10) The Rectifier Unit's "-c"bias voltage at the RF plug RF2, pin 7 was 118vdc.
11) In the Final Unit PC board, I could not find a terminal "FG". I did find IPM, SG, PD1, PU2, DRV, H, MR1, and MR2. There was no voltage at any of these terminals. The relay clicks when I key the microphone, but I still did not find any voltage on the Final Unit's terminals, including "SG".

I very much appreciate your continued advice.

73,
Russell
ae5uu

29898. Re: [TS-520_820_530_830] Suggested tests

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 01:53:51 UTC
From: Jim S
Topic: 29897 Message: 29898

RE: # 8 Are you trying to read resistance on a "live"circuit ? That is a BIG "no-no" ! ! !

----- Original Message -----
From: ae5uu
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 21, 2011 8:32 PM
Subject: [TS-520_820_530_830] Suggested tests

Mike,

1) First off, I now have 9vdc and 3.3vdc in the radio. I still have no 9vdc at the VFO panel jack pins 8 & 9.
2) At the IF unit, pin 5 I had nothing but my schematic indicated that I would find 14vdc on pin 4, which I did (15.24vdc.)
3) At the PLL Unit terminal 9 I had nothing, no matter what mode the radio was switched on.
4) At the FIX VOX Unit FX3 pin 1 I had 13.21vdc.
5) In the Relay Unit RL2 I found 15.22vdc on pin 10, and nothing on pin 14. However I did find 5vdc on pin 13. RL1, pins 1, 2, and 3 I had nothing.
6) In the RF Unit RF2 pin 1 I found nothing.
7) No LED lights anywhere.
8) The VFO resistance measurement were a little confusing. When the radio was turned off, the resistance was 2.52KOhms. When the radio was turned on, the resistance read high ohms.
9) No joy using a 12vdc battery.
10) The Rectifier Unit's "-c"bias voltage at the RF plug RF2, pin 7 was 118vdc.
11) In the Final Unit PC board, I could not find a terminal "FG". I did find IPM, SG, PD1, PU2, DRV, H, MR1, and MR2. There was no voltage at any of these terminals. The relay clicks when I key the microphone, but I still did not find any voltage on the Final Unit's terminals, including "SG".

I very much appreciate your continued advice.

73,
Russell
ae5uu

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[Non-text portions of this message have been removed]

29899. Re: Suggested tests

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 02:32:14 UTC
From: w5rkl
Topic: 29897 Message: 29899

You say there is 15.22VDC on Relay Unit RL2 pin 10. If you pull the relay from the Relay Unit, that voltage on pin 10 should be "zero".

The wrong voltages such as RL2 pin 10 and lack of voltage on RF2 pin 1 tells me a couple of things:

1. The female sockets inside the plugs are not making contact with the board pins

2. Some of the pins on the boards may have bad solder/broken connections to the foil runs on the foil side

3. Broken wires in the wiring harness

4. Your meter lead is not making contact with the female socket inside the plugs

etc...

Having 15.22VDC on Relay Unit plug RL2 pin 10 is simply wrong. The same applies to FIX VOX Unit plug FX3 pin 1 which should be 9VDC "directly", through the wiring harness, from the AF AVR Unit plug AF1 pins 1 and 2!

With the relay in the socket on the Relay Unit and the relay NOT energized, relay plug RL2 pin 14 has 9VDC "directly" from the AF AVR Unit plug AF1 pin 1 and 2 through the wiring harness that is applied through relay terminals RL-12 to relay plug RL2 pin 10! Therefore, the voltage on RL2 pin 10 should have "9VDC" not "15.22VDC"!

Are you using the schematic to trace and measure the voltages? If not then you should. I recommend wrapping a small solid wire around the tip of your volt meter probe when measuring voltages at the plug pins. Strip back about 1/2 inch of bare solid wire and wrap one end around the volt meter's probe then wrap electric tape around the probe's tip. This will keep the wire attached to the probe. Strip back about 1/4" of outer covering exposing the bare solid wire. Attach the black negative lead to the chassis and insert the red positive probe with wire attached into the plug's pin. A pin that should have a voltage that did not in previous measurements may now show voltage. Do not do this when measuring 210VDC or higher without using care to prevent receiving a shock!

Never troubleshoot when you are tired or frustrated. Mistakes are easily made that can harm or even kill you. Always use standard safety precautions when taking voltage measurements.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> 1) First off, I now have 9vdc and 3.3vdc in the radio. I still have no 9vdc at the VFO

panel jack pins 8 & 9.
> 2) At the IF unit, pin 5 I had nothing but my schematic indicated that I would find 14vdc on pin 4, which I did (15.24vdc.)
> 3) At the PLL Unit terminal 9 I had nothing, no matter what mode the radio was switched on.
> 4) At the FIX VOX Unit FX3 pin 1 I had 13.21vdc.
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> 6) In the RF Unit RF2 pin 1 I found nothing.
> 7) No LED lights anywhere.
> 8) The VFO resistance measurement were a little confusing. When the radio was turned off, the resistance was 2.52KOhms. When the radio was turned on, the resistance read high ohms.
> 9) No joy using a 12vdc battery.
> 10) The Rectifier Unit's "-c"bias voltage at the RF plug RF2, pin 7 was 118vdc.
> 11) In the Final Unit PC board, I could not find a terminal "FG". I did find IPM, SG, PD1, PU2, DRV, H, MR1, and MR2. There was no voltage at any of these terminals. The relay clicks when I key the microphone, but I still did not find any voltage on the Final Unit's terminals, including "SG".
>
> I very much appreciate your continued advice.
>
> 73,
> Russell
> ae5uu
>

29900. Re: Suggested tests

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 02:38:39 UTC
From: w5rkl
Topic: 29897 Message: 29900

One additional comment for Russell.

I never said to use a "12 volt" battery! Where did you get the idea to use a "12 volt" battery?

I agree, never attempt to measure resistance in a "live" circuit!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> RE: # 8 Are you trying to read resistance on a "live"circuit ? That is a BIG "no-no" ! ! !
>
>
> ----- Original Message -----
> From: ae5uu
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, February 21, 2011 8:32 PM
> Subject: [TS-520_820_530_830] Suggested tests
>
>
>
> Mike,
>
> 1) First off, I now have 9vdc and 3.3vdc in the radio. I still have no 9vdc at the VFO panel jack pins 8 & 9.
> 2) At the IF unit, pin 5 I had nothing but my schematic indicated that I would find 14vdc on pin 4, which I did (15.24vdc.)
> 3) At the PLL Unit terminal 9 I had nothing, no matter what mode the radio was switched on.
> 4) At the FIX VOX Unit FX3 pin 1 I had 13.21vdc.
> 5) In the Relay Unit RL2 I found 15.22vdc on pin 10, and nothing on pin 14. However I did find 5vdc on pin 13. RL1, pins 1, 2, and 3 I had nothing.
> 6) In the RF Unit RF2 pin 1 I found nothing.
> 7) No LED lights anywhere.
> 8) The VFO resistance measurement were a little confusing. When the radio was turned off, the resistance was 2.52KOhms. When the radio was turned on, the resistance read high ohms.
> 9) No joy using a 12vdc battery.
> 10) The Rectifier Unit's "-c"bias voltage at the RF plug RF2, pin 7 was 118vdc.
> 11) In the Final Unit PC board, I could not find a terminal "FG". I did find IPM, SG, PD1, PU2, DRV, H, MR1, and MR2. There was no voltage at any of these terminals. The relay clicks when I key the microphone, but I still did not find any voltage on the Final Unit's terminals, including "SG".

>
> I very much appreciate your continued advice.
>
> 73,
> Russell
> ae5uu
>
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>
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>

29901. Retest on Tuesday

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 02:52:59 UTC
From: ae5uu
Topic: 29901 Message: 29901

Mike,

I will run through all the tests again tomorrow, taking into account your last 2 postings. I will post the results when I have them.

73,
Russell
ae5uu

29902. Re: AGC Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 02:40:20 UTC
From: k3bmk
Topic: 29829 Message: 29902

Anyone have any thoughts on where I should start looking for the cause of this problem?

Thanks!

73
Brian

--- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@...> wrote:
>
> Mike,
>
> The tone remains unchanged when spinning the VFO.
>
> 73
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Brian,
> >
> > When the tone appears, with the AGC switch turned OFF, tuning the VFO to a higher or lower frequency, does the tone vary in frequency and/or disappear?
> >
> > The AGC switch has nothing to do with receive frequency control or anything other than the receiver's gain control.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@> wrote:
> > >
> > > I have a baffling agc problem which I need some assistance in figuring out.
> > >
> > > When my AGC switch is flipped to "off" I get a high pitched tone. When the mode switch is USB the pitch of the tone is a bit lower than when the switch is in LSB.
> > >
> > > When the AGC switch is flipped to fast or slow the tone goes away.
> > >
> > > Not really sure where to start at troubleshooting this issue.
> > >
> > > Any assistance would be appreciated!
> > >

> > > Thanks!
> > >
> > > Brian
> > > K3BMK
> > >
> >
>

29903. Re: [TS-520_820_530_830] Re: AGC Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 03:55:02 UTC
From: Jim S
Topic: 29829 Message: 29903

Sounds like a power supply de-coupling problem to me. Have you checked all the electrolytics that are used to bypass the power supply from the RF floating around the inside of the set?

If the gain is advanced all the way, there is a high possibility that a signal is leaking to where it shouldn't be getting, and causing a positive feedback (oscillation) situation.

Electrolytics do dry out and lose the ability to filter out those high frequencies, and you might never catch the problem by simply measuring D.C. voltages. Use a scope, and check any place where audio or RF signals should be bypassed to ground. There should be no significant AC signals there! If you find a signal of the proper frequency, that comes and goes when you change the gain , you have found the bad part, but caps are not that expensive, and sometimes re-capping a radio is an excellent restoration step.

----- Original Message -----
From: k3bmk
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 21, 2011 9:40 PM
Subject: [TS-520_820_530_830] Re: AGC Problem?

Anyone have any thoughts on where I should start looking for the cause of this problem?

Thanks!

73
Brian

--- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@...> wrote:
>
> Mike,
>
> The tone remains unchanged when spinning the VFO.
>
> 73
> Brian
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Brian,
> >
> > When the tone appears, with the AGC switch turned OFF, tuning the VFO to a higher or lower frequency, does the tone vary in frequency and/or disappear?
> >
> > The AGC switch has nothing to do with receive frequency control or anything other than the receiver's gain control.
> >

> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "k3bmk" <k3bmk@> wrote:
> > >
> > > I have a baffling agc problem which I need some assistance in figuring out.
> > >
> > > When my AGC switch is flipped to "off" I get a high pitched tone. When the mode switch is USB the pitch of the tone is a bit lower than when the switch is in LSB.
> > >
> > > When the AGC switch is flipped to fast or slow the tone goes away.
> > >
> > > Not really sure where to start at troubleshooting this issue.
> > >
> > > Any assistance would be appreciated!
> > >
> > > Thanks!
> > >
> > > Brian
> > > K3BMK
> > >
> >
>

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29904. HV board mystery

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 05:20:35 UTC
From: kevin
Topic: 29904 Message: 29904

I am checking the resistors on my 520 HV board. When I got to R7 I noticed that the schematic only goes to R6. I have an extra parts 520X which has an HV board with 6 resistors, the same as the schematic. Both boards have the same part number on them. Any ideas?
Kevin
KD0ILM

29905. Re: HV board mystery

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 06:14:53 UTC
From: Steve Bontempo
Topic: 29904 Message: 29905

Hey Kevin, without looking at mine I can't be sure but I can tell you that some of the boards are interchangeable with little to no modification between the 520 radios. Someone may have swapped out the board from another rig perhaps? I had a discussion with Mike W5RKL about this when troubleshooting my AF Unit. Kenwood apparently made little design changes here and there during the manufacturing process but they should have changed the part number of the board if they made a design change to the schematic. The fact that your boards are the same part number is kind of odd.

I ran into this sort of thing with my 2 520s where one has a dial light and the other does not. I know the earlier versions of the 520's VFO's did not come with lit dials but in my case, the later serial number is the one without the lights so I figure the VFO was replaced at some point. Unless you're the original owner, I would suspect that the board was taken from another model radio as the schematic that I have also shows up to R6.

Steve KU4BY

29906. Re: Automated RX antenna switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 08:16:45 UTC
From: pakjan830
Topic: 29847 Message: 29906

Hi Mike, thanks for the answer!

That would be the scenario for a SSB QSO if I understand you right (as no power is ouput when not speaking). What would happen though if I had the same in a VOX activated PSK or CW QSO? Does the VOX cater for a delay between PTT and the emission of HF?

73s Jan

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> First, unless there is power output when the relay switches, there will be no damage.
>
> Second, with zero power output to an external amplifier then there will be "zero" ALC produced and fed from the amplifier. ALC is not a "constant" gain control voltage from a power supply. The TS-830's ALC is produce ONLY when grid current flows in the final tubes and that requires an RF signal being applied at a level that causes the final tube grids to swing "positive" during a portion of the positive half of the RF cycle. Some, not all, external amplifiers produce ALC by rectifying the RF driving signal then feeding that rectified voltage back across the ALC connection to the TS-830 to reduce the gain. If the TS-830 is not providing any RF output then there will be no ALC produced or fed back from the amplifier to the TS-830.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> >
> > Hi all,
> >
> > I would like to be able to use a separate RX antenna (small loop) with my TS-830S which I need to switch over automatically to the TX antenna whenever PTT is activated.
> >
> > How I was hoping to do that is by utilizing the RX-TX relay contacts at the rear accessory connector to switch a coaxial relay which connects the other antenna to the antenna input. I am a little bit concerned about hot switching the signal and thereby damaging relay or radio.
> >
> > Are there any specs as to the timing between when the relay switches and when power is present at the antenna plug or does this happen in the same instant?
> >
> > How does an external PA handle this? Does it reduce output power via ALC until it has completed its switching cycle?
> >
> > 73 de Jan, DK3LJ

> >
>

29907. Re: Automated RX antenna switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 12:03:51 UTC
From: w5rkl
Topic: 29847 Message: 29907

Hello Jan,

What you are talking about is a relay sequencing switching circuit that controls the activation and switching of the antenna relay "first" then activating the transmitter second when switching from receive to transmit. When switching back to receive, the opposite sequence occurs, the transmitter activation relay releases "first" following by the antenna change over relay "last". You can't achieve this by connecting a separate antenna change relay controlled by the TS-830's amplifier relay terminals on the Remote socket.

While such a circuit can be easily controlled with PTT, CW break-in would require a bit more key switching and break-in control.

Simply connecting an external antenna change relay to the TS-830's Remote socket amplifier relay terminals will not accomplish this. When the TS-830 is keyed and the relays are energized, there is a millisecond of delay when the 830's internal relay energizes fully then activating the external relay, switching the antennas in transmit. The sequence operates in the same manner when switching back to receive, the 830's internal relay releases "first" then the antenna change over relay releases "second".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
>
> Hi Mike, thanks for the answer!
>
> That would be the scenario for a SSB QSO if I understand you right (as no power is ouput when not speaking). What would happen though if I had the same in a VOX activated PSK or CW QSO? Does the VOX cater for a delay between PTT and the emission of HF?
>
> 73s Jan
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > First, unless there is power output when the relay switches, there will be no damage.
> >
> > Second, with zero power output to an external amplifier then there will be "zero" ALC produced and fed from the amplifier. ALC is not a "constant" gain control voltage from a power supply. The TS-830's ALC is produce ONLY when grid current flows in the final tubes and that requires an RF signal being applied at a level that causes the final tube grids to swing "positive" during a portion of the positive half of the RF cycle. Some, not all, external amplifiers produce ALC by rectifying the RF driving signal then feeding that rectified voltage back across the ALC connection to the TS-830 to reduce the gain. If the TS-830 is not providing any RF output then there will be no ALC produced or fed back from

the amplifier to the TS-830.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> > >
> > > Hi all,
> > >
> > > I would like to be able to use a separate RX antenna (small loop) with my TS-830S which I need to switch over automatically to the TX antenna whenever PTT is activated.
> > >
> > > How I was hoping to do that is by utilizing the RX-TX relay contacts at the rear accessory connector to switch a coaxial relay which connects the other antenna to the antenna input. I am a little bit concerned about hot switching the signal and thereby damaging relay or radio.
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> > > Are there any specs as to the timing between when the relay switches and when power is present at the antenna plug or does this happen in the same instant?
> > >
> > > How does an external PA handle this? Does it reduce output power via ALC until it has completed its switching cycle?
> > >
> > > 73 de Jan, DK3LJ
> > >
> >
>

29908. AF AVR Unit VR4 to adjust pin 1 & 2 to 9vdc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 14:11:20 UTC
From: ae5uu
Topic: 29908 Message: 29908

Good morning Mike,

I have started over, with the test lead modification that you recommended (works well.)

AF AVR Unit AF1 pins 1 & 2 11.82vdc
AF AVR Unit AF1 pin 3 14.58vdc
AF AVR Unit AF2 pin 6 3.58vdc

No matter what I adjust VR4 to, the voltage remains at 11.82vdc.

I thought I had better submit this before I go any further since I know that I have a problem here.

73,

Russell
ae5uu

29909. Re: AF AVR Unit VR4 to adjust pin 1 & 2 to 9vdc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 14:30:57 UTC
From: w5rkl
Topic: 29908 Message: 29909

Morning Russell,

Yes, I agree, your AF AVR Unit board appears to have a problem. It's appears one or more of the 4 transistors in the 9 volt supply are bad. Which one would require some testing at the component level. Before fixing any further problems you would have to fix the AF AVR Unit board. Having 11.82 volts on the 9VDC supply can and will affect the VFO and other 9 volt circuits. Hopefully the extra 2 volts has not damaged the other 9 volt circuits.

A quick fix is to replace the AF AVR Unit board in your 820. Bob Mansker, ke5ftf at mail.com may have a used AF AVR Unit board. You should remove the AF AVR Unit board, turn it over, and find the "J25" number. The number will either be "J25-1381-03" or "J35-1381-13". The replacement board must have the same "J25" number as the AF AVR Unit board your 820 now has. I have both AF AVR Unit boards here, a "J25-1381-03" and a "J25-1381-03". My e-mail address is good here and on qrz.com.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Good morning Mike,
>
> I have started over, with the test lead modification that you recommended (works well.)
>
> AF AVR Unit AF1 pins 1 & 2 11.82vdc
> AF AVR Unit AF1 pin 3 14.58vdc
> AF AVR Unit AF2 pin 6 3.58vdc
>
> No matter what I adjust VR4 to, the voltage remains at 11.82vdc.
>
> I thought I had better submit this before I go any further since I know that I have a problem here.
>
> 73,
>
> Russell
> ae5uu
>

29910. AF AVR board number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 14:54:16 UTC
From: ae5uu
Topic: 29910 Message: 29910

Mike,

In your email you said that you have a "J25-1381-03" and a "J25-1381-03". I hope this duplicate was a typo. My board is "J25-1381-13".

73,

Russell
ae5uu

29911. Re: AF AVR board number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 15:23:26 UTC
From: w5rkl
Topic: 29910 Message: 29911

Oooppsss, my mistake. Yes, I meant "J25-1381-03" and "J25-1381-13".

I have the J25-1381-13 board here. It works and it has a new Q7 (2SA473(Y)) and D5 (WZ-060) 6 volt zener I put in last year. Drop me an e-mail if you are interested.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> In your email you said that you have a "J25-1381-03" and a "J25-1381-03". I hope this duplicate was a typo. My board is "J25-1381-13".
>
> 73,
>
> Russell
> ae5uu
>

29912. Sidetone frequency in 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 11:55:14 UTC
From: gm0hks
Topic: 29912 Message: 29912

hi,
Does a facility exist to lower the sidetone of the transmitted CW note on the TS830S ? I dont know if doing so would impact on a narrow CW filter that I have installed on the rig. I know 800hz or thereabouts appears to be the norm but I prefer a lower note, say 600hz thru 750hz. Is there a pot onboard which will provide for this or is it fixed ?
regards
Will / GM0HKS

29913. AF AVR board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 15:31:24 UTC
From: ae5uu
Topic: 29913 Message: 29913

Mike,

Yes I would like to obtain this AF AVR "J25-1381-13" board from you. My email address is rmn43@... for making the arrangements. Thank you.

73,

Russell
ae5uu

29914. Re: Sidetone frequency in 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 15:34:22 UTC
From: w5rkl
Topic: 29912 Message: 29914

Hi Will,

Unfortunately there isn't a pot that changed the frequency of the CW sidetone, only the sidetone volume level (VR1 on the AF Unit). Also, the CW sidetone does not flow through the crystal filters. The CW sidetone is applied to only "2" places

1. The receiver's audio amplifier so the operator can hear his/her dits and dahs

and

2. The VOX circuit for CW break-in

The CW sidetone is not applied to any other circuit.

The CW sidetone oscillator is Q1 and supporting component on the 830's AF Unit. Fixed C2, C3, C4, C5 and fixed resistors R5, R6, and R7 affect the audio frequency of the CW sidetone.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "gm0hks" <gm0hks@...> wrote:
>
> hi,
> Does a facility exist to lower the sidetone of the transmitted CW note on the TS830S ? I dont know if doing so would impact on a narrow CW filter that I have installed on the rig. I know 800hz or thereabouts appears to be the norm but I prefer a lower note, say 600hz thru 750hz. Is there a pot onboard which will provide for this or is it fixed ?
> regards
> Will / GM0HKS
>

29915. Re: [TS-520_820_530_830] Re: Sidetone frequency in 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 15:46:36 UTC
From: Will Beattie
Topic: 29912 Message: 29915

Hi Mikethanx for the information. Guess I better get used to that 800 +/- hz note as I do not wish to spend time changing out resistors of differing values to achieve a lower audio frequency.73Will / GM0HKS--- On Tue, 22/2/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: Sidetone frequency in 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, 22 February, 2011, 15:34

Hi Will,

Unfortunately there isn't a pot that changed the frequency of the CW sidetone, only the sidetone volume level (VR1 on the AF Unit). Also, the CW sidetone does not flow through the crystal filters. The CW sidetone is applied to only "2" places

1. The receiver's audio amplifier so the operator can hear his/her dits and dahs

and

2. The VOX circuit for CW break-in

The CW sidetone is not applied to any other circuit.

The CW sidetone oscillator is Q1 and supporting component on the 830's AF Unit. Fixed C2, C3, C4, C5 and fixed resistors R5, R6, and R7 affect the audio frequency of the CW sidetone.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "gm0hks" <gm0hks@...> wrote:

>

> hi,

> Does a facility exist to lower the sidetone of the transmitted CW note on the TS830S ? I dont know if doing so would impact on a narrow CW filter that I have installed on the rig. I know 800hz or thereabouts appears to be the norm but I prefer a lower note, say 600hz thru 750hz. Is there a pot onboard which will provide for this or is it fixed ?

> regards

> Will / GM0HKS

>

[Non-text portions of this message have been removed]

29916. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 16:09:08 UTC
From: sv0xbq
Topic: 29777 Message: 29916

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Chris,
>
> I'm sorry but that is not true.
>
> The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris and Alex <alexandchrisp@> wrote:

Hi Mike,

Sorry Mike but I disagree.

I have a P1 Touch Paddle Keyer (www.cwtouchkeyer.com). The supplied documentation states "This keyer output circuit is designed to switch key input of 13.8 volts or less. Do not attempt to use this output with a vacuum tube transmitter (either grid blocked or cathode keyed).

I also use a Link-All-3.0 interface which would lock on after about ten minutes use. I modified it with the single transistor grid block keying cct in the files section and for the past two years or so it's performed without a hiccup. Having said this I must say I also use a Watson "W-CRIK" key with no interface and that's fine.

73
Chris SV0XBQ/9

There are probably a lot of keyers that have no problem with 61vdc but not all. (unless I've been unlucky to find the only two that don't)
> >
> > You'll need a keyer interface as the voltage on the key cct of the hybrids
> > is too high for most keyers. There's a good but simple circuit in the files
> > on the site. Works a treat for me.
> > Chris SV0XBQ/9
> >
> > On 14 February 2011 17:14, mathprof53575 <wilson@> wrote:
> >
> > >

> > >
> > >
> > >
> > > None of these "boat anchors" has a built-in keyer. I have nothing against
> > > MFJ but there are lots of keyer kits out there, some very cheap like
> > > http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
> > > MFJ kits, you'd have to provide some kind of a case.
> > > Bob Wilson
> > > WA9D
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > >
> > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > bencher paddle directly hooked up to the radio, or do I need an electronic
> > > keyer like an MFJ...
> > > >
> > > > Thanks, Nick k7nrt
> > > >
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> > [Non-text portions of this message have been removed]
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>

29917. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 17:18:10 UTC
From: w5rkl
Topic: 29777 Message: 29917

Hi Chris,

I'll admit, and correct my "all keyer" statement, that your keyer appears to be one of the few exceptions. However, when referring to the Kenwood hybrid keying voltage as being excessively high, -60VDC is not considered to be an excessive keying voltage. This is the typical CW grid blocking keying voltage for many, not all, vintage transmitters and transceivers. There are, however, some vintage transmitters that use cathode keying where the CW keying voltage is much higher, on the order of 100VDC and higher.

The only time I have experienced failure in a keyer is when I plugged an Heathkit HD-10 keyer into a Swan 350. The HD-10 maximum keying voltage is -105VDC at 20ma, if I remember correctly, and the moment I plugged the HD-10 into the 350 the HD-10 keying transistor failed, was shorted internally.

Anyway, thanks for the information on your keyer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "sv0xbq" <alexandchrisp@...> wrote:
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Chris,
> >
> > I'm sorry but that is not true.
> >
> > The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.
> >
> > 73s
> > Mike
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> Chris SV0XBQ/9
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> > > You'll need a keyer interface as the voltage on the key cct of the hybrids
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> > > On 14 February 2011 17:14, mathprof53575 <wilson@> wrote:
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> > > > MFJ kits, you'd have to provide some kind of a case.
> > > > Bob Wilson
> > > > WA9D
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > > >
> > > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > > bencher paddle directly hooked up to the radio, or do I need an electronic
> > > > keyer like an MFJ...
> > > > >
> > > > > Thanks, Nick k7nrt
> > > > >
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> > > [Non-text portions of this message have been removed]
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>

29918. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 17:33:55 UTC
From: Jim S
Topic: 29777 Message: 29918

Mike, I had an old Multi-Elmac AF-67 that used Cathode Keying. You are right, the voltage was in excess of 100 volts, key up. You had to remember to put the button contact of a straight key on the cathode side of the circuit, and not the frame, or you could get a nasty shock! Don't ask me how I know this !

Jim AG3Y

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 22, 2011 12:18 PM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Hi Chris,

I'll admit, and correct my "all keyer" statement, that your keyer appears to be one of the few exceptions. However, when referring to the Kenwood hybrid keying voltage as being excessively high, -60VDC is not considered to be an excessive keying voltage. This is the typical CW grid blocking keying voltage for many, not all, vintage transmitters and transceivers. There are, however, some vintage transmitters that use cathode keying where the CW keying voltage is much higher, on the order of 100VDC and higher.

The only time I have experienced failure in a keyer is when I plugged an Heathkit HD-10 keyer into a Swan 350. The HD-10 maximum keying voltage is -105VDC at 20ma, if I remember correctly, and the moment I plugged the HD-10 into the 350 the HD-10 keying transistor failed, was shorted internally.

Anyway, thanks for the information on your keyer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "sv0xbq" <alexandchrisp@...> wrote:
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Chris,
> >
> > I'm sorry but that is not true.
> >
> > The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.
> >
> > 73s
> > Mike

> > W5RKL
> >
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> > --- In TS-520_820_530_830@yahoogroups.com, Chris and Alex <alexandchrisp@> wrote:
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> Hi Mike,
>
> Sorry Mike but I disagree.
>
> I have a P1 Touch Paddle Keyer (www.cwtouchkeyer.com). The supplied documentation states "This keyer output circuit is designed to switch key input of 13.8 volts or less. Do not attempt to use this output with a vacuum tube transmitter (either grid blocked or cathode keyed).
>
> I also use a Link-All-3.0 interface which would lock on after about ten minutes use. I modified it with the single transistor grid block keying cct in the files section and for the past two years or so it's performed without a hiccup. Having said this I must say I also use a Watson "W-CRIK" key with no interface and that's fine.
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> 73
> Chris SV0XBQ/9
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> There are probably a lot of keyers that have no problem with 61vdc but not all. (unless I've been unlucky to find the only two that don't)
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> > > You'll need a keyer interface as the voltage on the key cct of the hybrids
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> > > on the site. Works a treat for me.
> > > Chris SV0XBQ/9
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> > > On 14 February 2011 17:14, mathprof53575 <wilson@> wrote:
> > >
> > > >
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> > > >
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> > > > MFJ but there are lots of keyer kits out there, some very cheap like
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> > > > MFJ kits, you'd have to provide some kind of a case.
> > > > Bob Wilson
> > > > WA9D

> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > > >
> > > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > > bencher paddle directly hooked up to the radio, or do I need an electronic
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> > > > > Thanks, Nick k7nrt
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> > > >
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> > >
> > > [Non-text portions of this message have been removed]
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>

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16960)
http://www.pctools.com
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16960)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

29919. Lost 9vdc saga continues

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 17:37:07 UTC
From: ae5uu
Topic: 29919 Message: 29919

Mike,

I getting over my frustration at not being on the air daily. I am starting to enjoy this search process, the majority enabled by your guidance.

As I said, I have removed the AF AVR board. It is a "J25-1381-13".
I removed VR4 and found it to read 600 ohms across the coil, which is not too far off the specified 500 ohms (R12-0042-05) I should think. The center tap works correctly from each end.

So you suggest that we are talking about 1 or more of the 4 transisters in the 9vdc circuit, Q4, Q5, and Q6 (all 2SC372, part number V03-0099-05) and or Q7 (2SA496, part number V11-0113-05)). Can I test this, with the transistors either on or off the circuit board using my only tool, a volt-ohm meter?

You also mention D5 Zener diode (WZ-061, the number in my book, but not necessarily the one in my radio as my book is a Pdf file, part number V11-0243-05 also from my book). These are all easy to access. Are the individual parts expensive? Do you think that I could find them at Radio Shack?

I no doubt will purchase your board (through PayPal), and appreciate the opportunity to do so. In the meantime I am keeping myself busy. Am I wasting my time with this?

73,

Russell
ae5uu

29920. Re: Lost 9vdc saga continues

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 17:51:48 UTC
From: w5rkl
Topic: 29919 Message: 29920

Hi Russell,

I doubt you will find the components at Radio Shack. I replaced D5 with a 6 volt zener. D5 is a WZ-061, 6.1 volt zener. I found Q7 (2SA496(Y)) at a component warehouse but I can't remember the web address or company name. I bought 10 of them, they were priced at $1 each, so I have new 2SA496(Y) transistors that I can send you one along with the 6 volt zener diode for D5, also new. I have not cross referenced Q4, Q5, and Q6 with a replacement NPN transistor simply because Q4 thru Q6 were not bad. I replaced Q7 because my 820 was drifting more than factory specs. After replacing Q7 with a new 2SA496, the drift settled down to within the manual's factory specs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Mike,
>
> I getting over my frustration at not being on the air daily. I am starting to enjoy this search process, the majority enabled by your guidance.
>
> As I said, I have removed the AF AVR board. It is a "J25-1381-13".
> I removed VR4 and found it to read 600 ohms across the coil, which is not too far off the specified 500 ohms (R12-0042-05) I should think. The center tap works correctly from each end.
>
> So you suggest that we are talking about 1 or more of the 4 transisters in the 9vdc circuit, Q4, Q5, and Q6 (all 2SC372, part number V03-0099-05) and or Q7 (2SA496, part number V11-0113-05)). Can I test this, with the transistors either on or off the circuit board using my only tool, a volt-ohm meter?
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> You also mention D5 Zener diode (WZ-061, the number in my book, but not necessarily the one in my radio as my book is a Pdf file, part number V11-0243-05 also from my book). These are all easy to access. Are the individual parts expensive? Do you think that I could find them at Radio Shack?
>
> I no doubt will purchase your board (through PayPal), and appreciate the opportunity to do so. In the meantime I am keeping myself busy. Am I wasting my time with this?
>
> 73,
>
> Russell
> ae5uu
>

29921. Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 18:02:04 UTC
From: w5rkl
Topic: 29777 Message: 29921

Jim,

I have a Heathkit Apache TX-1 and the CW keying voltage is, if I remember correctly, about 130VDC or so. I remember keying it with an Eico 747 tube keyer which has a reed relay to key the circuit. I wouldn't think of using my MFJ-407 or HD-10 keyer. YOu could sure tell it was a vintage transmitter by the initial make when the CW key was closed, a very slight chirp could be heard even with the differential keying circuit the Apache used.

Heathkit used -60VDC or so grid block keying in their SB and HW line of 5 band transceivers (HW-100/101 and SB-100/101/102) and their hybrid HX-1681 transmitter. I believe the Heathkit DX20, DX-40, and DX-60 used cathode keying as well. I had a Hallicrafters HT-32 that used grid block CW keying which worked very well with my HD-10 keyer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Mike, I had an old Multi-Elmac AF-67 that used Cathode Keying. You are right, the voltage was in excess of 100 volts, key up. You had to remember to put the button contact of a straight key on the cathode side of the circuit, and not the frame, or you could get a nasty shock! Don't ask me how I know this !
>
> Jim AG3Y
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, February 22, 2011 12:18 PM
> Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s
>
>
>
>
> Hi Chris,
>
> I'll admit, and correct my "all keyer" statement, that your keyer appears to be one of the few exceptions. However, when referring to the Kenwood hybrid keying voltage as being excessively high, -60VDC is not considered to be an excessive keying voltage. This is the typical CW grid blocking keying voltage for many, not all, vintage transmitters and transceivers. There are, however, some vintage transmitters that use cathode keying where the CW keying voltage is much higher, on the order of 100VDC and higher.
>
> The only time I have experienced failure in a keyer is when I plugged an Heathkit HD-10 keyer into a Swan 350. The HD-10 maximum keying voltage is -105VDC at 20ma, if I remember correctly, and the moment I plugged the HD-10 into the 350 the HD-10 keying transistor

failed, was shorted internally.
>
> Anyway, thanks for the information on your keyer.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "sv0xbq" <alexandchrisp@> wrote:
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Chris,
> > >
> > > I'm sorry but that is not true.
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> > > The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.
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> > > 73s
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> > > W5RKL
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> > > > On 14 February 2011 17:14, mathprof53575 <wilson@> wrote:
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> > > > > None of these "boat anchors" has a built-in keyer. I have nothing against
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> > > > > Bob Wilson
> > > > > WA9D
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> > > > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > > > >
> > > > > > Recently acquired a TS-530s and I would like to know if I can use a
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> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16960)

> http://www.pctools.com
> =======
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> [Non-text portions of this message have been removed]
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29922. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 18:44:16 UTC
From: Alan Riley
Topic: 29777 Message: 29922

In the case of the Heathkit HX-1681, there is solid state circuitry within the power supply circuit board that provides for a low voltage at the key jack.

My HX-1681 has an open-circuit voltage of +5.9 V and a short-circuit current of 1.25 mA at the key jack.

Alan, KD5R

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 22, 2011 12:02 PM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Jim,

I have a Heathkit Apache TX-1 and the CW keying voltage is, if I remember correctly, about 130VDC or so. I remember keying it with an Eico 747 tube keyer which has a reed relay to key the circuit. I wouldn't think of using my MFJ-407 or HD-10 keyer. YOu could sure tell it was a vintage transmitter by the initial make when the CW key was closed, a very slight chirp could be heard even with the differential keying circuit the Apache used.

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73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Mike, I had an old Multi-Elmac AF-67 that used Cathode Keying. You are right, the voltage was in excess of 100 volts, key up. You had to remember to put the button contact of a straight key on the cathode side of the circuit, and not the frame, or you could get a nasty shock! Don't ask me how I know this !
>
> Jim AG3Y
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, February 22, 2011 12:18 PM
> Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s
>
>

>
> Hi Chris,
>
> I'll admit, and correct my "all keyer" statement, that your keyer appears to be one of the few exceptions. However, when referring to the Kenwood hybrid keying voltage as being excessively high, -60VDC is not considered to be an excessive keying voltage. This is the typical CW grid blocking keying voltage for many, not all, vintage transmitters and transceivers. There are, however, some vintage transmitters that use cathode keying where the CW keying voltage is much higher, on the order of 100VDC and higher.
>
> The only time I have experienced failure in a keyer is when I plugged an Heathkit HD-10 keyer into a Swan 350. The HD-10 maximum keying voltage is -105VDC at 20ma, if I remember correctly, and the moment I plugged the HD-10 into the 350 the HD-10 keying transistor failed, was shorted internally.
>
> Anyway, thanks for the information on your keyer.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "sv0xbq" <alexandchrisp@> wrote:
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Chris,
> > >
> > > I'm sorry but that is not true.
> > >
> > > The grid block keying voltage at the CW key socket is approximately -61VDC which is well within the maximum CW keying voltage of all CW keyers.
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> > Sorry Mike but I disagree.
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> > I have a P1 Touch Paddle Keyer (www.cwtouchkeyer.com). The supplied documentation states "This keyer output circuit is designed to switch key input of 13.8 volts or less. Do not attempt to use this output with a vacuum tube transmitter (either grid blocked or cathode keyed).

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> > I also use a Link-All-3.0 interface which would lock on after about ten minutes use. I modified it with the single transistor grid block keying cct in the files section and for the past two years or so it's performed without a hiccup. Having said this I must say I also use a Watson "W-CRIK" key with no interface and that's fine.
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> > There are probably a lot of keyers that have no problem with 61vdc but not all. (unless I've been unlucky to find the only two that don't)
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> > > > You'll need a keyer interface as the voltage on the key cct of the hybrids
> > > > is too high for most keyers. There's a good but simple circuit in the files
> > > > on the site. Works a treat for me.
> > > > Chris SV0XBQ/9
> > > >
> > > > On 14 February 2011 17:14, mathprof53575 <wilson@> wrote:
> > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > None of these "boat anchors" has a built-in keyer. I have nothing against
> > > > > MFJ but there are lots of keyer kits out there, some very cheap like
> > > > > http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
> > > > > MFJ kits, you'd have to provide some kind of a case.
> > > > > Bob Wilson
> > > > > WA9D
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@> wrote:
> > > > > >
> > > > > > Recently acquired a TS-530s and I would like to know if I can use a
> > > > > bencher paddle directly hooked up to the radio, or do I need an electronic
> > > > > keyer like an MFJ...
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> > > > > > Thanks, Nick k7nrt
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> =======
> Email scanned by PC Tools - No viruses or spyware found.
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

29923. Re: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 20:44:20 UTC
From: Jim S
Topic: 29777 Message: 29923

I can't imagine what my first Novice rig, a Multi-Elmac AF-67 sounded like over the air! Good thing that most hams looked the other way when they heard a Novice call on the air, with a chirpy, clicky, drifting signal ! I never got an "O O" report, so maybe it wasn't so bad, after all!

Too bad those days didn't last longer. My second rig was a Central Electronics 100V, and that was PURE PLEASURE to operate! Coupled with a 75A-4, was like being in HEAVEN !

Ahhh, Memories !

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, February 22, 2011 1:02 PM
Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

Jim,

I have a Heathkit Apache TX-1 and the CW keying voltage is, if I remember correctly, about 130VDC or so. I remember keying it with an Eico 747 tube keyer which has a reed relay to key the circuit. I wouldn't think of using my MFJ-407 or HD-10 keyer. YOu could sure tell it was a vintage transmitter by the initial make when the CW key was closed, a very slight chirp could be heard even with the differential keying circuit the Apache used.

Heathkit used -60VDC or so grid block keying in their SB and HW line of 5 band transceivers (HW-100/101 and SB-100/101/102) and their hybrid HX-1681 transmitter. I believe the Heathkit DX20, DX-40, and DX-60 used cathode keying as well. I had a Hallicrafters HT-32 that used grid block CW keying which worked very well with my HD-10 keyer.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Mike, I had an old Multi-Elmac AF-67 that used Cathode Keying. You are right, the voltage was in excess of 100 volts, key up. You had to remember to put the button contact of a straight key on the cathode side of the circuit, and not the frame, or you could get a nasty shock! Don't ask me how I know this !
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> Jim AG3Y
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> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, February 22, 2011 12:18 PM
> Subject: [TS-520_820_530_830] Re: Sending CW with the TS-530s

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> Hi Chris,
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> Anyway, thanks for the information on your keyer.
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> > > > > http://k1el.tripod.com/K12.html. But that one is not as easy a kit as the
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> > > > > > Thanks, Nick k7nrt
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29924. Re: coax rf connector needed for TS-930 (and possibly others)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 22:00:22 UTC
From: james27613
Topic: 29894 Message: 29924

Hi Chris,

www.kenwoodparts.com

E04-0157-05 JACK MINI AX2 TS-940S TS-660 $2.64

73 james ke4drn

29925. Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 22:34:53 UTC
From: jon_g4fut
Topic: 29925 Message: 29925

Hi all,
When I turn the RF gain RIGHT DOWN on my TS830s I can detect a slight mains hum in the LS as well as the headphones. Any ideas please?
Jon G4FUT

29926. New member

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-22 23:02:09 UTC
From: Bill
Topic: 64 Message: 29926

Hi Everybody,

First of all, thanks for approving my membership application so quickly. I see this can be a very busy group so I'll probably switch to the digest mode. The mail I have read so far is very encouraging. People are helpful and courteous even when mistakes are made.

I have a set of the 599 twins. Some time in the 80s I took a ham friend to a somewhat distant swap n swindle... er.. hamfest. All the way there he talked about how much he wanted a set of twins. Drake twins. Heath twins. Collins twins. Any twins. So about an hour into the flea market I saw this nice looking set of Kenwood twins with a matching speaker. I called my buddy and he bought them for $250. The seller assured him of course "they work fine business". Much later I saw my friend at work and asked about his new toys. He set his coffee cup down and moaned. "They don't work". And it's worse - a member of our local club had a set with new finals that actually did work for $200! He bought those. Next day I went to his house and looked inside the transmitter... parts missing! I offered him $200 for the broken rig (the receiver seemed to be OK). He jumped all over that and I took the transmitter and receiver to my car. I came back for the speaker but it was still connected to his other new rig. I asked for that. He complained that I was only paying $200! I pointed out the rig doesn't work. I got the speaker, too <evil grin>. I repaired the transmitter and had the twins on the air two days later. I still have them and still use them. Over the years I've made two or three other repairs as the equipment ages. But I find the twins pretty easy to work on..even for me.

73,

Bill KU8H

29927. Re: New member

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 03:03:46 UTC
From: w5rkl
Topic: 64 Message: 29927

HI Bill,

Sounds like you got a good deal!! Did the R599 comes with the 6 and 2 meter converters? If it did they would be mounted on the top right rear inside the receiver. I have an R599A receiver with both 6 and 2 meter converters installed. The 6 meter converter works but the 2 meter converter oscillates, something I have not yet worked on. One of many projects I have waiting to be tackled.

The R599 receive is a nice receiver. I wish it had an IF Shift control but unfortunately it doesn't. The CW filter is very good. I use it with a Drake T4XB transmitter, I had to add a mute circuit so the R599 muting circuit would be compatible with the Drake xmtr mute circuit. It's a simple one transistor switch. Easy to use and works very well.

Anyway, welcome to the group. If you have any questions about your twins or any other Kenwood hybrids, even technical questions not related to a transceiver etc, feel free to ask.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bill" <w_r_cromwell@...> wrote:
>
> Hi Everybody,
>
> First of all, thanks for approving my membership application so quickly. I see this can be a very busy group so I'll probably switch to the digest mode. The mail I have read so far is very encouraging. People are helpful and courteous even when mistakes are made.
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>

> 73,
>
> Bill KU8H
>

29928. Re: Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 03:06:46 UTC
From: w5rkl
Topic: 29925 Message: 29928

Hi Jon,

You might try cleaning and tightening all PC board mounting screws. The foil side of the boards, when mounted in the 830, act as grounds. Over time the mounting screws become lose and corrosion sets in, affecting the board grounds.

Check chassis ground screws as well, they too can become lose which affects the ground.

Until you clean and tighten all mounting screws I would change any filter caps just yet.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@...> wrote:
>
> Hi all,
> When I turn the RF gain RIGHT DOWN on my TS830s I can detect a slight mains hum in the LS as well as the headphones. Any ideas please?
> Jon G4FUT
>

29929. Re: [TS-520_820_530_830] Re: Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 05:58:34 UTC
From: basketoak@cox.net
Topic: 29925 Message: 29929

Bob,

For the uninitiated, could you pls provide the procedure to clean the mounting points.

Thanks,
Dave
KG4MGB

---- w5rkl <w5rkl@...> wrote:

==========
Hi Jon,

You might try cleaning and tightening all PC board mounting screws. The foil side of the boards, when mounted in the 830, act as grounds. Over time the mounting screws become lose and corrosion sets in, affecting the board grounds.

Check chassis ground screws as well, they too can become lose which affects the ground.

Until you clean and tighten all mounting screws I would change any filter caps just yet.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@...> wrote:
>
> Hi all,
> When I turn the RF gain RIGHT DOWN on my TS830s I can detect a slight mains hum in the LS as well as the headphones. Any ideas please?
> Jon G4FUT
>

--
Dave Beadner

29930. Re: Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 16:22:57 UTC
From: jon_g4fut
Topic: 29925 Message: 29930

Thanks Mike....will do...as I have just bouth the rig, I will take pleasure in having a good roam around inside. :-)
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Jon,
>
> You might try cleaning and tightening all PC board mounting screws. The foil side of the boards, when mounted in the 830, act as grounds. Over time the mounting screws become lose and corrosion sets in, affecting the board grounds.
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> Check chassis ground screws as well, they too can become lose which affects the ground.
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> Until you clean and tighten all mounting screws I would change any filter caps just yet.
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> Mike
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> --- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@> wrote:
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> > Hi all,
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29931. Re: [TS-520_820_530_830] Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 16:46:16 UTC
From: John Davidson
Topic: 29925 Message: 29931

consider replacing the filter cqps in the 12 V portion of the power supply.

From: jon_g4fut <jon_g4fut@fastmail.co.uk>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, February 22, 2011 5:34:53 PM
Subject: [TS-520_820_530_830] Hum on audio on 830s

Hi all,
When I turn the RF gain RIGHT DOWN on my TS830s I can detect a slight mains hum in the LS as well as the headphones. Any ideas please?
Jon G4FUT

[Non-text portions of this message have been removed]

29932. Re: Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 16:53:05 UTC
From: kd8hmo
Topic: 29925 Message: 29932

Does any of this apply to the 520S too?

--- In TS-520_820_530_830@yahoogroups.com, <basketoak@...> wrote:
>
> Bob,
>
> For the uninitiated, could you pls provide the procedure to clean the mounting points.
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> Thanks,
> Dave
> KG4MGB
>
>
> ---- w5rkl <w5rkl@...> wrote:
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> Dave Beadner
>

29933. TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 17:40:06 UTC
From: k7zs
Topic: 29933 Message: 29933

Hello Group

Well, troubleshooting and refurishing a TS-830S. All working well, with one problem. the 17 meter band has very low output.

To answer the obvious responses:

1. The TOF line has been cut, so opened up for WARC bands.
2. ALC does peak well on receive, It reacts nicely to aligning with both ANT and RF coils.
3. On transmit, I get NO ALC in either TUNE or CW mode. With FULL CAR on CW mode, I can peak up the output with the DRIVE, TUNE, LOAD controls, as well as adjusting the 18mhz coil. About 7 watts output.
4. I inspected the underside of the RF board, there is no problem there.
5. I removed the 17m coil (L29), no burning, good continuity.
6. I tried several 12BY7A drivers, all act the same.

SO .....

All I can see that remains untested is the C37, the 18pf capacitor that is across the coil for the 17m DRIVE alignment.

Anything else that I am missing?

Thanks and 73

Kevin K7ZS

29934. Re: Hum on audio on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 17:52:52 UTC
From: w5rkl
Topic: 29925 Message: 29934

The PC boards in the hybrids have ground foil on the foil side around the mounting holes. If the ground foil around the holes that mate with the chassis mounting hardware gets corroded, the foil side grounds will be affected. What I typically do is to remove the mounting screws and wet a piece of stiff card board with contact cleaner, slide the card board between the bottom of the board and the mounting screw hardware on the chassis, press the board gently against the card board and slide the card board out from between the bottom of the board and the mounting hardware. I do this until the cardboard comes out clean, not discolored. I change the card board for each pass between the board and the chassis mounting hardware. This ensures a clean foil ground between the PC board and the chassis mounting hardware. I replace the mounting screw and move on to the next hole.

If the LV, 2200ufd 25VDC filter capacitor have high internal leakage current, AC ripple can appear on the 14VDC supply. The 14VDC supply is the source voltage for the "9VDC" and "3.3VDC" supply in the hybrids. The supplies are located in the 520 on the FIX CH AVR Unit board, the "AF AVR Unit" board in the 820, and the "AF Unit" board in the 530 and 830. The filter capacitors, 2200ufd, are located on the bottom right rear in the 520 series (2 axial lead capacitors), on the Relay Unit in the 820 series (2 radial lead capacitors), and the AF Unit board in the 530 and 830 (2 radial lead capacitors).

If you have access to a scope, you can connect the scope to the output of the 14VDC supply to see if there is any AC ripple on the 14VDC supply. If there is AC ripple on the output of the 14VDC supply there is a good chance there will be AC ripple on the 9VDC and 3VDC supplies as well. For connections to the output of the 14VDC supply, check the appropriate transceiver's schematic. The "input" to the 14VDC supply, the connection where the "14VAC" is applied, is labeled "14". There you will see AC ripple. It's the "output" of the 14VDC supply you need to look at with the scope.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Does any of this apply to the 520S too?
>
> --- In TS-520_820_530_830@...m, <basketoak@> wrote:
> >
> > Bob,
> >
> > For the uninitiated, could you pls provide the procedure to clean the mounting points.
> >
> > Thanks,
> > Dave
> > KG4MGB
> >
> >

> > ---- w5rkl <w5rkl@> wrote:
> >
> > =============
> > Hi Jon,
> >
> > You might try cleaning and tightening all PC board mounting screws. The foil side of the boards, when mounted in the 830, act as grounds. Over time the mounting screws become lose and corrosion sets in, affecting the board grounds.
> >
> > Check chassis ground screws as well, they too can become lose which affects the ground.
> >
> > Until you clean and tighten all mounting screws I would change any filter caps just yet.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@> wrote:
> > >
> > > Hi all,
> > > When I turn the RF gain RIGHT DOWN on my TS830s I can detect a slight mains hum in the LS as well as the headphones. Any ideas please?
> > > Jon G4FUT
> > >
> >
> >
> >
> > --
> > Dave Beadner
> >
>

29935. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 18:15:39 UTC
From: w5rkl
Topic: 29933 Message: 29935

Hi Kevin,

The driver tube has nothing to do with your problem nor are the final tubes. Changing the driver tube should be done when the initial tune up step, peaking the ALC with the DRIVE control in TUNE mode with the transmitter keyed, results in a peak ALC indication but the ALC indication begins to drop back towards zero. That indicates a weak/failing driver tube. There should be more than enough drive from the driver tube to peg the ALC meter in TUNE mode during tune up with the CAR control set between 9 and 11 o'clock when adjusting the DRIVE control. In CW mode, unless you turn the CAR control up to between 2 and 3 o'clock, you will not see an ALC indication in transmit. ALC is not used in CW mode as a gain control, the CAR control is used.

What you see on the meter in receive is not "ALC". The meter, in receive, displays the variations in the output of the "AGC" amplifier to the meter amplifiers, based on the incoming signal strength as it is being processed in the "IF" stage on the IF Unit board. Although ALC and AGC both do the same thing, they are different. ALC is a "transmitter" gain control voltage and is only used in "transmit" (USB and LSB modes), never in receive. ALC has nothing to do with nor will ALC be present in the receiver. As I said, ALC is a transmitter gain control voltage and ALC is produced only when grid current flows in the final tubes and only in transmit, never in receive. Since the final tubes are biased to cut off in receive there is no chance of ALC being produced and displayed in receiver. Besides, the relay on the AF Unit "disables" all meter switch positions in receive, allowing only receive signal levels to be displayed as S Units.

I recommend checking the PLL Unit individual band frequencies. This is covered in the TS-830 service manual, step 9 page 35. You will need a frequency counter for this check.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@...> wrote:
>
> Hello Group
>
> Well, troubleshooting and refurishing a TS-830S. All working well, with one problem. the 17 meter band has very low output.
>
> To answer the obvious responses:
>
> 1. The TOF line has been cut, so opened up for WARC bands.
> 2. ALC does peak well on receive, It reacts nicely to aligning with both ANT and RF coils.
> 3. On transmit, I get NO ALC in either TUNE or CW mode. With FULL CAR on CW mode, I can peak up the output with the DRIVE, TUNE, LOAD controls, as well as adjusting the 18mhz coil. About 7 watts output.

> 4. I inspected the underside of the RF board, there is no problem there.
> 5. I removed the 17m coil (L29), no burning, good continuity.
> 6. I tried several 12BY7A drivers, all act the same.
>
> SO .....
>
> All I can see that remains untested is the C37, the 18pf capacitor that is across the coil for the 17m DRIVE alignment.
>
> Anything else that I am missing?
>
> Thanks and 73
>
> Kevin K7ZS
>

29936. ts-830 HV gone

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-23 23:51:22 UTC
From: MadmaRty
Topic: 29936 Message: 29936

Hello !!! hope all is doing well ... just got finished rebuilding the final stage on my 820 and last night my good ole trusty TS-830s stopped transmitting . Before I open her was hoping to build up a cheat sheet of helpful " go here first hints" .. I keyed up the rig to dip my plate and tune, noticed very odd reaction on the meter. tried to load and guess what !!! only 10 watts output. Flipped over to LSB and keyed mike with meter on HV scale and nothing < very little>.
I tried the simple things .. put a know good driver tube and finale tubes still same reaction . this was a sudden drop off.. did not give any symptoms before it happened. clue... I did screw up and key rig without antenna or dummy load , maybe popped a diode or something? Going to break out the manual and read up ... hope to get some feedback here!! thanks for reading !

PS-
RECEIVER works perfect

29937. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 00:04:44 UTC
From: k7zs
Topic: 29933 Message: 29937

Hi Mike

Thanks for the detailed reply, and I guess was referring to the meter action when in the ALC position. By clarifying what it means depending on mode of operation, and further transmit mode, I learned a lot!

I guess the point I was trying to make, is that the receive is working 100 percent, and the transmit functions 100 percent on all bands, with plenty of ALC from the driver tube, no power fading etc..

Also, in receive it is 'right on' frequency wise, and the receiver is extremely sensitive. That is why I dismissed the PLL as a source of this single band really low output. I have a good antenna, and I was able to work a Costa Rica station from here in Oregon, with only ~5 watts output, so it all works, just extremely low output on 17m only.

I do have a good counter, and have done the VCO adjustments many times before. I usually use both the voltage and frequency method. The VFO does tune all the way from end to end, I have seen them before where the oscillator will quit when the VCO is too far off proper calibration.

Stay tuned, I will report what I find after performing the VCO alignment.

Thanks Mike

Vy 73 -Kevin

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> Hi Kevin,
>
> The driver tube has nothing to do with your problem nor are the final tubes. Changing the driver tube should be done when the initial tune up step, peaking the ALC with the DRIVE control in TUNE mode with the transmitter keyed, results in a peak ALC indication but the ALC indication begins to drop back towards zero. That indicates a weak/failing driver tube. There should be more than enough drive from the driver tube to peg the ALC meter in TUNE mode during tune up with the CAR control set between 9 and 11 o'clock when adjusting the DRIVE control. In CW mode, unless you turn the CAR control up to between 2 and 3 o'clock, you will not see an ALC indication in transmit. ALC is not used in CW mode as a gain control, the CAR control is used.
>
> What you see on the meter in receive is not "ALC". The meter, in receive, displays the variations in the output of the "AGC" amplifier to the meter amplifiers, based on the incoming signal strength as it is being processed in the "IF" stage on the IF Unit board. Although ALC and AGC both do the same thing, they are different. ALC is a "transmitter" gain control voltage and is only used in "transmit" (USB and LSB modes), never in receive. ALC has nothing to do with nor will ALC be present in the receiver. As I said, ALC is a

transmitter gain control voltage and ALC is produced only when grid current flows in the final tubes and only in transmit, never in receive. Since the final tubes are biased to cut off in receive there is no chance of ALC being produced and displayed in receiver. Besides, the relay on the AF Unit "disables" all meter switch positions in receive, allowing only receive signal levels to be displayed as S Units.
>
> I recommend checking the PLL Unit individual band frequencies. This is covered in the TS-830 service manual, step 9 page 35. You will need a frequency counter for this check.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@> wrote:
> >
> > Hello Group
> >
> > Well, troubleshooting and refurishing a TS-830S. All working well, with one problem. the 17 meter band has very low output.
> >
> > To answer the obvious responses:
> >
> > 1. The TOF line has been cut, so opened up for WARC bands.
> > 2. ALC does peak well on receive, It reacts nicely to aligning with both ANT and RF coils.
> > 3. On transmit, I get NO ALC in either TUNE or CW mode. With FULL CAR on CW mode, I can peak up the output with the DRIVE, TUNE, LOAD controls, as well as adjusting the 18mhz coil. About 7 watts output.
> > 4. I inspected the underside of the RF board, there is no problem there.
> > 5. I removed the 17m coil (L29), no burning, good continuity.
> > 6. I tried several 12BY7A drivers, all act the same.
> >
> > SO .....
> >
> > All I can see that remains untested is the C37, the 18pf capacitor that is across the coil for the 17m DRIVE alignment.
> >
> > Anything else that I am missing?
> >
> > Thanks and 73
> >
> > Kevin K7ZS
> >
>

29938. Re: New member

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 01:35:27 UTC
From: Bill Cromwell
Topic: 64 Message: 29938

Thanks Mike,

Mine has the two meter converter but not the six meter converter. The converter works. The R599 does FM too and I tried it on some of the local two meter repeaters. It's probably more useful to me on ten meter FM and I'll use the channelized VHF FM radio on those repeaters. I have thought about making a six meter converter for it. Mine has a 250 Hz CW filter in it. That works really well!

Apparently you don't have the matching transmitter. RIT doesn't mean very much when we use a separate transmitter (which the twins can accommodate).

73,

Bill KU8H

29939. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 02:59:51 UTC
From: k7zs
Topic: 29933 Message: 29939

Hi Mike

OK, VCO check on the PLL board indicated everything was very close to the spec voltage, and all of the frequencies being generated were also right on.

After re-reading your message, now I have a question, regarding the meaning of the ALC indication seen during the transmit DRIVE alignment.

The setup is for the mode switch to be in CW, the CAR control at 12 o'clock, the Screen Grid switch off, and the meter switch set to ALC. 1st step, of course, is setting the bandswitch and moving the VFO to the proper frequency (to find the center of the band) and then peaking ALC in RECEIVE with a fairly strong received signal (like so many, I use the CALIBRATOR).

Switching the standby switch to SEND, you again peak the meter by adjusting the band coil on the DRV board for PEAK ALC. Hmmmmm..... what is causing the meter to deflect?

Since the SG switch is off, the tubes are not conducting, so why does the ALC circuit (indicating grid current is flowing, or is that wrong?)

I note that the PLATE and LOAD settings are irrelevant in this process, so I am curious why the ALC is deflecting when there is no current flowing in the tube, since the SG switch setting makes it impossible.

REASON FOR ASKING: I have noticed that the PLATE CURRENT DIPS FINE when in CW mode on 17m, but the peak output is with the LOAD CONTROL all the way to the left, with output rising all the way to the stop. Leads me to think the PI network on the output is not right, indicating a bandswitch issue IN THE TANK CIRCUIT.

I appreciate you sharing your wisdom with all of us Mike!

73 Kevin K7ZS

--- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@...> wrote:
>
> Hi Mike
>
> Thanks for the detailed reply, and I guess was referring to the meter action when in the ALC position. By clarifying what it means depending on mode of operation, and further transmit mode, I learned a lot!
>

29940. Re: [TS-520_820_530_830] Re: New member

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 03:26:03 UTC
From: pmarkavage@juno.com
Topic: 64 Message: 29940

Note that the selectivity control can be used in the 25 KHz position for ultra wide band AM reception or even in the CW position if you like to copy a dozen stations all at the same time. My R-599D came without the 6 and 2 meter converters but when I heard the Twins were being discontinued, I search around several dealers and found both of them. The converters are not stellar performers as is, and also require an input impedance fairly close to 50 ohms, or they will have the tendency to go into oscillation.

Pete, wa2cwa
http://www.manualman.com

On Wed, 23 Feb 2011 17:35:27 -0800 (PST) Bill Cromwell
<w_r_cromwell@...> writes:
> Thanks Mike,
>
> Mine has the two meter converter but not the six meter converter.
> The converter works. The R599 does FM too and I tried it on some of
> the local two meter repeaters. It's probably more useful to me on
> ten meter FM and I'll use the channelized VHF FM radio on those
> repeaters. I have thought about making a six meter converter for it.
> Mine has a 250 Hz CW filter in it. That works really well!
>
> Apparently you don't have the matching transmitter. RIT doesn't mean
> very much when we use a separate transmitter (which the twins can
> accommodate).
>
> 73,
>
> Bill KU8H

29941. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 13:18:07 UTC
From: w5rkl
Topic: 29933 Message: 29941

Good morning Kevin,

I see folks continue referring to receive meter indications as "ALC". ALC is never displayed on the meter in "receive". What is displayed on the meter in receive is variations in "AGC" gain control voltage, not variations in "ALC". Respectfully, it's important to understand and use the correct gain control terminology when referring to gain control voltages in receive and transmit. ALC is a transmitter gain control voltage and only occurs in "transmit", never in receive. AGC is a "receiver" gain control voltage and only occurs in "receive", never in "transmit".

Why does the meter switch not display ALC, IP, RF, HV, and COMP signal/voltage levels while in receive? It's because the meter switch is "disabled" in receive and "enabled" in transmit by the relay on the AF Unit through plug 7. Read on for an explanation how this occurs.

In receive, the AF Unit plug 7 Pin "6" is label "M" for "Meter" and the relay on the AF Unit is shown "not energized" (830 is in receive). If you follow AF Unit plug 7 pin 6 up through the relay terminals you will notice it ends at AF Unit plug 10 pin 6 which is labeled "SM" for "S Meter". AF Unit plug 10 Pin 6 continues through the wiring harness to the IF Unit plug 9 pin 2 which is labeled "SM", again for "S Meter". IF Unit plug 9 Pin 2 continues through the IF Unit board to the "collector" of "Q12". The "voltage" applied to Q12's "Base", in receive, is the receiver's "AGC" voltage from the AGC circuit and any variation in "AGC" receiver gain control voltage will appear on Q12's "collector" fed along the path through IF Unit to IF Unit plug 9 pin 2 (SM) to AF Unit plug 10 pin 6 (SM) down through AF Unit relay terminals to plug 7 pin 6 (M) and out to the meter, displaying "S Units". The level of "S Meter" reading is determined by the level of IF signal applied to the AGC circuit on the IF Unit that is then applied to the Base of Q12. Throughout this receive meter circuit, there is no path to the meter switch. Therefore, the meter cannot and will not ever display "ALC, IP, HV, RF, and COMP" signal/voltage/current levels while the 830 is in receive.

When the 830 is in transmit, however, the meter's signal/voltage path changes when the AF Unit relay is energized. When the AF Unit relay is energized the meter at AF Unit plug 7 pin 6 so the meter path now flows from plug 7 pin 6 through the relay terminals to AF Unit plug 7 pin 2 "TM" (Transmit Meter). The path continues from AF Unit plug 7 pin 2 (TM) through the wiring hardness to the meter switch wiper S13. Depending on the meter switch position determines what signal/voltage/current level is displayed on the meter in "transmit".

The above discussions is how the meter is "disabled" in receive and "enabled" in transmit.

Again, I mean no disrespect when discussing the differences between ALC and AGC. It is important to understand the differences between AGC and ALC and to use the correct terminology when referring between the 2 so as not to confuse or mislead discussions.

Okay, why does the ALC meter show an indication when the "SG" switch is set to OFF since the final tubes are not conducting in transmit? Are the final tubes completely shut off

with no conduction taking place with the SG switch set to OFF? No, not really. The SG switch prevents conduction from occurring between the cathode and plate but NOT between the cathode and "grid"!

The SG switch, when placed in the "OFF" position, applies a "Negative" potential to the final tube screens. As electrons are emitted from the cathode and they attempt to flow to the plate, they are met with a "negative" potential on the screen which forces them "back onto the cathode" so the electrons never reach the plate, therefore, no conduction between the cathode and plate occurs. However, the negative potential on the screen has no control over electron flow between the cathode and grid! Therefore, when the driver tube's RF sine wave signal, when applied to the final tube grids, is at a positive sine wave level that results in the final tube grids to swing "positive", a current "WILL" flow between the final tube cathodes and grids even when the SG switch is set to the "OFF" position. As I said, the negative potential applied to the final tube grids with the SG switch in the OFF position has no control what so ever over electron flow between the cathode and grid when the grids are positive. That's why you can see ALC indication, in transmit, when the SG switch is set to "OFF".

I hope that answers your question. Again, I mean on disrespect in my discussion pertaining to the difference between ALC and AGC. I only mean to ensure folks understand the difference between the two gain control voltages, how and when they are produced and used, and the importance of using the correct terminology.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@...> wrote:
>
> Hi Mike
>
> OK, VCO check on the PLL board indicated everything was very close to the spec voltage, and all of the frequencies being generated were also right on.
>
> After re-reading your message, now I have a question, regarding the meaning of the ALC indication seen during the transmit DRIVE alignment.
>
> The setup is for the mode switch to be in CW, the CAR control at 12 o'clock, the Screen Grid switch off, and the meter switch set to ALC. 1st step, of course, is setting the bandswitch and moving the VFO to the proper frequency (to find the center of the band) and then peaking ALC in RECEIVE with a fairly strong received signal (like so many, I use the CALIBRATOR).
>
> Switching the standby switch to SEND, you again peak the meter by adjusting the band coil on the DRV board for PEAK ALC. Hmmmmm..... what is causing the meter to deflect?
>
> Since the SG switch is off, the tubes are not conducting, so why does the ALC circuit (indicating grid current is flowing, or is that wrong?)
>
> I note that the PLATE and LOAD settings are irrelevant in this process, so I am curious why the ALC is deflecting when there is no current flowing in the tube, since the SG switch setting makes it impossible.

>
> REASON FOR ASKING: I have noticed that the PLATE CURRENT DIPS FINE when in CW mode on 17m, but the peak output is with the LOAD CONTROL all the way to the left, with output rising all the way to the stop. Leads me to think the PI network on the output is not right, indicating a bandswitch issue IN THE TANK CIRCUIT.
>
> I appreciate you sharing your wisdom with all of us Mike!
>
> 73 Kevin K7ZS
>
> --- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@> wrote:
> >
> > Hi Mike
> >
> > Thanks for the detailed reply, and I guess was referring to the meter action when in the ALC position. By clarifying what it means depending on mode of operation, and further transmit mode, I learned a lot!
> >
>

29942. Re: New member

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 13:31:50 UTC
From: w5rkl
Topic: 64 Message: 29942

I agree with you Pete. I use the 25Khz position when operating "AM". The 2.5Khz selectivity position, in AM, is too narrow for acceptable AM reception.

My R599A had been messed with, "Golden Screw Driver" attack..:) The VFO would not tune above 275 on the dial, reached the mechanical stop before the top of the dial. Although the calibrator signal appeared to be close at 25Khz intervals, I use the term "appeared" loosely, the VFO coil and padding variable capacitor were both adjusted wrong. I also found the CW carrier oscillator variable capacitor does not rotate properly to adjust the CW carrier oscillator crystal slightly. That's okay because the CW oscillator crystal is very close to it's crystal frequency so I'll leave it as is, not change/replace the capacitor.

I like the R599A and yes, you are right, I do not have the T599 transmitter. I don't use the RIT, have it set to 12 o'clock with or without the RF gain control pushed in or pulled out.

I like the smoothness of the dial. When I purchased the R599A the dial was rough and the analog dial scarped the rear of the front panel. I had to move the dial back away from the rear of the front panel to fix that. Now it tunes smooth and quite.

Some day I'll find a T599A to match the R599A but for now, I use it with the Drake transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Note that the selectivity control can be used in the 25 KHz position for
> ultra wide band AM reception or even in the CW position if you like to
> copy a dozen stations all at the same time. My R-599D came without the 6
> and 2 meter converters but when I heard the Twins were being
> discontinued, I search around several dealers and found both of them. The
> converters are not stellar performers as is, and also require an input
> impedance fairly close to 50 ohms, or they will have the tendency to go
> into oscillation.
>
> Pete, wa2cwa
> http://www.manualman.com
>
>
> On Wed, 23 Feb 2011 17:35:27 -0800 (PST) Bill Cromwell
> <w_r_cromwell@...> writes:
> > Thanks Mike,
> >
> > Mine has the two meter converter but not the six meter converter.

> > The converter works. The R599 does FM too and I tried it on some of
> > the local two meter repeaters. It's probably more useful to me on
> > ten meter FM and I'll use the channelized VHF FM radio on those
> > repeaters. I have thought about making a six meter converter for it.
> > Mine has a 250 Hz CW filter in it. That works really well!
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> > Apparently you don't have the matching transmitter. RIT doesn't mean
> > very much when we use a separate transmitter (which the twins can
> > accommodate).
> >
> > 73,
> >
> > Bill KU8H
>

29943. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 16:48:47 UTC
From: k7zs
Topic: 29933 Message: 29943

Hi Mike

No problem on your excellent and emphatic discussion of ALC vs AGC! Through that you educucated us, and explained a lot of the inner workings of the TS-830, which obviously you know VERY well! Of course when you are trying to help folks remotely, proper terminology can be the difference between success and confusion. Thanks for your patience with us!

And, FASCINATING as to why we see an ALC indication with SG off. I now understand - GRID current flows sine the screen is negative, making the grid the only game in town, and since that is the measure used to determine the amount of ALC in effect, we can use it gauge the drive level. Excellent, and now it's part of the archives here, which is super for all of us!

As to my single band problem, I spent all evening going through every S1 switch contact, and all of the contacts in the RF compartment switch. De-Ox-It carefully with a Q-tip (again!) Also, of course, I performed the VCO adjustment per the manual, both with voltage and taking the frequency at D40 on the PLL board. That all looks OK.

NEW QUESTION: How would one, without a sophisticated audio generator, adjust ALC MAX control VR7 on the IF board? The step (#31, ALC ADJUSTMENT in the service manual) calls for a 5mv 1.5khz audio signal to be fed into the mic connector with the ability to bring it to 10mv. Any tricks?

Lastly, any clues besides the obvious bandswitch S1-7 that could cause low drive level on 17m? I've run out of ideas short of removing the S1-7 wafer and carefully ohming out the contacts.

THANKS MIKE for sharing your incredible knowledge here on the Hybrid Junkie forum!

73 Kevin

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Kevin,
>
> I see folks continue referring to receive meter indications as "ALC"........

29944. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-24 18:15:01 UTC
From: w5rkl
Topic: 29933 Message: 29944

Hi Kevin,

ALC alignemnt step 31 is in 3 parts.

The first part sets the meter to zero with the meter switch set to ALC and the transmitter keyed in sideband with mic gain set to minimum with no audio signal applied to the microphone socket. This is important for not only the second section but also for the ALC meter scale to be as accurate as possible. This is "similar" to the S meter zero adjustments for the receiver with no incoming signal.

The second part sets the ALC meter sensitivity with a set level of audio applied in sideband to the 830. With 1.5Khz at 5mv fed to the microphone socket and MIC gain set fully CW, adjusting VR6 on the IF Unit board will result in the ALC meter just resting at zero. If VR6 is adjusted incorrectly then the meter will not rest at zero resulting in a false ALC meter reading.

The last part sets the ALC meter output at a signal level of 10mv fed to the microphone. If this adjustment, VR7 on the IF Unit, is not adjusted properly then the ALC meter scale will not be as accurate as it can possible be.

I do not recommend using any other method to make alignment step 31. Follow the steps, using the signal levels and equipment mentions so the alignment is done properly. Don't side step or try an alternate method as you could easily end up with an improperly adjusted ALC sensitivity and gain settings resulting in improper/false ALC readings. The 1.5Khz tone is used so the RF carrier signal, modulated with the 1.5Khz tone signal, flowing through the IF stage will be at maximum. This makes adjusting the ALC more accurate then simply adjusting for zero by "guessing". Remember, I have always said, never guess, always check. I'll add "use the right procedures (follow the alignment instructions in the service manual) to ensure the adjustment is done right. Your 830 will thank you and so will the folks you talk to on the air.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "k7zs" <klahaie@...> wrote:
>
> Hi Mike
>
> No problem on your excellent and emphatic discussion of ALC vs AGC! Through that you educucated us, and explained a lot of the inner workings of the TS-830, which obviously you know VERY well! Of course when you are trying to help folks remotely, proper terminology can be the difference between success and confusion. Thanks for your patience with us!
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> Lastly, any clues besides the obvious bandswitch S1-7 that could cause low drive level on 17m? I've run out of ideas short of removing the S1-7 wafer and carefully ohming out the contacts.
>
> THANKS MIKE for sharing your incredible knowledge here on the Hybrid Junkie forum!
>
> 73 Kevin
>

29945. TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 02:34:41 UTC
From: Joseph Stiles
Topic: 29945 Message: 29945

Greetings group!

I picked up an 830S at a garage sale. It is a full filtered GOLD edition. Have spent the last few days cleaning it up..kinda looked like a sawdust bomb went off inside. It puts out full power, except on 160 meter band, 70 watts tops. I was looking around on the RF board and noticed L4 (right by the 1.8Mhz ANT coil) slug appears damaged. Would this account for the low output? All other bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no luck?

73's joe wb7uqu

[Non-text portions of this message have been removed]

29946. Kenwood TS520SE frequency tuning very unstable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 02:48:02 UTC
From: ve3mlm
Topic: 29946 Message: 29946

as you turn dial - audio seems to garble & cuts out as you tune - must dial very slowly to capture a station - seems better when it's warmed up - problem is same on all bands - have not tried to fix it

29947. TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 06:20:24 UTC
From: kingtygr
Topic: 29947 Message: 29947

Does anyone know of a way to use a Heathkit frequency meter to display the frequency of the TS-520SE? I picked up the meter a few weeks ago for general use, but was thinking it'd be nice to use with my Kenwood as well.

Thanks in advance!

Paul Allen
KE7TYY

29948. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 08:15:03 UTC
From: pmarkavage@juno.com
Topic: 29947 Message: 29948

No easy way to use a "regular" frequency counter, without some addtional circuitry, to view actual frequency of the TS-520SE. You're better off finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were designed to work with rigs like the TS-520 series.

Pete, wa2cwa

On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
> Does anyone know of a way to use a Heathkit frequency meter to
> display the frequency of the TS-520SE? I picked up the meter a few
> weeks ago for general use, but was thinking it'd be nice to use with
> my Kenwood as well.
>
> Thanks in advance!
>
> Paul Allen
> KE7TYY

29949. AF AVR board in TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 13:32:22 UTC
From: ae5uu
Topic: 29949 Message: 29949

Good morning Mike,

On further analysis of my troublesome AF AVR board last night, I discovered that all six pins on AF1 and five out of six pins on AF2 had failed solder joints where they connect to the board. Very strange. I repaired this and hoped for a better output from my board but no joy. My 9vdc output is still 11.2 vdc and the position of VR4 still makes no difference. I look forward to receiving the used board from you today and thanks again. I miss being on the air.

73,

Russell
ae5uu

29950. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 14:34:44 UTC
From: Jim S
Topic: 29947 Message: 29950

Well, that is true to an extent. You would NOT be able to use a counter to measure the receive frequency of a 520 or any other superhetrodyne design, without some sort of offset calibration capabilities, but you COULD measure the transmit frequency in an indirect way. Even that would give you some error, since there is no carrier in SSB mode, and I believe it is offset enough to produce a tone from the other station when in the CW mode.

So I would agree, there really is no way to actually view the actual frequency without making those compensations!

----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 25, 2011 3:15 AM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

No easy way to use a "regular" frequency counter, without some addtional
circuitry, to view actual frequency of the TS-520SE. You're better off
finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were
designed to work with rigs like the TS-520 series.

Pete, wa2cwa

On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
> Does anyone know of a way to use a Heathkit frequency meter to
> display the frequency of the TS-520SE? I picked up the meter a few
> weeks ago for general use, but was thinking it'd be nice to use with
> my Kenwood as well.
>
> Thanks in advance!
>
> Paul Allen
> KE7TYY

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

29951. Re: AF AVR board in TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 14:49:03 UTC
From: w5rkl
Topic: 29949 Message: 29951

Hi Russell,

That happens with those old boards from time to time. Let me know when the board arrives. The board 9VDC and 3.3VDC adjustments should be right but I would recommend checking them to be sure. Check and, if necessary, adjust the 9VDC VR4 first followed by the 3.3VDC VR1 last.

Hopefully when you get the board and installed it things will start working. Naturally you will have to make sure the 9VDC to the VFO be present at the VFO plug. You can pull the VFO 2 pin plug from the back of the VFO and measure the voltage from the larger of the 2 pins for 9VDC. The voltage for the VFO goes through the FUNCTION switch to the rear VFO socket then through the jumper plug or short piece of wire between pins 8 and 9 to the larger of the 2 VFO pins on the VFO plug. I seem to remember you replaced that 9 pin socket, if I'm wrong let me know, with another plug of some sort. Just be sure none of the wires are shorted except wires to the original 9 pin socket, pins 8 and 9.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Good morning Mike,
>
> On further analysis of my troublesome AF AVR board last night, I discovered that all six pins on AF1 and five out of six pins on AF2 had failed solder joints where they connect to the board. Very strange. I repaired this and hoped for a better output from my board but no joy. My 9vdc output is still 11.2 vdc and the position of VR4 still makes no difference. I look forward to receiving the used board from you today and thanks again. I miss being on the air.
>
> 73,
>
> Russell
> ae5uu
>

29952. Re: Kenwood TS520SE frequency tuning very unstable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 14:59:09 UTC
From: w5rkl
Topic: 29946 Message: 29952

Good morning Robert,

Your problem appears to be a dirty VFO variable capacitor shaft to frame connection inside the VFO.

With the 520 right side up, front panel facing you, remove the top cover. Be careful not to break the top cover speaker wire when removing the top cover. The speaker cable unplugs from the speaker.

The VFO metal enclosure is directly behind the front panel. On the right side is a small metal plate held to the VFO enclosure with 2 phillips head screws. Remove one screw and loosen the other. Move the plate so you can see inside the VFO. The VFO variable capacitor can be seen through the square hole. At the rear of the VFO variable capacitor is a metal fork that is attached at one end to the capacitor's frame and the other end slides over the capacitor's shaft. The area where the fork slides onto the shaft can become corroded/dirty. Give this area a shot of contact cleaner then rotate the VFO fully CW and CCW a few times. Then, using canned air you can buy at Walmart, blow the excess contact cleaner and any dirt with canned air. Use just enough contact cleaner to do the job. You may have to do this a couple of times depending on how dirty the connection is.

It's also possible the front bearings on the VFO variable capacitor are also contributing to this problem, the grease may have dried out. If cleaning the fork connection fixes the problem then you can stop and secure the side plate onto the VFO enclosure.

Read and adhere to all warnings/cautions on the contact cleaner can. Contact cleaner is flammable and it only takes a small spark to ignite it. Use just enough to do the job, don't soak the area with cleaner. Always use generous amounts of canned air to remove any/all cleaner residue then wait 3 to 5 minutes before applying power. Always follow all safety precautions and remove ALL power plugs from the wall outlet and wait for all power supplies to bleed to zero before putting your hands inside the radio.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ve3mlm" <ve3mlm@...> wrote:
>
> as you turn dial - audio seems to garble & cuts out as you tune - must dial very slowly to capture a station - seems better when it's warmed up - problem is same on all bands - have not tried to fix it
>

29953. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 15:07:56 UTC
From: James Allen
Topic: 29947 Message: 29953

Well, I didn't think there was an easy way, but one can hope. What about the hard way? Do you think if I pulled up the schematics on the DG-5 I could figure out a way to build interface circuitry?

It's not a big deal if I can't get it to work, I mainly got the meter to use for testing and repairs. I also got a RF signal generator, function generator, and a nice little lab power supply for $10 each when I got the frequency meter.

Maybe someday though I'll figure out something, or find a DG-5 for a good price when I have the money.

Paul Allen
KE7TYY

[Non-text portions of this message have been removed]

29954. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 15:39:08 UTC
From: w5rkl
Topic: 29945 Message: 29954

Good morning Joe,

L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if necessary, make adjustments as needed in step 18 on page 37 in the 830 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group!
>
> I picked up an 830S at a garage sale. It is a full filtered GOLD edition.
> Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
> went off inside. It puts out full power, except on 160 meter band, 70 watts
> tops. I was looking around on the RF board and noticed L4 (right by the 1.8Mhz
> ANT coil) slug appears damaged. Would this account for the low output? All other
> bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no
> luck?
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

29955. Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 15:45:49 UTC
From: w5rkl
Topic: 29947 Message: 29955

Good morning James,

I agree with the other response, the best route, whether easy or difficult, is to obtain a DG-5 digital display or the other aftermarket digital display.

The digital display requires circuitry that accepts the "VFO", "HET" and "CAR" oscillator signals that are mixed/counted by digital circuity along with an internal digital circuit reference oscillator in the digital display circuit itself in order to produce the accurate frequency that is then applied to a digital display circuit. The accuracy of any digital display is not only based on the accuracy of the 3 rear panel RCA sockets that have the required oscillator signals (VFO, HET, and CAR) but also the accuracy of digital displays internal reference oscillator.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, James Allen <jp.paul.allen@...> wrote:
>
> Well, I didn't think there was an easy way, but one can hope. What about the
> hard way? Do you think if I pulled up the schematics on the DG-5 I could
> figure out a way to build interface circuitry?
>
> It's not a big deal if I can't get it to work, I mainly got the meter to use
> for testing and repairs. I also got a RF signal generator, function
> generator, and a nice little lab power supply for $10 each when I got the
> frequency meter.
>
> Maybe someday though I'll figure out something, or find a DG-5 for a good
> price when I have the money.
>
>
> Paul Allen
> KE7TYY
>
>
> [Non-text portions of this message have been removed]
>

29956. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 15:48:42 UTC
From: w5rkl
Topic: 29945 Message: 29956

Joe,

Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the step I am referring to.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Joe,
>
> L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if necessary, make adjustments as needed in step 18 on page 37 in the 830 service manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Greetings group!
> >
> > I picked up an 830S at a garage sale. It is a full filtered GOLD edition.
> > Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
> > went off inside. It puts out full power, except on 160 meter band, 70 watts
> > tops. I was looking around on the RF board and noticed L4 (right by the 1.8Mhz
> > ANT coil) slug appears damaged. Would this account for the low output? All other
> > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no
> > luck?
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

29957. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 17:38:20 UTC
From: W LEWIS
Topic: 29945 Message: 29957

I've never been lucky enough to find much ham stuff at garage/estate sales. If you don't mind me asking, what did you pay for it?
73's
Butch Lewis
KØPSA

--- On Fri, 2/25/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS 830S L-4
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, February 25, 2011, 9:48 AM

Joe,

Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the step I am referring to.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Joe,
>
> L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if necessary, make adjustments as needed in step 18 on page 37 in the 830 service manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> >
> > Greetings group!
> >
> > I picked up an 830S at a garage sale. It is a full filtered GOLD edition.
> > Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
> > went off inside. It puts out full power, except on 160 meter band, 70 watts
> > tops. I was looking around on the RF board and noticed L4 (right by the 1.8Mhz
> > ANT coil) slug appears damaged. Would this account for the low output? All other
> > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no
> > luck?
> >

> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

29958. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 17:49:22 UTC
From: Joseph Stiles
Topic: 29945 Message: 29958

Mike & group,

I did those steps prior to posting the msg, but rechecked them again. The 160m band appears the only one with lower output. However, I got out a better magnifier and some really bright light and took a further look at L4 on the RF board. The slug is damaged, half of it appears missing, there was some type of glue applied to the top, and I can see the fine copper wires and they "don't look right." So, I guess I'll root around the parts bin. Is there another coil that can be taken from another board? I have other boards, but not sure that I have an RF board. Oh, on further inspection, it also appears that some of the wiring on the counter board and the PLL have/had been altered. From what I can figure out it may have had or an attempted CB hack. Just my luck.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 7:48:42 AM
Subject: [TS-520_820_530_830] Re: TS 830S L-4

Joe,

Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the step I am referring to.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Joe,
>
> L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if
>necessary, make adjustments as needed in step 18 on page 37 in the 830 service
>manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
wrote:
> >

> > Greetings group!
> >
> > I picked up an 830S at a garage sale. It is a full filtered GOLD
>edition.
>
> > Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
>
> > went off inside. It puts out full power, except on 160 meter band, 70 watts
> > tops. I was looking around on the RF board and noticed L4 (right by the
>1.8Mhz
>
> > ANT coil) slug appears damaged. Would this account for the low output? All
>other
>
> > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no

> > luck?
> >
> > 73's joe wb7uqu
> >
> >
> >
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> >
> > [Non-text portions of this message have been removed]
> >
>

[Non-text portions of this message have been removed]

29959. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 17:54:29 UTC
From: van wd8aam
Topic: 29945 Message: 29959

Ham items at a garage sale are a RARE item,
and either the ham that found these at a garage
sale was VERYLUCKY (at the right time),
or a ham that went to a LOT/regularily,
or was both!
wd8aaam

17:38 2/25/2011, you wrote:
>
>
>I've never been lucky enough to find much ham
>stuff at garage/estate sales.Â If you don't
>mind me asking, what did you pay for it?
>73's
>Butch Lewis
>KÃ□PSA
>
>--- On Fri, 2/25/11, w5rkl <<mailto:w5rkl%40yahoo.com>w5rkl@...> wrote:
>
>From: w5rkl <<mailto:w5rkl%40yahoo.com>w5rkl@...>
>Subject: [TS-520_820_530_830] Re: TS 830S L-4
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Date: Friday, February 25, 2011, 9:48 AM
>
>Â
>
>Joe,
>
>Ignore the step 18 that addresses the "AM"
>portion. This applies to TS-830M models only.
>Step 18 on page 37 titled "Generator Drive Coil
>Adjustment" is the step I am referring to.
>
>73s
>Mike
>W5RKL
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>"w5rkl" <w5rkl@...> wrote:
> >
> > Good morning Joe,
> >

> > L4 is one of the receiver's "8.83Mhz" trap
> coils. I recommend checking and, if necessary,
> make adjustments as needed in step 18 on page 37 in the 830 service manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
> Joseph Stiles <stilesjoseph@> wrote:
> > >
> > > Greetings group!
> > >
> > > I picked up an 830S at a garage sale. It is
> a full filtered GOLD edition.
> > > Have spent the last few days cleaning it
> up..kinda looked like a sawdust bomb
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> except on 160 meter band, 70 watts
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> and noticed L4 (right by the 1.8Mhz
> > > ANT coil) slug appears damaged. Would this
> account for the low output? All other
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> ANT, MIX, and DRIVE coils, with no
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> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
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> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >[Non-text portions of this message have been removed]
> >
> >

[Non-text portions of this message have been removed]

29960. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 18:00:04 UTC
From: Joseph Stiles
Topic: 29945 Message: 29960

Butch,

$200.00. It appears that this rig sat in a garage(unheated) of an SK for about 5 years. All the control worked smooth and weren't noisy. The front panel was in VG shape, and the VFO was smooth. Plenty of HV. There were lots of "radio things." It appears that this may have also had or an aborted CB hack. I found some wiring changes that appear to have been reversed between the counter unit and the PLL board.....the solder job was very poor and what was taped up was poor also. So, going to have to go through this unit and double check. It does work on all bands...just that 160m is off. Also, found a damaged L4 on the RF board that's going to have to be replaced....guess I'll have a project for a bit.....

73's joe wb7uqu

From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 9:38:20 AM
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4

I've never been lucky enough to find much ham stuff at garage/estate sales. If you don't mind me asking, what did you pay for it?
73's
Butch Lewis
KØPSA

--- On Fri, 2/25/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS 830S L-4
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, February 25, 2011, 9:48 AM

Joe,

Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the step I am referring to.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Joe,

>
> L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if
>necessary, make adjustments as needed in step 18 on page 37 in the 830 service
>manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
wrote:
> >
> > Greetings group!
> >
> > I picked up an 830S at a garage sale. It is a full filtered GOLD edition.
> > Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
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> > went off inside. It puts out full power, except on 160 meter band, 70 watts
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>
> > ANT coil) slug appears damaged. Would this account for the low output? All
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>
> > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no

> > luck?
> >
> > 73's joe wb7uqu
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

29961. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 18:28:38 UTC
From: w5rkl
Topic: 29945 Message: 29961

Hi Joe,

Bob Mansker, ke5ftf at mail.com most likely has a replacement RF Unit board. You might check with him to see what he can do for you. I recently purchases a replacement RF Unit board for my 820. It worked great and his prices are reasonable.

73s
Mike
W5KRL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> I did those steps prior to posting the msg, but rechecked them again. The
> 160m band appears the only one with lower output. However, I got out a better
> magnifier and some really bright light and took a further look at L4 on the RF
> board. The slug is damaged, half of it appears missing, there was some type of
> glue applied to the top, and I can see the fine copper wires and they "don't
> look right." So, I guess I'll root around the parts bin. Is there another coil
> that can be taken from another board? I have other boards, but not sure that I
> have an RF board. Oh, on further inspection, it also appears that some of the
> wiring on the counter board and the PLL have/had been altered. From what I can
> figure out it may have had or an attempted CB hack. Just my luck.
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, February 25, 2011 7:48:42 AM
> Subject: [TS-520_820_530_830] Re: TS 830S L-4
>
>
>
> Joe,
>
> Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M
> models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the
> step I am referring to.
>
> 73s
> Mike

> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Good morning Joe,
> >
> > L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and, if
> >necessary, make adjustments as needed in step 18 on page 37 in the 830 service
> >manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> > >
> > > Greetings group!
> > >
> > > I picked up an 830S at a garage sale. It is a full filtered GOLD
> >edition.
> >
> > > Have spent the last few days cleaning it up..kinda looked like a sawdust bomb
> >
> > > went off inside. It puts out full power, except on 160 meter band, 70 watts
> > > tops. I was looking around on the RF board and noticed L4 (right by the
> >1.8Mhz
> >
> > > ANT coil) slug appears damaged. Would this account for the low output? All
> >other
> >
> > > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with no
>
> > > luck?
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

29962. Re: TS-830S Low Output 17m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 20:41:09 UTC
From: k7zs
Topic: 29933 Message: 29962

Hi Mike

Thanks for the expert advice on the ALC adjustment. I will resurrect my AG, and get the scope and counter on it to do it right.

But, the original problem still exists: low output on 17m. I can get 5-7 watts out in CW mode, CAR pot fully CCW. Drive peaks output, plate adjustment dips IP, load peaks up RF, the works, but not more than 5w.

I have confirmed continuity on S1-7 wafer, removing the coil and measuring resistance from the contact (making sure it went through the rivet) to the point under the RF board where it enters the coil for 17m. No resistance there. I have done the VCO check, I have measured the RF VOLTAGE at TP4 on the RF board, I have measured the DRV level with the RF vm (HP3400A). ALL appears normal, but it just won't tune 17m.

I have swapped tubes (both driver and finals), I have inspected and confirmed low resistances on S1-7. Even though in tune mode, it's not in play, I have checked the switch contacts in the final compartment. All seem fine. All voltages right where they should be on both driver and finals.

It just won't tune up on 17m?

Any parting comments on what to check?

73 Kevin K7ZS

29963. (no subject)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 22:10:34 UTC
From: John Dipolito
Topic: 29963 Message: 29963

Hello Kenwood owners !!

Trying to figure out a odd change in my ts-830s , rig has been rack solid foe a year... here is what happened . In the past while tunning up in cw mode with my load knob all the way off < minimum> my IP scale would be around 150 mA with about 60 watts output... then I would turn my load knob up until 100 watts output and the ip would read 220mA. Now for some reason with load knob at minimum the current is 240MA with 70 watts out and I have to jack up the current to 260mA to get 100watts. I cant get the current below 240mA when in the past I could go as low as I wanted.

Yes this is after dipping the plate ..etc .. I repalced the finals and driver tube with known good ones...same results !! any takers? I suspect something in the rectifier board .

[Non-text portions of this message have been removed]

29964. Re: [TS-520_820_530_830] (unknown)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-25 22:40:51 UTC
From: Joseph Stiles
Topic: 29963 Message: 29964

John,

Check the value of the 4 20 ohm resistors on the final board...they should be no more than about 5.6 ohms to ground. Also, check the 100 ohm resistors on the final board too...and the 470 ohm resistor on the rectifier board. You do not have to dismantle the final board...get an X-RAY view schematic out of the service manual..check n6wk web site....good luck.....

73's joe wb7uqu

From: John Dipolito <jdip0@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 2:10:34 PM
Subject: [TS-520_820_530_830] (unknown)

Hello Kenwood owners !!

Trying to figure out a odd change in my ts-830s , rig has been rack solid foe a year... here is what happened . In the past while tunning up in cw mode with my load knob all the way off < minimum> my IP scale would be around 150 mA with about 60 watts output... then I would turn my load knob up until 100 watts output and the ip would read 220mA. Now for some reason with load knob at minimum the current is 240MA with 70 watts out and I have to jack up the current to 260mA to get 100watts. I cant get the current below 240mA when in the

past I could go as low as I wanted.

Yes this is after dipping the plate ..etc .. I repalced the finals and driver tube with known good ones...same results !! any takers? I suspect something in the rectifier board .

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[Non-text portions of this message have been removed]

29965. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 00:37:22 UTC
From: John Davidson
Topic: 29947 Message: 29965

WHY ?
Is something wrong with the analog dial?
I have had the original TS520(no S) for over 35 years and the circular analog dial is great if you calibrate it properly..
Never had any desire to add any digital readout to it.

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.
No easy way to use a "regular" frequency counter, without some addtional circuitry, to view actual frequency of the TS-520SE. You're better off finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were designed to work with rigs like the TS-520 series.
Pete, wa2cwa
On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
> Does anyone know of a way to use a Heathkit frequency meter to
> display the frequency of the TS-520SE? I picked up the meter a few
> weeks ago for general use, but was thinking it'd be nice to use with
> my Kenwood as well.
>
> Thanks in advance!
>
> Paul Allen
> KE7TYY

[Non-text portions of this message have been removed]

29966. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 00:49:27 UTC
From: Jim S
Topic: 29947 Message: 29966

John, I think that this obsession (if I may call it that) over digital readouts is a symptom of a trend that I am noticing on the ham bands. If a station is off an even frequency by something like 1.3 Khz, someone is likely to come along and tell the operator that he is "off frequency", even though his signal might be WELL WITHIN his allocated range for his license.

There is only one band in which exact center frequencies are a requirment, and that band is NOT supported by the 520. It seems rather silly to me that operation on something other than an even frequency (14.230.00.00 as opposed to 14.231.24.5) is reason to be called out by someone else, but it seems to be happening more and more often.

One of my radios is PLL controlled, but the closest to a given frequency I can get is 10Hz, and I usually don't use that, but rather, tune in 100Hz increments. The other one is a pair of 599 twins, and I would NEVER want to put a digital dial on them! That would be like hanging a foxtail on the rearview mirror of a Ferrari !

73, Jim AG3Y

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 25, 2011 7:37 PM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

WHY ?
Is something wrong with the analog dial?
I have had the original TS520(no S) for over 35 years and the circular analog
dial is great if you calibrate it properly..
Never had any desire to add any digital readout to it.

From: "pmarkavage@juno.com" <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.
No easy way to use a "regular" frequency counter, without some addtional
circuitry, to view actual frequency of the TS-520SE. You're better off
finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were
designed to work with rigs like the TS-520 series.
Pete, wa2cwa
On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
> Does anyone know of a way to use a Heathkit frequency meter to
> display the frequency of the TS-520SE? I picked up the meter a few
> weeks ago for general use, but was thinking it'd be nice to use with
> my Kenwood as well.
>
> Thanks in advance!

>
> Paul Allen
> KE7TYY

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29967. Re: [TS-520_820_530_830] (unknown)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 01:01:45 UTC
From: John Dipolito
Topic: 29963 Message: 29967

Thanks Joe , this will give me a starting point !!

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 5:40:51 PM
Subject: Re: [TS-520_820_530_830] (unknown)

John,

Check the value of the 4 20 ohm resistors on the final board...they should be no more than about 5.6 ohms to ground. Also, check the 100 ohm resistors on the final board too...and the 470 ohm resistor on the rectifier board. You do not have to dismantle the final board...get an X-RAY view schematic out of the service manual..check n6wk web site....good luck.....

73's joe wb7uqu

From: John Dipolito <jdip0@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 2:10:34 PM
Subject: [TS-520_820_530_830] (unknown)

Hello Kenwood owners !!

Trying to figure out a odd change in my ts-830s , rig has been rack solid foe a year... here is what happened . In the past while tunning up in cw mode with my load knob all the way off < minimum> my IP scale would be around 150 mA with about 60 watts output... then I would turn my load knob up until 100 watts output and the ip would read 220mA. Now for some reason with load knob at minimum the current is 240MA with 70 watts out and I have to jack up the current to 260mA to get 100watts. I cant get the current below 240mA when in the

past I could go as low as I wanted.

Yes this is after dipping the plate ..etc .. I repalced the finals and driver tube with known good ones...same results !! any takers? I suspect something in the rectifier board .

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29968. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 01:10:21 UTC
From: James Allen
Topic: 29947 Message: 29968

Oh, there's nothing wrong with using the dial readout, I just thought it'd be nice to have a digital readout. Like I mentioned before, I got the frequency meter mainly for testing and diagnostic purposes. It just would have been an added bonus if I could have hooked it up to me 520SE as well.

Paul Allen
KE7TYY

[Non-text portions of this message have been removed]

29969. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 05:01:59 UTC
From: pmarkavage@juno.com
Topic: 29947 Message: 29969

You could add a RF sensor (germanium diode and some wire) to the input of the counter, and depending on how much RF is floating around your shack when you're transmitting and how sensitive the counter is, the counter will detect and read the frequency your transmitting on. Not extremely elegant, but you can dazzle your contacts with decimal accuracy. It can also indicate if your VFO on transmit is drifting around.

Pete, wa2cwa

On Fri, 25 Feb 2011 18:10:21 -0700 James Allen <jp.paul.allen@...>
writes:
> Oh, there's nothing wrong with using the dial readout, I just thought
> it'd
> be nice to have a digital readout. Like I mentioned before, I got
> the
> frequency meter mainly for testing and diagnostic purposes. It just
> would
> have been an added bonus if I could have hooked it up to me 520SE as
> well.
>
> Paul Allen
> KE7TYY

29970. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 15:06:36 UTC
From: John Davidson
Topic: 29947 Message: 29970

I think it is more of a SSB thing where you have to be really netted with the other operator(s) on freq to sound right. You would not like to sound like a chipmunk or Klingon warrior.
You would not bother the other end ot the qso to have to dig thru menus to find how to enable and use the RIT function !
CW is more forgiving if you are 500 Hz off the other op's freq.

From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 7:49:27 PM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

John, I think that this obsession (if I may call it that) over digital readouts is a symptom of a trend that I am noticing on the ham bands. If a station is off an even frequency by something like 1.3 Khz, someone is likely to come along and tell the operator that he is "off frequency", even though his signal might be WELL WITHIN his allocated range for his license.

There is only one band in which exact center frequencies are a requirment, and that band is NOT supported by the 520. It seems rather silly to me that operation on something other than an even frequency (14.230.00.00 as opposed to 14.231.24.5) is reason to be called out by someone else, but it seems to be happening more and more often.

One of my radios is PLL controlled, but the closest to a given frequency I can get is 10Hz, and I usually don't use that, but rather, tune in 100Hz increments. The other one is a pair of 599 twins, and I would NEVER want to put a digital dial on them! That would be like hanging a foxtail on the rearview mirror of a Ferrari !

73, Jim AG3Y

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, February 25, 2011 7:37 PM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

WHY ?
Is something wrong with the analog dial?
I have had the original TS520(no S) for over 35 years and the circular analog dial is great if you calibrate it properly..
Never had any desire to add any digital readout to it.

From: "pmarkavage@..." <pmarkavage@juno.com>

To: TS-520_820_530_830@yahoogroups.
No easy way to use a "regular" frequency counter, without some addtional circuitry, to view actual frequency of the TS-520SE. You're better off finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were designed to work with rigs like the TS-520 series.
Pete, wa2cwa
On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
> Does anyone know of a way to use a Heathkit frequency meter to
> display the frequency of the TS-520SE? I picked up the meter a few
> weeks ago for general use, but was thinking it'd be nice to use with
> my Kenwood as well.
>
> Thanks in advance!
>
> Paul Allen
> KE7TYY

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29971. Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 15:48:01 UTC
From: w5rkl
Topic: 29947 Message: 29971

A digital display is only as accurate as the digital displays internal reference oscillator is, as well as the transceiver's internal oscillators are.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> You could add a RF sensor (germanium diode and some wire) to the input of
> the counter, and depending on how much RF is floating around your shack
> when you're transmitting and how sensitive the counter is, the counter
> will detect and read the frequency your transmitting on. Not extremely
> elegant, but you can dazzle your contacts with decimal accuracy. It can
> also indicate if your VFO on transmit is drifting around.
>
> Pete, wa2cwa
>
> On Fri, 25 Feb 2011 18:10:21 -0700 James Allen <jp.paul.allen@...>
> writes:
> > Oh, there's nothing wrong with using the dial readout, I just thought
> > it'd
> > be nice to have a digital readout. Like I mentioned before, I got
> > the
> > frequency meter mainly for testing and diagnostic purposes. It just
> > would
> > have been an added bonus if I could have hooked it up to me 520SE as
> > well.
> >
> > Paul Allen
> > KE7TYY
>

29972. Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 20:59:49 UTC
From: Jim S
Topic: 29947 Message: 29972

Well, 500 hz away from another operator when working CW is still a pretty good hop, unless you are purposefully running "split". However, I have heard stations running up to 500 hz apart, and neither operator seems to be aware that he is that far away from the other station! Amazing!

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 26, 2011 10:06 AM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

I think it is more of a SSB thing where you have to be really netted with the other operator(s) on freq to sound right. You would not like to sound like a chipmunk or Klingon warrior.
You would not bother the other end ot the qso to have to dig thru menus to find how to enable and use the RIT function !
CW is more forgiving if you are 500 Hz off the other op's freq.

_____
From: Jim S <jimstan@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 7:49:27 PM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

John, I think that this obsession (if I may call it that) over digital readouts is a symptom of a trend that I am noticing on the ham bands. If a station is off an even frequency by something like 1.3 Khz, someone is likely to come along and tell the operator that he is "off frequency", even though his signal might be WELL WITHIN his allocated range for his license.

There is only one band in which exact center frequencies are a requirment, and that band is NOT supported by the 520. It seems rather silly to me that operation on something other than an even frequency (14.230.00.00 as opposed to 14.231.24.5) is reason to be called out by someone else, but it seems to be happening more and more often.

One of my radios is PLL controlled, but the closest to a given frequency I can get is 10Hz, and I usually don't use that, but rather, tune in 100Hz increments. The other one is a pair of 599 twins, and I would NEVER want to put a digital dial on them! That would be like hanging a foxtail on the rearview mirror of a Ferrari !

73, Jim AG3Y

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com

Sent: Friday, February 25, 2011 7:37 PM
Subject: Re: [TS-520_820_530_830] TS520SE and Heathkit frequency meter

WHY ?
Is something wrong with the analog dial?
I have had the original TS520(no S) for over 35 years and the circular analog dial is great if you calibrate it properly..
Never had any desire to add any digital readout to it.

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.
No easy way to use a "regular" frequency counter, without some addtional circuitry, to view actual frequency of the TS-520SE. You're better off finding a Kenwood DG-5 or Spectronics DD-1K digital displays that were designed to work with rigs like the TS-520 series.
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On Fri, 25 Feb 2011 06:20:24 -0000 "kingtygr" <jp.paul.allen@...>
writes:
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> Thanks in advance!
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> Paul Allen
> KE7TYY

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29973. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 21:03:24 UTC
From: Jim S
Topic: 29947 Message: 29973

A frequency counter, picking up RF off the air, can be more accurate, at least for the transmitted signal, provided that it is calibrated against a good standard. WWV is plenty good enough for amateur radio use. The signal from the time-base oscillator is zero beat against one of the WWV station's carriers, and the result should provide a good base for all your measurements.

Of course, Mike knows this. I am just mentioning the procedure for those who are just getting started in this avocation!

73, Jim AG3Y

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 26, 2011 10:48 AM
Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

A digital display is only as accurate as the digital displays internal reference oscillator is, as well as the transceiver's internal oscillators are.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> You could add a RF sensor (germanium diode and some wire) to the input of
> the counter, and depending on how much RF is floating around your shack
> when you're transmitting and how sensitive the counter is, the counter
> will detect and read the frequency your transmitting on. Not extremely
> elegant, but you can dazzle your contacts with decimal accuracy. It can
> also indicate if your VFO on transmit is drifting around.
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> Pete, wa2cwa
>
> On Fri, 25 Feb 2011 18:10:21 -0700 James Allen <jp.paul.allen@...>
> writes:
> > Oh, there's nothing wrong with using the dial readout, I just thought
> > it'd
> > be nice to have a digital readout. Like I mentioned before, I got
> > the
> > frequency meter mainly for testing and diagnostic purposes. It just
> > would
> > have been an added bonus if I could have hooked it up to me 520SE as
> > well.
> >

> > Paul Allen
> > KE7TYY
>

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29974. Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 22:50:40 UTC
From: w5rkl
Topic: 29947 Message: 29974

I agree with Jim.

The DG-5 has an internal 10Mhz standard oscillator. The calibration adjustments are covered on page 36 in the DG-5 service manual.

The nice thing about the DG-5 is it can be be used as a simple frequency counter as well as displaying receive and transmit frequency when connected to the TS-520S and TS-520SE. Mods to bring the HET, VFO, and CAR oscillator signals to the rear panel of the TS-520 is required in order to use the DG-5 with the TS-520.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> A frequency counter, picking up RF off the air, can be more accurate, at least for the transmitted signal, provided that it is calibrated against a good standard. WWV is plenty good enough for amateur radio use. The signal from the time-base oscillator is zero beat against one of the WWV station's carriers, and the result should provide a good base for all your measurements.
>
> Of course, Mike knows this. I am just mentioning the procedure for those who are just getting started in this avocation!
>
> 73, Jim AG3Y
>
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, February 26, 2011 10:48 AM
> Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
>
>
>
>
>
> A digital display is only as accurate as the digital displays internal reference oscillator is, as well as the transceiver's internal oscillators are.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@ wrote:
> >

> > You could add a RF sensor (germanium diode and some wire) to the input of
> > the counter, and depending on how much RF is floating around your shack
> > when you're transmitting and how sensitive the counter is, the counter
> > will detect and read the frequency your transmitting on. Not extremely
> > elegant, but you can dazzle your contacts with decimal accuracy. It can
> > also indicate if your VFO on transmit is drifting around.
> >
> > Pete, wa2cwa
> >
> > On Fri, 25 Feb 2011 18:10:21 -0700 James Allen <jp.paul.allen@>
> > writes:
> > > Oh, there's nothing wrong with using the dial readout, I just thought
> > > it'd
> > > be nice to have a digital readout. Like I mentioned before, I got
> > > the
> > > frequency meter mainly for testing and diagnostic purposes. It just
> > > would
> > > have been an added bonus if I could have hooked it up to me 520SE as
> > > well.
> > >
> > > Paul Allen
> > > KE7TYY
> >
>
>
>
>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
> http://www.pctools.com
> =======
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>

29975. 950VDC

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 23:26:02 UTC
From: MadmaRty
Topic: 29975 Message: 29975

hello folks ... replaced the 4 20 ohm resistors and the screen resistors and now I am reading 950 volts dc on top of my tubes <idle> were as before was 800 !!! all comments welcome !

29976. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 00:37:01 UTC
From: Joseph Stiles
Topic: 29945 Message: 29976

Mike & group,

Found a good L4 on a bad RF board in the parts bin and replaced the broken one. While I was in there, took out the IF board too and cleaning it and the RF board in DAWN dish soap really did the trick. All back together now and turned on. Two questions though: what the heck is an AF VTVM,? and is it necessary to have it to do step #20 in the service manual? I have an o'scope, vtvm, and dvm w/rf probe. tnx.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, February 25, 2011 10:28:38 AM
Subject: [TS-520_820_530_830] Re: TS 830S L-4

Hi Joe,

Bob Mansker, ke5ftf at mail.com most likely has a replacement RF Unit board. You might check with him to see what he can do for you. I recently purchases a replacement RF Unit board for my 820. It worked great and his prices are reasonable.

73s
Mike
W5KRL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> I did those steps prior to posting the msg, but rechecked them again. The
> 160m band appears the only one with lower output. However, I got out a better

> magnifier and some really bright light and took a further look at L4 on the RF

> board. The slug is damaged, half of it appears missing, there was some type of

> glue applied to the top, and I can see the fine copper wires and they "don't
> look right." So, I guess I'll root around the parts bin. Is there another coil

> that can be taken from another board? I have other boards, but not sure that I

> have an RF board. Oh, on further inspection, it also appears that some of the
> wiring on the counter board and the PLL have/had been altered. From what I can

> figure out it may have had or an attempted CB hack. Just my luck.
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, February 25, 2011 7:48:42 AM
> Subject: [TS-520_820_530_830] Re: TS 830S L-4
>
>
> Joe,
>
> Ignore the step 18 that addresses the "AM" portion. This applies to TS-830M
> models only. Step 18 on page 37 titled "Generator Drive Coil Adjustment" is the
>
> step I am referring to.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Good morning Joe,
> >
> > L4 is one of the receiver's "8.83Mhz" trap coils. I recommend checking and,
>if
>
> >necessary, make adjustments as needed in step 18 on page 37 in the 830 service
>
> >manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> > >
> > > Greetings group!
> > >
> > > I picked up an 830S at a garage sale. It is a full filtered GOLD
> >edition.
> >
> > > Have spent the last few days cleaning it up..kinda looked like a sawdust

>bomb
>
> >
> > > went off inside. It puts out full power, except on 160 meter band, 70 watts
>
> > > tops. I was looking around on the RF board and noticed L4 (right by the
> >1.8Mhz
> >
> > > ANT coil) slug appears damaged. Would this account for the low output? All

> >other
> >
> > > bands appear fine. I tried "tweaking" the ANT, MIX, and DRIVE coils, with
>no
>
>
> > > luck?
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
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[Non-text portions of this message have been removed]

29977. TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 00:48:18 UTC
From: Will
Topic: 29977 Message: 29977

Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it (b) why it is necessary (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and (d) implication of not doing it. Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS

29978. Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-26 23:53:18 UTC
From: Bill
Topic: 29947 Message: 29978

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> A digital display is only as accurate as the digital displays internal reference oscillator is, as well as the transceiver's internal oscillators are.
>
>
> 73s
> Mike
> W5RKL

Hi Mike...
...and Everybody,

I have noticed widespread misunderstanding on the lists and on the air about the difference between dial resolution and dial accuracy. Obviously some of the members here have a good idea about that. Once upon a time I was considering how to hook up a digital display to a Hammarlund receiver. Before I could get one built I learned how to use the dial that was already on the receiver. There was no real need for the digital dial.

Digital dials might be more convenient than counting off those funny little marks on the dial, especially if your eyesight is fading a little. We just have to keep in mind that 10 Hz or 1 Hz or .001 Hz resolution on the display is no guarantee that's your exact, absolute frequency. This doesn't even address the whole idea of transferring a standard and the concept of tolerances.

If you have access to the 1976 ARRL Handbook (and perhaps others) there is a digital frequency readout as part of a receiver project that would be suitable for any of these radios. If you just want to know more you can look there and not bother about building it. The receiver project starts on page 274. That's the one I was going to build for the Hammarlund. It was faster and easier to learn how to use the calibrator and interpolation than to build that dial <evil grin>. I was able to dial up a MARS traffic net by the dials alone and have the rig right on the net.

The dials on my 599 Twins are more than adequate for ham use. I do have a digital frequency counter on my bench sharing space with a WWII LM <g>.

73,

Bill KU8H

29979. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 01:40:35 UTC
From: Jim S
Topic: 29947 Message: 29979

With all the digital dials, etc. that have pervaded the market, a simple little device has essentially been lost to the ham radio avocation! I am talking about the 100Khz crystal calibrator. The simplest ones gave "marks" every 100Khz up the HF band. More advanced ones would have a divider circuit that would split that 100Khz frequency into 25Khz increments.

Many of the older radios such as the Kenwood hybrids had crystal calibrators either built in or available as an "option" at a small charge. I can still remember the Heathkit calibrator that plugged into an octal socket on the chassis.

When these devices are set up right, it is extremely easy to see exactly where the edges of the bands, and/or your allocation falls on an analog dial. The calibration marks on those dials were either lined up by holding the knob skirt and turning the innner knob to adjust the VFO without moving the dial itself, or perhaps by turning a small knob on the front of the radio that would adjust a small trimmer in parallel with the VFO capacitor and move the frequency far enough to allow the dial marks to be in the right spot.

Unless something was seriously wrong with the radio, most dials would agree within a few Khz of the marker, and a simple twist of the right knob was all it took to get very close to the right frequency.

Did they give you fractions of a Hz resolution ? NO ! Were they "close enough for Government work" ? Well, YES, as long as you used common sense and didn't try to put your suppressed carrier ON the band edge, and hope that all your sideband energy was within the band, or didn't try to put your CW carrier on the other band edge, and hope that it was "close enough". Even the seasoned Extra Class operators knew enough to stay a couple of hundred Hz inside the band, just to "make sure" !

Sadly, that skill, and those tools seem to be disappearing with the newer operators and radios.

I really wonder how many "appliance operators" know how to check the calibration of their digital dials ?

Jim AG3Y

----- Original Message -----
From: Bill
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, February 26, 2011 6:53 PM
Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> A digital display is only as accurate as the digital displays internal reference oscillator is, as well as the transceiver's internal oscillators are.
>

>
> 73s
> Mike
> W5RKL

Hi Mike...
...and Everybody,

I have noticed widespread misunderstanding on the lists and on the air about the difference between dial resolution and dial accuracy. Obviously some of the members here have a good idea about that. Once upon a time I was considering how to hook up a digital display to a Hammarlund receiver. Before I could get one built I learned how to use the dial that was already on the receiver. There was no real need for the digital dial.

Digital dials might be more convenient than counting off those funny little marks on the dial, especially if your eyesight is fading a little. We just have to keep in mind that 10 Hz or 1 Hz or .001 Hz resolution on the display is no guarantee that's your exact, absolute frequency. This doesn't even address the whole idea of transferring a standard and the concept of tolerances.

If you have access to the 1976 ARRL Handbook (and perhaps others) there is a digital frequency readout as part of a receiver project that would be suitable for any of these radios. If you just want to know more you can look there and not bother about building it. The receiver project starts on page 274. That's the one I was going to build for the Hammarlund. It was faster and easier to learn how to use the calibrator and interpolation than to build that dial <evil grin>. I was able to dial up a MARS traffic net by the dials alone and have the rig right on the net.

The dials on my 599 Twins are more than adequate for ham use. I do have a digital frequency counter on my bench sharing space with a WWII LM <g>.

73,

Bill KU8H

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.16990)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

29980. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 06:56:22 UTC
From: PGA
Topic: 29945 Message: 29980

Joe,

A AF VTVM is a voltmeter with a calibrated scale in db, with an input impedance of 600 ohms. You can substitute this by using your own VTVM and put a 600 ohms resistor over the input, that will do the trick too. Almost every VTVM meter has a seldom used db scale.

hope this helps,

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> Found a good L4 on a bad RF board in the parts bin and replaced the broken
> one. While I was in there, took out the IF board too and cleaning it and the RF

snip

29981. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 07:13:29 UTC
From: Chris Parnell
Topic: 29945 Message: 29981

Hi All,

I built my own VTVM based on an Australian hams design, that works VERY well, and I couldn't do without it now... This one has a analogue meter, 5 ranges up to 500mV, 1V, 5V, 10V and 20V.

If anyone wants the design details and component list, please let me know.

Thanks
Chris, ZL1CDP

Sent from my iPhone

On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:

> Joe,
>
> A AF VTVM is a voltmeter with a calibrated scale in db, with an input impedance of 600 ohms. You can substitute this by using your own VTVM and put a 600 ohms resistor over the input, that will do the trick too. Almost every VTVM meter has a seldom used db scale.
>
> hope this helps,
>
> 73, Wim PA0PGA
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
> >
> > Mike & group,
> >
> > Found a good L4 on a bad RF board in the parts bin and replaced the broken
> > one. While I was in there, took out the IF board too and cleaning it and the RF
>
> snip
>
>

[Non-text portions of this message have been removed]

29982. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 07:39:45 UTC
From: PGA
Topic: 29977 Message: 29982

Hi Will,

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it

Neutralisation is preventing the tubes to go in self-oscillation by blending out the internal tube capacitance, the usual source for VHF self-oscillation.

b) why it is necessary

If not done the tubes can (and will) produce a signal in the VHF range and causes trouble in TV, Airband or other frequencies.

(c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and

The easiest way to do it is the "cold method"
You run the TX on 10 meters and tune for maximum output into a dummyload.
Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
Put a T-piece connector between the set and dummy, for connecting a meter, a SWR meter will not do. Let the dummy connected.
Connect a scope or RF millivoltmeter to this connector and set for a comfortable readable signal strenght.
You may also use a second receiver's S-meter instead of the scope, but the receiver must be connected directly, otherwise you pick up all kinds of stray signals.

Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.

Tune the neutrodyne condenser for minimum signal.
Be very careful: usually one end of this capacitor is on 900V and that is no voltage to ignore.
Use a good isolated adjustment tool, not a normal screwdriver, because that induces more capacity to the circuit.

Remove the measurement instrument, reconnect the accessory socket, you set is neutrodyned.

That is all, you just compensated the internal tube capacitances and there should be no "wild" oscillations.

There are more elaborated ways to do this, but I always used this method that was used on VHF when the transmitters had still tubes.

d) implication of not doing it.

see above

Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS
>

hope this helps

73, Wim PA0PGA

29983. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 11:45:33 UTC
From: Ken
Topic: 29945 Message: 29983

Yes Chris please send design details & component list to nz4q@... thanks!

Ken
NZ4Q

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi All,
>
> I built my own VTVM based on an Australian hams design, that works VERY well, and I couldn't do without it now... This one has a analogue meter, 5 ranges up to 500mV, 1V, 5V, 10V and 20V.
>
> If anyone wants the design details and component list, please let me know.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>
> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
> > A AF VTVM is a voltmeter with a calibrated scale in db, with an input impedance of 600 ohms. You can substitute this by using your own VTVM and put a 600 ohms resistor over the input, that will do the trick too. Almost every VTVM meter has a seldom used db scale.
> >
> > hope this helps,
> >
> > 73, Wim PA0PGA
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@> wrote:
> > >
> > > Mike & group,
> > >
> > > Found a good L4 on a bad RF board in the parts bin and replaced the broken
> > > one. While I was in there, took out the IF board too and cleaning it and the RF
> >
> > snip
> >
> >
>
>
> [Non-text portions of this message have been removed]

>

29984. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 12:44:58 UTC
From: Charles Coffee
Topic: 29945 Message: 29984

Chris would you mind sending me the design for the VTVM also?

email KJ4GU@....

Thank you
Chuck, KJ4GU

On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi All,
>
> I built my own VTVM based on an Australian hams design, that works VERY
> well, and I couldn't do without it now... This one has a analogue meter, 5
> ranges up to 500mV, 1V, 5V, 10V and 20V.
>
> If anyone wants the design details and component list, please let me know.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
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> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
> > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> impedance of 600 ohms. You can substitute this by using your own VTVM and
> put a 600 ohms resistor over the input, that will do the trick too. Almost
> every VTVM meter has a seldom used db scale.
> >
> > hope this helps,
> >
> > 73, Wim PA0PGA
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
> wrote:
> > >
> > > Mike & group,
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> > > Found a good L4 on a bad RF board in the parts bin and replaced the
> broken
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> and the RF
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> > > snip

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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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29985. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 14:15:56 UTC
From: mydogchillroy@yahoo.com
Topic: 29945 Message: 29985

While we are on the subject of VTVM... If anyone has a hardcover copy of the Rhys Samuel book The V.T.V.M. they would be willing to part with - please reach me off-list.

tnx, Jim aj4vp

From: Charles Coffee <chascoffee@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 27, 2011 7:44:58 AM
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4

Chris would you mind sending me the design for the VTVM also?

email KJ4GU@....

Thank you
Chuck, KJ4GU

On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi All,
>
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> well, and I couldn't do without it now... This one has a analogue meter, 5
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>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>
> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
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> wrote:
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

29986. Re: [TS-520_820_530_830] TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 15:33:07 UTC
From: Charles Rodecap
Topic: 29945 Message: 29986

Hi Chris

I would appreciate a copy for the VTVM also.
email millwrightmonkey@...

Thanks
Charlie
KA9HDG

--- On Sun, 2/27/11, mydogchillroy@... <mydogchillroy@...> wrote:

From: mydogchillroy@yahoo.com <mydogchillroy@...>
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, February 27, 2011, 9:15 AM

While we are on the subject of VTVM... If anyone has a hardcover copy of the

Rhys Samuel book The V.T.V.M. they would be willing to part with - please reach

me off-list.

tnx, Jim aj4vp

From: Charles Coffee <chascoffee@...>

To: TS-520_820_530_830@yahoogroups.com

Sent: Sun, February 27, 2011 7:44:58 AM

Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4

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email KJ4GU@....

Thank you

Chuck, KJ4GU

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> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
> > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> impedance of 600 ohms. You can substitute this by using your own VTVM and
> put a 600 ohms resistor over the input, that will do the trick too. Almost
> every VTVM meter has a seldom used db scale.
> >
> > hope this helps,
> >
> > 73, Wim PA0PGA
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
> wrote:
> > >
> > > Mike & group,
> > >
> > > Found a good L4 on a bad RF board in the parts bin and replaced the

> broken

> > > one. While I was in there, took out the IF board too and cleaning it

> and the RF

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> > snip

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29987. Re: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 14:25:24 UTC
From: Will Beattie
Topic: 29977 Message: 29987

Hi again WimI have read your instruction details again and have a couple of more questions. I hope you will understand as I am not totally familiar with the 830 and valve principles:

Then you switch off the heaters of the final tubes by removing the accessory socketWhat does this mean exactly. Do I have to physically remove the socket ? desolder the wiring to it or what ?
also
Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.I was assuming that by switching the heaters off for the final tubes on the front panel control this is what you refer to. Perhaps you would advise.

neutrodyne condenser _ by this do you mean TC1 underneath the final printed circuit board ?

very 73
Will

--- On Sun, 27/2/11, PGA <wpenders@...> wrote:

From: PGA <wpenders@home.nl>
Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 27 February, 2011, 7:39

Hi Will,

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:

>

> Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it

Neutralisation is preventing the tubes to go in self-oscillation by blending out the internal tube capacitance, the usual source for VHF self-oscillation.

b) why it is necessary

If not done the tubes can (and will) produce a signal in the VHF range and causes trouble in TV, Airband or other frequencies.

(c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and

The easiest way to do it is the "cold method"

You run the TX on 10 meters and tune for maximum output into a dummyload.

Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.

Put a T-piece connector between the set and dummy, for connecting a meter, a SWR meter will not do. Let the dummy connected.

Connect a scope or RF millivoltmeter to this connector and set for a comfortable readable signal strenght.

You may also use a second receiver's S-meter instead of the scope, but the receiver must be connected directly, otherwise you pick up all kinds of stray signals.

Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.

Tune the neutrodyne condenser for minimum signal.

Be very careful: usually one end of this capacitor is on 900V and that is no voltage to ignore.

Use a good isolated adjustment tool, not a normal screwdriver, because that induces more capacity to the circuit.

Remove the measurement instrument, reconnect the accessory socket, you set is neutrodyned.

That is all, you just compensated the internal tube capacitances and there should be no "wild" oscillations.

There are more elaborated ways to do this, but I always used this method that was used on VHF when the transmitters had still tubes.

d) implication of not doing it.

see above

Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS

>

hope this helps

73, Wim PA0PGA

[Non-text portions of this message have been removed]

29988. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 13:02:06 UTC
From: W2FID
Topic: 29945 Message: 29988

Hi Chris:
How about posting the info in the files section for us all. If not, please send a copy to me.
Thanks
73
Marshall
W2FID

--- On Sun, 2/27/11, Charles Coffee <chascoffee@...> wrote:

From: Charles Coffee <chascoffee@...>
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, February 27, 2011, 4:44 AM

Chris would you mind sending me the design for the VTVM also?

email KJ4GU@....

Thank you
Chuck, KJ4GU

On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi All,
>
> I built my own VTVM based on an Australian hams design, that works VERY
> well, and I couldn't do without it now... This one has a analogue meter, 5
> ranges up to 500mV, 1V, 5V, 10V and 20V.
>
> If anyone wants the design details and component list, please let me know.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>
> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
> > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> impedance of 600 ohms. You can substitute this by using your own VTVM and
> put a 600 ohms resistor over the input, that will do the trick too. Almost
> every VTVM meter has a seldom used db scale.
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> > 73, Wim PA0PGA
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> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
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29989. PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 15:08:51 UTC
From: Will
Topic: 29989 Message: 29989

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

29990. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 16:40:32 UTC
From: w5rkl
Topic: 29977 Message: 29990

Hi Will,

Just a few added bits of information to Wim's resposne.

Tube amplifiers have what is called unwanted internal capacitance between that exists between the output and input elements. The unwanted capacitance between the output element and the input element within the tube(s) can cause the output to couple back to the input causing "regenerative feedback" to occur. Regenerative feedback can result in loss of amplifier efficiency, maximum RF output will not occur at the maximum plate current dip, and/or cause the amplifier to "oscillate".

The neutralizing capacitor, typically a variable capacitor and is listed on the hybrid schematics as "TC1", connects the amplifier's output to the amplifier's input at 180 degrees out of phase. The neutralizing capacitor, when properly adjusted, cancels the unwanted tube element capacitance, eliminating regenerative feedback

Neutralization does not "drift" out alignment due to age of the tube(s) since the tube's internal capacitance is set by the design of the tube and is not affected by age.

The hybrid service and operator manuals list the steps required when neutralizing the final amplifier in the hybrids.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it (b) why it is necessary (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and (d) implication of not doing it. Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS
>

29991. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 17:09:16 UTC
From: Chris Parnell
Topic: 29945 Message: 29991

Hi All, I will post it to the files section.

Note, it's not an old style Vacum Tube Voltmeter, but a more modern RF Voltmeter design.

Hope it helps you all.

Cheers
Chris, ZL1CDP

Sent from my iPhone

On 28/02/2011, at 1:44 AM, Charles Coffee <chascoffee@...> wrote:

> Chris would you mind sending me the design for the VTVM also?
>
> email KJ4GU@....
>
> Thank you
> Chuck, KJ4GU
>
> On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:
>
> > Hi All,
> >
> > I built my own VTVM based on an Australian hams design, that works VERY
> > well, and I couldn't do without it now... This one has a analogue meter, 5
> > ranges up to 500mV, 1V, 5V, 10V and 20V.
> >
> > If anyone wants the design details and component list, please let me know.
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > Sent from my iPhone
> >
> > On 27/02/2011, at 7:56 PM, PGA <wpenders@home.nl> wrote:
> >
> > > Joe,
> > >
> > > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> > > impedance of 600 ohms. You can substitute this by using your own VTVM and
> > > put a 600 ohms resistor over the input, that will do the trick too. Almost
> > > every VTVM meter has a seldom used db scale.
> > >
> > > hope this helps,
> > >

> > > 73, Wim PA0PGA
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
> > wrote:
> > > >
> > > > Mike & group,
> > > >
> > > > Found a good L4 on a bad RF board in the parts bin and replaced the
> > broken
> > > > one. While I was in there, took out the IF board too and cleaning it
> > and the RF
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29992. RF Voltmeter design files

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 17:36:23 UTC
From: Chris Parnell
Topic: 29992 Message: 29992

Hi all,

I couldn't post this to the group as it's 2MB in a zip file, so I have hosted it on my www.ft-2000.com website.
You can download the file here:

http://www.ft-2000.com/RFVTM.zip

If you want to download the file from a web browser, please ensure that the RFVTM portion of the url is in UPPERCASE, as it's hosted on a unix server and therefore case-sensitive.

As mentioned in a previous email to the group, this is not an older Vacum Tube variety, but a very accurate, modern, RF VTM that is easy to build and use which helps tremendously with aligning your HF hybrid rigs. - Great for neutralization and general alignment.

Lastly, just to mention that this is not my design, it is from a VK ham.

Thanks
Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

29993. Re: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 17:13:19 UTC
From: Will Beattie
Topic: 29977 Message: 29993

Hey Mike,excellent. Thank you so much for that added information. I am learning big chunks re the 830 and, in general, tube output devices. Very grateful for the input from yourself very 73Will / GM0HKS
--- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 27 February, 2011, 16:40

Hi Will,

Just a few added bits of information to Wim's resposne.

Tube amplifiers have what is called unwanted internal capacitance between that exists between the output and input elements. The unwanted capacitance between the output element and the input element within the tube(s) can cause the output to couple back to the input causing "regenerative feedback" to occur. Regenerative feedback can result in loss of amplifier efficiency, maximum RF output will not occur at the maximum plate current dip, and/or cause the amplifier to "oscillate".

The neutralizing capacitor, typically a variable capacitor and is listed on the hybrid schematics as "TC1", connects the amplifier's output to the amplifier's input at 180 degrees out of phase. The neutralizing capacitor, when properly adjusted, cancels the unwanted tube element capacitance, eliminating regenerative feedback

Neutralization does not "drift" out alignment due to age of the tube(s) since the tube's internal capacitance is set by the design of the tube and is not affected by age.

The hybrid service and operator manuals list the steps required when neutralizing the final amplifier in the hybrids.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:

>

> Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it (b) why it is necessary (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique

effective/anyway good and (d) implication of not doing it. Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS

>

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29994. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 18:07:37 UTC
From: PGA
Topic: 29977 Message: 29994

Hello Will,

I am also not very familiar with the 830, more used to the FT101ZD and FT901DM. They have a accessoire socket for a external 2M transverter, that can be used to interrupt the 12 to the finals.

My mistake: looking in the schematic shows that the 530 has not such convenient plug, so you have to break the 12V to the heater elsewere.
Switching off the heater voltage on the front kills also the 12BY7 heater and that is not wanted in this case.
So desoldering the 12V connection to the final board is the quickest solution.

Yes, TC1 is the neutrodyne condenser.

Generally you can use this neutrodyning method on every tube-type transmitter, if you switch off the heater to the final and tune the neutrodyning condenser for minimal output of the PA stage.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@...> wrote:
>
> Hi again WimI have read your instruction details again and have a couple of more questions. I hope you will understand as I am not totally familiar with the 830 and valve principles:
>
> Then you switch off the heaters of the final tubes by removing the accessory socketWhat does this mean exactly. Do I have to physically remove the socket ? Â desolder the wiring to it or what ?
> also
> Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.I was assuming that by switching the heaters off for the final tubes on the front panel control this is what you refer to. Perhaps you would advise.
>
> neutrodyne condenser _ by this do you mean TC1 underneath the final printed circuit board ?
>
> very 73
> Will
>
>
> --- On Sun, 27/2/11, PGA <wpenders@...> wrote:
>
> From: PGA <wpenders@...>
> Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
> To: TS-520_820_530_830@yahoogroups.com

> Date: Sunday, 27 February, 2011, 7:39
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> Hi Will,
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>
> Neutralisation is preventing the tubes to go in self-oscillation by blending out the internal tube capacitance, the usual source for VHF self-oscillation.
>
>
>
> b) why it is necessary
>

>
>
> If not done the tubes can (and will) produce a signal in the VHF range and causes trouble in TV, Airband or other frequencies.
>
>
>
> (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and
>
>
>
> The easiest way to do it is the "cold method"
>
> You run the TX on 10 meters and tune for maximum output into a dummyload.
>
> Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
>
> Put a T-piece connector between the set and dummy, for connecting a meter, a SWR meter will not do. Let the dummy connected.
>
> Connect a scope or RF millivoltmeter to this connector and set for a comfortable readable signal strenght.
>
> You may also use a second receiver's S-meter instead of the scope, but the receiver must be connected directly, otherwise you pick up all kinds of stray signals.
>
>
>
> Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.
>
>
>
> Tune the neutrodyne condenser for minimum signal.
>
> Be very careful: usually one end of this capacitor is on 900V and that is no voltage to ignore.
>
> Use a good isolated adjustment tool, not a normal screwdriver, because that induces more capacity to the circuit.
>
>
>
> Remove the measurement instrument, reconnect the accessory socket, you set is neutrodyned.
>
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>

> That is all, you just compensated the internal tube capacitances and there should be no "wild" oscillations.
>
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>
> There are more elaborated ways to do this, but I always used this method that was used on VHF when the transmitters had still tubes.
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> d) implication of not doing it.
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> see above
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>
> Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS
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> hope this helps
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> 73, Wim PA0PGA
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29995. Re: [TS-520_820_530_830] RF Voltmeter design files

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 18:28:09 UTC
From: Charles Coffee
Topic: 29992 Message: 29995

Thanks Chris, appreciate the link for the download and nice documentation.

Best Regards
Chuck, KJ4GU
On Sun, Feb 27, 2011 at 12:36 PM, Chris Parnell <cparnell1001@...> wrote:

> Hi all,
>
> I couldn't post this to the group as it's 2MB in a zip file, so I have
> hosted it on my www.ft-2000.com website.
> You can download the file here:
>
> http://www.ft-2000.com/RFVTM.zip
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> and therefore case-sensitive.
>
> As mentioned in a previous email to the group, this is not an older Vacum
> Tube variety, but a very accurate, modern, RF VTM that is easy to build and
> use which helps tremendously with aligning your HF hybrid rigs. - Great for
> neutralization and general alignment.
>
> Lastly, just to mention that this is not my design, it is from a VK ham.
>
> Thanks
> Chris Parnell, ZL1CDP
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29996. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 20:12:57 UTC
From: Alan Riley
Topic: 29989 Message: 29996

My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

73,
Alan, KD5R

----- Original Message -----
From: Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 27, 2011 9:08 AM
Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

[Non-text portions of this message have been removed]

29997. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 20:28:29 UTC
From: w5rkl
Topic: 29977 Message: 29997

Actually, Wim, you need the driver tube's RF signal when adjusting TC1 to neutralize the final amplifier. What needs to be done is the final tubes must be stopped from producing RF output and that is accomplished by setting the rear panel SG switch to OFF. With the SG switch set to OFF, a "negative" voltage is applied to the screens of the final tubes. This prevents electron flow from the cathode to the plate, turning both final tube cathode to plate conduction "OFF".

Other transceivers, when neutralizing the final amplifier, states to remove both plate and screen voltage, this is how Heathkit neutralizes the final amplifier in the HW-100 and SB-100 series transceivers, excluding the HW/SB-104.

Regardless of the transceiver, the driver tube must function as normal.

As for operating the Kenwood hybrids, 520 and 820, with the Kenwood Xverter, the driver tube is not turned off, it remains operating as it normal does. The final amplifier is turned off by setting the SG switch to OFF. The filament switch remains "ON" at all times. The "Xverter" requires a driver tube 10 meter signal in transmit and if the driver tube is turned OFF (Heater switch set to OFF) then there will be no RF signal being applied to the Xverter in transmit resulting in no RF output to the Xverter to mix with the Xverter's transmit local oscillator which results in no RF output from the Xverter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> Hello Will,
>
> I am also not very familiar with the 830, more used to the FT101ZD and FT901DM. They have a accessoire socket for a external 2M transverter, that can be used to interrupt the 12 to the finals.
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> My mistake: looking in the schematic shows that the 530 has not such convenient plug, so you have to break the 12V to the heater elsewere.
> Switching off the heater voltage on the front kills also the 12BY7 heater and that is not wanted in this case.
> So desoldering the 12V connection to the final board is the quickest solution.
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> Yes, TC1 is the neutrodyne condenser.
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> Generally you can use this neutrodyning method on every tube-type transmitter, if you switch off the heater to the final and tune the neutrodyning condenser for minimal output of the PA stage.
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> --- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@> wrote:
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> > Then you switch off the heaters of the final tubes by removing the accessory socketWhat does this mean exactly. Do I have to physically remove the socket ? Â desolder the wiring to it or what ?
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> > Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.I was assuming that by switching the heaters off for the final tubes on the front panel control this is what you refer to. Perhaps you would advise.
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> > neutrodyne condenser _ by this do you mean TC1 underneath the final printed circuit board ?
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> > very 73
> > Will
> >
> >
> > --- On Sun, 27/2/11, PGA <wpenders@> wrote:
> >
> > From: PGA <wpenders@>
> > Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Sunday, 27 February, 2011, 7:39
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> >
> > Hi Will,
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@> wrote:
> >
> > >
> >
> > > Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it
> >
> >
> >
> > Neutralisation is preventing the tubes to go in self-oscillation by blending out the internal tube capacitance, the usual source for VHF self-oscillation.
> >
> >
> >
> > b) why it is necessary
> >
> >
> >
> > If not done the tubes can (and will) produce a signal in the VHF range and causes trouble in TV, Airband or other frequencies.
> >
> >
> >
> > (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and
> >
> >
> >
> > The easiest way to do it is the "cold method"
> >
> > You run the TX on 10 meters and tune for maximum output into a dummyload.
> >
> > Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
> >
> > Put a T-piece connector between the set and dummy, for connecting a meter, a SWR meter will not do. Let the dummy connected.

> >
> > Connect a scope or RF millivoltmeter to this connector and set for a comfortable readable signal strenght.
> >
> > You may also use a second receiver's S-meter instead of the scope, but the receiver must be connected directly, otherwise you pick up all kinds of stray signals.
> >
> >
> >
> > Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.
> >
> >
> >
> > Tune the neutrodyne condenser for minimum signal.
> >
> > Be very careful: usually one end of this capacitor is on 900V and that is no voltage to ignore.
> >
> > Use a good isolated adjustment tool, not a normal screwdriver, because that induces more capacity to the circuit.
> >
> >
> >
> > Remove the measurement instrument, reconnect the accessory socket, you set is neutrodyned.
> >
> >
> >
> > That is all, you just compensated the internal tube capacitances and there should be no "wild" oscillations.
> >
> >
> >
> > There are more elaborated ways to do this, but I always used this method that was used on VHF when the transmitters had still tubes.
> >
> >
> >
> > d) implication of not doing it.
> >
> >
> >
> > see above
> >
> >
> >
> > Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.....Will / GM0HKS

> >
> > >
> >
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> >
> > hope this helps
> >
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> >
> > 73, Wim PA0PGA
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> > [Non-text portions of this message have been removed]
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29998. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 20:47:14 UTC
From: Joseph Stiles
Topic: 29945 Message: 29998

Wim,

Tnx fer the info. stupid question: you mentioned putting a "600 ohm resistor over the input," what do you mean? I still struggle with some terms and am still learning quite a bit about operating certain diagnostic equipment. tnx.....

73's joe wb7uqu

From: "mydogchillroy@..." <mydogchillroy@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 27, 2011 6:15:56 AM
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4

While we are on the subject of VTVM... If anyone has a hardcover copy of the Rhys Samuel book The V.T.V.M. they would be willing to part with - please reach me off-list.

tnx, Jim aj4vp

From: Charles Coffee <chascoffee@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 27, 2011 7:44:58 AM
Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4

Chris would you mind sending me the design for the VTVM also?

email KJ4GU@....

Thank you
Chuck, KJ4GU

On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi All,
>
> I built my own VTVM based on an Australian hams design, that works VERY
> well, and I couldn't do without it now... This one has a analogue meter, 5
> ranges up to 500mV, 1V, 5V, 10V and 20V.
>
> If anyone wants the design details and component list, please let me know.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone

>
> On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>
> > Joe,
> >
> > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> impedance of 600 ohms. You can substitute this by using your own VTVM and
> put a 600 ohms resistor over the input, that will do the trick too. Almost
> every VTVM meter has a seldom used db scale.
> >
> > hope this helps,
> >
> > 73, Wim PA0PGA
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
> wrote:
> > >
> > > Mike & group,
> > >
> > > Found a good L4 on a bad RF board in the parts bin and replaced the
> broken
> > > one. While I was in there, took out the IF board too and cleaning it
> and the RF
> >
> > snip
> >
> >
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> [Non-text portions of this message have been removed]
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29999. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 20:34:20 UTC
From: Will Beattie
Topic: 29989 Message: 29999

Thanks Alan, yep, I think the IP on this rig is running a little high and that is why I am trying to ascertain from as many individual 830 owners as is possible, if their plate current versus output power differs greatly from mine. Once I get some figures from others, I can then set about working out what is going on with this rig
regards

Will
--- On Sun, 27/2/11, Alan Riley <arr44@...> wrote:

From: Alan Riley <arr44@suddenlink.net>
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 27 February, 2011, 20:12

My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

73,

Alan, KD5R

----- Original Message -----

From: Will

To: TS-520_820_530_830@yahoogroups.com

Sent: Sunday, February 27, 2011 9:08 AM

Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

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[Non-text portions of this message have been removed]

30000. Voltages are now correct after installation of new AF AVR board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 20:59:01 UTC
From: ae5uu
Topic: 30000 Message: 30000

Good afternoon Mike,

I received the board last evening, have installed it, and found the following which I believe to be correct:

AF AVR AF1 pin 1 9.06vdc
pin 2 9.06vdc
AF AVR AF2 pin 6 3.37vdc

IF Unit pin 5 9.06vdc
pin 4 14.4vdc

PLL Unit PLL2 pin 3 (labeled 9) 8.78vdc

FIX-VOX Unit FX3 pin 1 9.06vdc

Relay Unit RL1 pin 1 no pin 1
pin 2 9.06vdc
pin 3 9.06vdc
pin 4 ?
pin 5 15.44vdc
pin 6 Ground
pin 7 14.37vdc
pin 8 14.37vdc
pin 9 14.37vdc
pin 10 14.37vdc
pin 11 14.4vdc
pin 12 14.4vdc
pin 13 4.85vdc
pin 14 Ground

RL2 pin 10 9.06vdc

RF Unit RF2 pin 1 9.06vdc

FUNCTION Switch to FIX-R FIX LED is on
FUNCTION Switch to VFO VFO LED is on
RIT Switch to On RIT LED is on
RF ATT Switch to On ATT LED is on

Now my problems seem to have shifted downstream:

With power on, and heater on, in receive, I show a reading on the meter of 220ma or 650 volts or etc. (I do not know what is being measured here) in all positions of the meter switch. In all cases, the meter reads e.g. 250ma at first and reduces to 220ma over 4 or 5 seconds, or 725 volts quickly down to 650 volts in the same period. I hear what sounds like a relay (maybe it always made that noise?), but it is not the transmit relay.

1) I have 900vdc in the HV section, meter on HV, in transmit (as I mentioned, 650 volts or 220ma or whatever on receive.)
2) Mode set at SSB, when I transmit, meter set to IP, I have no plate current of 60ma. In receive I have the same crazy meter reading.
3) Mode set to TUN, meter to ALC, in transmit, I CAN MAXIMISE meter reading with the Drive control. The reading is 10% higher than I am used to seeing in the past. In receive, the same crazy meter reading.
4) Meter set to IP, Mode set to TUN, no current for the Plate control to dip. On receive, same crazy meter reading.
5) Meter switch set to IP, Mode set to CW, in transmit no reading. NO crazy meter reading in receive. Change in Load control has no effect. Here I AM looking for 225ma but have nothing.
6) Meter switch to RF, adjust Plate and Load controls. No reading to adjust in transmit. Same crazy meter reading in receive.
7) Meter back in ALC, there is some microphone response but the level is only apparent above the initial crazy reading on the meter (meter does not zero.)

Thank you again for the board. What are your thoughts on my new problems? Thanks

73,

Russell
AE5UU

30001. Re: PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 21:08:20 UTC
From: w5rkl
Topic: 29989 Message: 30001

The "IP" meter indication is a combination of final tube screen and plate current. The ICAS (Intermittent Commercial Amateur Service) maximum screen current rating of a single 6146 is "12.6ma", 2 times that for 2 tubes in parallel, and the max 6146 screen voltage is 250VDC. Therefore, to determine the actual final tube plate current, subtract approximately 25ma from the IP meter reading, that will be the approximate final tube plate current.

If one runs higher power output which results in higher IP current, current levels that exceed the 6146 maximum screen current rating, damage to the final tube screens can occur.

Amplifier power input is determine by the formula

Pin = IP x HV

Where "Pin" is "Power Input", "IP" is the combination of final tube screen and plate currents, and "HV" is the High voltage to the plates of the final tubes at normal FULL output!

Therefore, if the IP meter indicates 225ma and the HV indicates 875VDC the power "input" in the final amplifier would be approximately:

.225 x 875 = 196.875 watts

The power output numbers above are a combination of both final tube screen and plate power, minus any loss of RF output due to grid current flowing (ALC indicated) in the final tube grids. When grid current flows in the final tubes power is consumed in the grids resulting in a loss, reduction, of power output from the final tubes to the PI Network.

The final amplifier's in the hybrids operate in Class AB1 which has a typical efficiency ratio of 55%, power input verses power output. Therefore, with 196.875 watts input, with 55% efficiency ratio of power in verse power out, the approximate power output would be 108.2 watts out at the rear SO-239 (196.875 - 45% = 108.2 watt).

The power input figures shown above is/are the "DC" input NOT the "PEP" input power level. The power output figures are based on typical power loss percentages in a typical Class AB1 RF amplifier.

PEP output cannot be measured by monitoring the IP and HV readings as they change too rapidly during normal sideband operation. A calibrated PEP watt meter is the only way to determine the approximate PEP RF output of the transceiver in sideband. The PEP watt meter output accuracy, or any watt meter accuracy for that matter, is also governed by the manufactures percentage of error.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:
>

> My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.
>
> 73,
> Alan, KD5R
>
>
> ----- Original Message -----
> From: Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, February 27, 2011 9:08 AM
> Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
>
>
>
> Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?
>
> regards
>
> Will
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30002. Re: Voltages are now correct after installation of new AF AVR board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 21:12:41 UTC
From: w5rkl
Topic: 30000 Message: 30002

Hi Russell,

The HV sagging to 650VDC appears to be a HV filter capacitor failure, one of the HV filter caps has failed. I recommend replacing "both" HV filter capacitors along with both 470K 1/2 watt resistors and both .001ufd 2KV disc capacitors. See Ken, K4EAA, website

www.k4eaa.com

for HV replacement filter capacitor kit.

Do that then we can look at any other problems your 820 may have.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Good afternoon Mike,
>
> I received the board last evening, have installed it, and found the following which I believe to be correct:
>
> AF AVR AF1 pin 1 9.06vdc
> pin 2 9.06vdc
> AF AVR AF2 pin 6 3.37vdc
>
> IF Unit pin 5 9.06vdc
> pin 4 14.4vdc
>
> PLL Unit PLL2 pin 3 (labeled 9) 8.78vdc
>
> FIX-VOX Unit FX3 pin 1 9.06vdc
>
> Relay Unit RL1 pin 1 no pin 1
> pin 2 9.06vdc
> pin 3 9.06vdc
> pin 4 ?
> pin 5 15.44vdc
> pin 6 Ground
> pin 7 14.37vdc
> pin 8 14.37vdc
> pin 9 14.37vdc
> pin 10 14.37vdc
> pin 11 14.4vdc
> pin 12 14.4vdc

> pin 13 4.85vdc
> pin 14 Ground
>
> RL2 pin 10 9.06vdc
>
> RF Unit RF2 pin 1 9.06vdc
>
> FUNCTION Switch to FIX-R FIX LED is on
> FUNCTION Switch to VFO VFO LED is on
> RIT Switch to On RIT LED is on
> RF ATT Switch to On ATT LED is on
>
> Now my problems seem to have shifted downstream:
>
> With power on, and heater on, in receive, I show a reading on the meter of 220ma or 650 volts or etc. (I do not know what is being measured here) in all positions of the meter switch. In all cases, the meter reads e.g. 250ma at first and reduces to 220ma over 4 or 5 seconds, or 725 volts quickly down to 650 volts in the same period. I hear what sounds like a relay (maybe it always made that noise?), but it is not the transmit relay.
>
> 1) I have 900vdc in the HV section, meter on HV, in transmit (as I mentioned, 650 volts or 220ma or whatever on receive.)
> 2) Mode set at SSB, when I transmit, meter set to IP, I have no plate current of 60ma. In receive I have the same crazy meter reading.
> 3) Mode set to TUN, meter to ALC, in transmit, I CAN MAXIMISE meter reading with the Drive control. The reading is 10% higher than I am used to seeing in the past. In receive, the same crazy meter reading.
> 4) Meter set to IP, Mode set to TUN, no current for the Plate control to dip. On receive, same crazy meter reading.
> 5) Meter switch set to IP, Mode set to CW, in transmit no reading. NO crazy meter reading in receive. Change in Load control has no effect. Here I AM looking for 225ma but have nothing.
> 6) Meter switch to RF, adjust Plate and Load controls. No reading to adjust in transmit. Same crazy meter reading in receive.
> 7) Meter back in ALC, there is some microphone response but the level is only apparent above the initial crazy reading on the meter (meter does not zero.)
>
> Thank you again for the board. What are your thoughts on my new problems? Thanks
>
> 73,
>
> Russell
> AE5UU
>

30003. Re: [TS-520_820_530_830] Re: Voltages are now correct after installation of new AF AVR board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 21:41:35 UTC
From: Russell Nilson
Topic: 30000 Message: 30003

Mike,

As per 1) below, I have a nice solid 900 volts out of the HV capacitors. Earlier today I changed them, the two small capacitors and the two resistors out anyway. I still have a solid 900 volts. It is the confusing meter readings when the set sits there in receive that I don't understand. As I mentioned, I don't know what the meter is measuring, but it is the same in all meter switch positions. If the HV reading on the meter is supposed to read 900 volts on receive and transmit, then I do not have that; just transmit. Could my driver tube be causing any of this trouble?

73,

Russell
AE5UU

--- On Sun, 2/27/11, w5rkl <w5rkl@yahoo.com> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: Voltages are now correct after installation of new AF AVR board
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, February 27, 2011, 3:12 PM

Hi Russell,

The HV sagging to 650VDC appears to be a HV filter capacitor failure, one of the HV filter caps has failed. I recommend replacing "both" HV filter capacitors along with both 470K 1/2 watt resistors and both .001ufd 2KV disc capacitors. See Ken, K4EAA, website

www.k4eaa.com

for HV replacement filter capacitor kit.

Do that then we can look at any other problems your 820 may have.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:

>

> Good afternoon Mike,

>

> I received the board last evening, have installed it, and found the following which I believe to be correct:

>

> AF AVR AF1 pin 1 9.06vdc

> pin 2 9.06vdc

> AF AVR AF2 pin 6 3.37vdc

>

> IF Unit pin 5 9.06vdc

> pin 4 14.4vdc

>

> PLL Unit PLL2 pin 3 (labeled 9) 8.78vdc

>

> FIX-VOX Unit FX3 pin 1 9.06vdc

>

> Relay Unit RL1 pin 1 no pin 1

> pin 2 9.06vdc

> pin 3 9.06vdc

> pin 4 ?

> pin 5 15.44vdc

> pin 6 Ground

> pin 7 14.37vdc

> pin 8 14.37vdc

> pin 9 14.37vdc

> pin 10 14.37vdc

> pin 11 14.4vdc

> pin 12 14.4vdc

> pin 13 4.85vdc

> pin 14 Ground

>

> RL2 pin 10 9.06vdc

>

> RF Unit RF2 pin 1 9.06vdc

>

> FUNCTION Switch to FIX-R FIX LED is on

> FUNCTION Switch to VFO VFO LED is on

> RIT Switch to On RIT LED is on

> RF ATT Switch to On ATT LED is on

>

> Now my problems seem to have shifted downstream:

>

> With power on, and heater on, in receive, I show a reading on the meter of 220ma or 650 volts or etc. (I do not know what is being measured here) in all positions of the meter switch. In all cases, the meter reads e.g. 250ma at first and reduces to 220ma over 4 or 5 seconds, or 725 volts quickly down to 650 volts in the same period. I hear what sounds like a relay (maybe it always made that noise?), but it is not the transmit relay.

>

> 1) I have 900vdc in the HV section, meter on HV, in transmit (as I mentioned, 650 volts or 220ma or whatever on receive.)

> 2) Mode set at SSB, when I transmit, meter set to IP, I have no plate current of 60ma. In receive I have the same crazy meter reading.

> 3) Mode set to TUN, meter to ALC, in transmit, I CAN MAXIMISE meter reading with the Drive control. The reading is 10% higher than I am used to seeing in the past. In receive, the same crazy meter reading.

> 4) Meter set to IP, Mode set to TUN, no current for the Plate control to dip. On receive, same crazy meter reading.

> 5) Meter switch set to IP, Mode set to CW, in transmit no reading. NO crazy meter reading in receive. Change in Load control has no effect. Here I AM looking for 225ma but have nothing.

> 6) Meter switch to RF, adjust Plate and Load controls. No reading to adjust in transmit. Same crazy meter reading in receive.

> 7) Meter back in ALC, there is some microphone response but the level is only apparent above the initial crazy reading on the meter (meter does not zero.)

>

> Thank you again for the board. What are your thoughts on my new problems? Thanks

>

> 73,

>

> Russell

> AE5UU

>

[Non-text portions of this message have been removed]

30004. Re: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 22:27:04 UTC
From: Will Beattie
Topic: 29989 Message: 30004

Alan,once again, I am extremely grateful for the math calculations. I'll take time out tomorrow to evaluate the rig HV reading, plate current and try the calculations in order to ascertain what the 830 is radiating. This has been a great exercise for me and, I suspect, others too. Very many thanks once againWill
--- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 27 February, 2011, 21:08

The "IP" meter indication is a combination of final tube screen and plate current. The ICAS (Intermittent Commercial Amateur Service) maximum screen current rating of a single 6146 is "12.6ma", 2 times that for 2 tubes in parallel, and the max 6146 screen voltage is 250VDC. Therefore, to determine the actual final tube plate current, subtract approximately 25ma from the IP meter reading, that will be the approximate final tube plate current.

If one runs higher power output which results in higher IP current, current levels that exceed the 6146 maximum screen current rating, damage to the final tube screens can occur.

Amplifier power input is determine by the formula

Pin = IP x HV

Where "Pin" is "Power Input", "IP" is the combination of final tube screen and plate currents, and "HV" is the High voltage to the plates of the final tubes at normal FULL output!

Therefore, if the IP meter indicates 225ma and the HV indicates 875VDC the power "input" in the final amplifier would be approximately:

.225 x 875 = 196.875 watts

The power output numbers above are a combination of both final tube screen and plate power, minus any loss of RF output due to grid current flowing (ALC indicated) in the final tube grids. When grid current flows in the final tubes power is consumed in the grids resulting in a loss, reduction, of power output from the final tubes to the PI Network.

The final amplifier's in the hybrids operate in Class AB1 which has a typical efficiency ratio of 55%, power input verses power output. Therefore, with 196.875 watts input, with 55% efficiency ratio of power in verse power out, the approximate power output would be 108.2 watts out at the rear SO-239 (196.875 - 45% = 108.2 watt).

The power input figures shown above is/are the "DC" input NOT the "PEP" input power level. The power output figures are based on typical power loss percentages in a typical Class AB1 RF amplifier.

PEP output cannot be measured by monitoring the IP and HV readings as they change too rapidly during normal sideband operation. A calibrated PEP watt meter is the only way to determine the approximate PEP RF output of the transceiver in sideband. The PEP watt meter output accuracy, or any watt meter accuracy for that matter, is also governed by the manufactures percentage of error.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@...> wrote:

>

> My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

>

> 73,

> Alan, KD5R

>

>

> ----- Original Message -----

> From: Will

> To: TS-520_820_530_830@yahoogroups.com

> Sent: Sunday, February 27, 2011 9:08 AM

> Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

>

>

>

> Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

>

> regards

>

> Will

>

>

>

>

> [Non-text portions of this message have been removed]

>

[Non-text portions of this message have been removed]

30005. looking for sp-230,130 or 180

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 22:25:08 UTC
From: yash@aol.com
Topic: 30005 Message: 30005

Looking for any of the above speakers to use with my ts-830. Can do pay pal + or any way for payment.
thanks
dale wt4t

[Non-text portions of this message have been removed]

30006. Re: PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 22:39:14 UTC
From: w5rkl
Topic: 29989 Message: 30006

You're welcome Will and the name is "Mike" not "Allen".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@...> wrote:
>
> Alan,once again, I am extremely grateful for the math calculations. I'll take time out tomorrow to evaluate the rig HV reading, plate current and try the calculations in order to ascertain what the 830 is radiating. This has been a great exercise for me and, I suspect, others too. Â Very many thanks once againWillÂ
> --- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER
> To: TS-520_820_530_830@yahoogroups.com
> Date: Sunday, 27 February, 2011, 21:08
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> The "IP" meter indication is a combination of final tube screen and plate current. The ICAS (Intermittent Commercial Amateur Service) maximum screen current rating of a single 6146 is "12.6ma", 2 times that for 2 tubes in parallel, and the max 6146 screen voltage is 250VDC. Therefore, to determine the actual final tube plate current, subtract approximately 25ma from the IP meter reading, that will be the approximate final tube plate current.
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> If one runs higher power output which results in higher IP current, current levels that exceed the 6146 maximum screen current rating, damage to the final tube screens can occur.
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> Amplifier power input is determine by the formula
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> Pin = IP x HV
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> Where "Pin" is "Power Input", "IP" is the combination of final tube screen and plate currents, and "HV" is the High voltage to the plates of the final tubes at normal FULL output!
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> Therefore, if the IP meter indicates 225ma and the HV indicates 875VDC the power "input" in the final amplifier would be approximately:
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> .225 x 875 = 196.875 watts
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> The power output numbers above are a combination of both final tube screen and plate power, minus any loss of RF output due to grid current flowing (ALC indicated) in the final tube grids. When grid current flows in the final tubes power is consumed in the grids resulting in a loss, reduction, of power output from the final tubes to the PI Network.
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> The final amplifier's in the hybrids operate in Class AB1 which has a typical efficiency ratio of 55%, power input verses power output. Therefore, with 196.875 watts input, with 55% efficiency ratio of power in verse power out, the approximate power output would be

108.2 watts out at the rear SO-239 (196.875 - 45% = 108.2 watt).
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> The power input figures shown above is/are the "DC" input NOT the "PEP" input power level. The power output figures are based on typical power loss percentages in a typical Class AB1 RF amplifier.
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> PEP output cannot be measured by monitoring the IP and HV readings as they change too rapidly during normal sideband operation. A calibrated PEP watt meter is the only way to determine the approximate PEP RF output of the transceiver in sideband. The PEP watt meter output accuracy, or any watt meter accuracy for that matter, is also governed by the manufactures percentage of error.
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> 73s
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> Mike
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> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com, "Alan Riley" <arr44@> wrote:
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> > My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.
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> > > 73,
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> > > Alan, KD5R
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> > > ----- Original Message -----
>
> > > From: Will
>
> > > To: TS-520_820_530_830@yahoogroups.com
>
> > > Sent: Sunday, February 27, 2011 9:08 AM
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> > Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
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> > Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?
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30007. Re: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 22:43:23 UTC
From: Will Beattie
Topic: 29989 Message: 30007

Mike,I am extremely sorry.....guess I picked up on the thread below yours. That came from Alan, KD5R.....oooooops ! Its been a real privilege drawing on your expertise. Thanks again

Will
--- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, 27 February, 2011, 22:39

You're welcome Will and the name is "Mike" not "Allen".

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@...> wrote:

>

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> --- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:

>

> From: w5rkl <w5rkl@...>

> Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER

> To: TS-520_820_530_830@yahoogroups.com

> Date: Sunday, 27 February, 2011, 21:08

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current.

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> If one runs higher power output which results in higher IP current, current levels that exceed the 6146 maximum screen current rating, damage to the final tube screens can occur.

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> Amplifier power input is determine by the formula

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> Pin = IP x HV

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> Where "Pin" is "Power Input", "IP" is the combination of final tube screen and plate currents, and "HV" is the High voltage to the plates of the final tubes at normal FULL output!

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> Therefore, if the IP meter indicates 225ma and the HV indicates 875VDC the power "input" in the final amplifier would be approximately:

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> .225 x 875 = 196.875 watts

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> The power output numbers above are a combination of both final tube screen and plate power, minus any loss of RF output due to grid current flowing (ALC indicated) in the final tube grids. When grid current flows in the final tubes power is consumed in the grids resulting in a loss, reduction, of power output from the final tubes to the PI Network.

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> The final amplifier's in the hybrids operate in Class AB1 which has a typical efficiency ratio of 55%, power input verses power output. Therefore, with 196.875 watts input, with 55% efficiency ratio of power in verse power out, the approximate power output would be 108.2 watts out at the rear SO-239 (196.875 - 45% = 108.2 watt).

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> PEP output cannot be measured by monitoring the IP and HV readings as they change too rapidly during normal sideband operation. A calibrated PEP watt meter is the only way to determine the approximate PEP RF output of the transceiver in sideband. The PEP watt meter output accuracy, or any watt meter accuracy for that matter, is also governed by the manufactures percentage of error.

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> W5RKL

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> > Alan, KD5R

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> > ----- Original Message -----

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> > From: Will

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> > To: TS-520_820_530_830@yahoogroups.com

>

> > Sent: Sunday, February 27, 2011 9:08 AM

>

> > Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

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30008. Re: PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-27 23:05:55 UTC
From: w5rkl
Topic: 29989 Message: 30008

No problem Will and you're welcome.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@...> wrote:
>
> Mike,I am extremely sorry.....guess I picked up on the thread below yours. That came from Alan, KD5R.....oooops ! Â Its been a real privilege drawing on your expertise. Thanks again
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> Will
> --- On Sun, 27/2/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER
> To: TS-520_820_530_830@yahoogroups.com
> Date: Sunday, 27 February, 2011, 22:39
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> > From: w5rkl <w5rkl@>
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> > Subject: [TS-520_820_530_830] Re: PLATE CURRENT VERSUS OUTPUT POWER
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> > To: TS-520_820_530_830@yahoogroups.com
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> > Date: Sunday, 27 February, 2011, 21:08
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> > > ----- Original Message -----

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> > > From: Will
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> > > To: TS-520_820_530_830@yahoogroups.com
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>
> > > Sent: Sunday, February 27, 2011 9:08 AM
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> > > Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
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30009. RE: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 00:13:37 UTC
From: Robert Herendeen
Topic: 29989 Message: 30009

I get 90 watts at 200ma and 105 watts at 230ma on 40mtrs.

More plate current does not get me more power out, so 230ma is about max on 40 for this 830.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Will Beattie
Sent: Sunday, February 27, 2011 12:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Thanks Alan, yep, I think the IP on this rig is running a little high and that is why I am trying to ascertain from as many individual 830 owners as is possible, if their plate current versus output power differs greatly from mine. Once I get some figures from others, I can then set about working out what is going on with this rig
regards

Will
--- On Sun, 27/2/11, Alan Riley <arr44@... <mailto:arr44%40suddenlink.net> > wrote:

From: Alan Riley <arr44@... <mailto:arr44%40suddenlink.net> >
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Sunday, 27 February, 2011, 20:12

My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

73,

Alan, KD5R

----- Original Message -----

From: Will

To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Sunday, February 27, 2011 9:08 AM

Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

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regards

Will

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30010. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 02:51:03 UTC
From: Joseph Stiles
Topic: 29989 Message: 30010

Will,

Are you sure that the "meter" is accurate? Measure the the 4 20 ohm resistors on the final board. You do not have to remove the board to test. They should be no more than 6 ohms to ground(20% tolerance), the closer to 5 ohms to ground the better. The higher the ohms, the more the Ip reads and the lower the power. If I remember right, these affect plate current metering. Find an X-RAY view of the final board to locate the resistors in question. Check out n6wk.com and the high-rez service manual. My 830S & 820S will usually put out a full 100 watts on all bands (except 10 meters) with 220 - 240 mA of Ip. Also, don't trust the meter on the front to be accurate reading the HV. Measure at the HV caps or the "800" terminal on the rectifier board. I have seen meters be of by as much as 90v due to out of value resistors in the metering circuit. Good luck.....

73's Joe wb7uqu

_____
From: Robert Herendeen <w6jzr@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 27, 2011 4:13:37 PM
Subject: RE: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

I get 90 watts at 200ma and 105 watts at 230ma on 40mtrs.

More plate current does not get me more power out, so 230ma is about max on 40 for this 830.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Will Beattie
Sent: Sunday, February 27, 2011 12:34 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

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Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
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Alan, KD5R

----- Original Message -----

From: Will

To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Sunday, February 27, 2011 9:08 AM

Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

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30011. tuning 811

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 04:09:04 UTC
From: kj4fcj
Topic: 30011 Message: 30011

Hello all, I need to know the detailed tuning sequence for ssb operation using an Ameritron 811 with an 820s. The instructions aren't very clear about when to key with the cw send switch or when to use the ptt switch on the mike for tuning adjustments. One more question; is there any nets for Kenwood hybrid owners ? Thanks in advance to an awesome group.
Charles Kj4fcj

30012. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 12:21:41 UTC
From: PGA
Topic: 29977 Message: 30012

As usual, you are right Mike,
I have read the directions in the 830 manual, and the SG switch is even a more convenient way than disconnecting the 12V.
I was just not sure if there was still some output with full drive from the driver, because the 6146B acts as a (bad) triode when only the screen grid is off.
One way or the other the 12BY7 driver must be on as I already stated.

All in all the directions in the manual are in fact the same as I mentioned and should work fine.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Actually, Wim, you need the driver tube's RF signal when adjusting TC1 to neutralize the final amplifier. What needs to be done is the final tubes must be stopped from producing RF output and that is accomplished by setting the rear panel SG switch to OFF. With the SG switch set to OFF, a "negative" voltage is applied to the screens of the final tubes. This prevents electron flow from the cathode to the plate, turning both final tube cathode to plate conduction "OFF".
>
> Other transceivers, when neutralizing the final amplifier, states to remove both plate and screen voltage, this is how Heathkit neutralizes the final amplifier in the HW-100 and SB-100 series transceivers, excluding the HW/SB-104.
>
> Regardless of the transceiver, the driver tube must function as normal.
>
> As for operating the Kenwood hybrids, 520 and 820, with the Kenwood Xverter, the driver tube is not turned off, it remains operating as it normal does. The final amplifier is turned off by setting the SG switch to OFF. The filament switch remains "ON" at all times. The "Xverter" requires a driver tube 10 meter signal in transmit and if the driver tube is turned OFF (Heater switch set to OFF) then there will be no RF signal being applied to the Xverter in transmit resulting in no RF output to the Xverter to mix with the Xverter's transmit local oscillator which results in no RF output from the Xverter.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:
> >
> > Hello Will,
> >

> > I am also not very familiar with the 830, more used to the FT101ZD and FT901DM. They have a accessoire socket for a external 2M transverter, that can be used to interrupt the 12 to the finals.
> >
> > My mistake: looking in the schematic shows that the 530 has not such convenient plug, so you have to break the 12V to the heater elsewere.
> > Switching off the heater voltage on the front kills also the 12BY7 heater and that is not wanted in this case.
> > So desoldering the 12V connection to the final board is the quickest solution.
> >
> > Yes, TC1 is the neutrodyne condenser.
> >
> > Generally you can use this neutrodyning method on every tube-type transmitter, if you switch off the heater to the final and tune the neutrodyning condenser for minimal output of the PA stage.
> >
> > 73, Wim PA0PGA
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Will Beattie <gm0hks@> wrote:
> > >
> > > Hi again WimI have read your instruction details again and have a couple of more questions. I hope you will understand as I am not totally familiar with the 830 and valve principles:
> > >
> > > Then you switch off the heaters of the final tubes by removing the accessory socketWhat does this mean exactly. Do I have to physically remove the socket ? Â desolder the wiring to it or what ?
> > > also
> > > Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.I was assuming that by switching the heaters off for the final tubes on the front panel control this is what you refer to. Perhaps you would advise.
> > >
> > > neutrodyne condenser _ by this do you mean TC1 underneath the final printed circuit board ?
> > >
> > > very 73
> > > Will
> > >
> > >
> > > --- On Sun, 27/2/11, PGA <wpenders@> wrote:
> > >
> > > From: PGA <wpenders@>
> > > Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Sunday, 27 February, 2011, 7:39
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> > >
> > > Hi Will,
> > >
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@> wrote:
> > >
> > > >
> > >
> > > > Hi everyone; I know this sounds like a rather academic type question but could/would someone explain to me about neutralisation of paired tubes in the 830 and its requirement(s). Having taken delivery of a beautiful example of the 830s, I need to try and understand this particular requirement should new valves be required at some point. Can you explain (a) what it is and detail specifically how to do it
> > >
> > >
> > >
> > > Neutralisation is preventing the tubes to go in self-oscillation by blending out the internal tube capacitance, the usual source for VHF self-oscillation.
> > >
> > >
> > >
> > > b) why it is necessary
> > >
> > >
> > >
> > > If not done the tubes can (and will) produce a signal in the VHF range and causes trouble in TV, Airband or other frequencies.

> > >
> > >
> > >
> > > (c) the easiest way to perform this without an rf probe/VTVM, ie, is the second receiver technique effective/anyway good and
> > >
> > >
> > >
> > > The easiest way to do it is the "cold method"
> > >
> > > You run the TX on 10 meters and tune for maximum output into a dummyload.
> > >
> > > Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
> > >
> > > Put a T-piece connector between the set and dummy, for connecting a meter, a SWR meter will not do. Let the dummy connected.
> > >
> > > Connect a scope or RF millivoltmeter to this connector and set for a comfortable readable signal strenght.
> > >
> > > You may also use a second receiver's S-meter instead of the scope, but the receiver must be connected directly, otherwise you pick up all kinds of stray signals.
> > >
> > >
> > >
> > > Then set the TX in transmit after you have checked double that the heaters of the PA are disconnected.
> > >
> > >
> > >
> > > Tune the neutrodyne condenser for minimum signal.
> > >
> > > Be very careful: usually one end of this capacitor is on 900V and that is no voltage to ignore.
> > >
> > > Use a good isolated adjustment tool, not a normal screwdriver, because that induces more capacity to the circuit.
> > >
> > >
> > >
> > > Remove the measurement instrument, reconnect the accessory socket, you set is neutrodyned.
> > >
> > >
> > >
> > > That is all, you just compensated the internal tube capacitances and there should be no "wild" oscillations.
> > >
> > >

> > >
> > > There are more elaborated ways to do this, but I always used this method that was used on VHF when the transmitters had still tubes.
> > >
> > >
> > >
> > > d) implication of not doing it.
> > >
> > >
> > >
> > > see above
> > >
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> > >
> > > Although kicking around this great hobby for nearly 25 years, I have been in semiconductor land for most of that time and valves is a whole new game to me. Thanks in anticipation.............Will / GM0HKS
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> > > >
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> > >
> > > hope this helps
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> > > 73, Wim PA0PGA
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30013. Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 12:55:38 UTC
From: PGA
Topic: 29945 Message: 30013

Joe,

For reading the audio voltages in DB, the meter should have a input impedance of 600 ohms, because this kind of measurements are done with a 600 ohm source. 600 ohms is a norm just as 50 ohms is used for RF voltage measurement.

0db = 775mv/600 ohm.

Nearly all VTVM's have a input impedance of 11 Megohm, too high for a calibrated audio measurement.
Putting a 600 ohm resistor on the input of the meter brings the input impedance down to nearly 600 ohms.

It suffices for a quick measurement of the audio voltages when you align your transceiver.

I hope this answers your question.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Wim,
>
> Tnx fer the info. stupid question: you mentioned putting a "600 ohm resistor
> over the input," what do you mean? I still struggle with some terms and am
> still learning quite a bit about operating certain diagnostic equipment.
> tnx...................
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "mydogchillroy@..." <mydogchillroy@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, February 27, 2011 6:15:56 AM
> Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4
>
>
> While we are on the subject of VTVM... If anyone has a hardcover copy of the
> Rhys Samuel book The V.T.V.M. they would be willing to part with - please reach
> me off-list.
>
> tnx, Jim aj4vp
>
> _____

> From: Charles Coffee <chascoffee@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, February 27, 2011 7:44:58 AM
> Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4
>
> Chris would you mind sending me the design for the VTVM also?
>
> email KJ4GU@...
>
> Thank you
> Chuck, KJ4GU
>
> On Sun, Feb 27, 2011 at 2:13 AM, Chris Parnell <cparnell1001@...> wrote:
>
> > Hi All,
> >
> > I built my own VTVM based on an Australian hams design, that works VERY
> > well, and I couldn't do without it now... This one has a analogue meter, 5
> > ranges up to 500mV, 1V, 5V, 10V and 20V.
> >
> > If anyone wants the design details and component list, please let me know.
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > Sent from my iPhone
> >
> > On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
> >
> > > Joe,
> > >
> > > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
> > impedance of 600 ohms. You can substitute this by using your own VTVM and
> > put a 600 ohms resistor over the input, that will do the trick too. Almost
> > every VTVM meter has a seldom used db scale.
> > >
> > > hope this helps,
> > >
> > > 73, Wim PA0PGA
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> > wrote:
> > > >
> > > > Mike & group,
> > > >
> > > > Found a good L4 on a bad RF board in the parts bin and replaced the
> > broken
> > > > one. While I was in there, took out the IF board too and cleaning it
> > and the RF
> > >

> > > snip
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30014. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 14:35:44 UTC
From: na7i_dick
Topic: 29977 Message: 30014

"Wim" :

What in heck is the 'accessory socket', and where is it located?

Without knowing, it sounds like a messy unsoldering job. If so, the meter method is far to be preferred.

Dick NA7I

--- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@...> wrote:
>
> Hi Will,
...
> Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
...
> hope this helps
>
> 73, Wim PA0PGA
>

30015. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 14:39:33 UTC
From: na7i_dick
Topic: 29977 Message: 30015

Very good correction, Mike. This is exactly what it says to do in the manual, available here in the files.

Dick, NA7I

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Actually, Wim, you need the driver tube's RF signal when adjusting TC1 to neutralize the final amplifier. What needs to be done is the final tubes must be stopped from producing RF output and that is accomplished by setting the rear panel SG switch to OFF. With the SG switch set to OFF, a "negative" voltage is applied to the screens of the final tubes. This prevents electron flow from the cathode to the plate, turning both final tube cathode to plate conduction "OFF".
> ...

> 73s
> Mike
> W5RKL
>

30016. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 15:48:59 UTC
From: w5rkl
Topic: 29977 Message: 30016

Morning Dick,

I suspect Wim is referring to the ACC Socket on the Yaesu FT-101. The FT-101's final tube filaments are routed through pins 1 and 2 of the rear panel ACC Socket in the FT-101. Pins 1 and 2 must be shorted with a shorting plug or wire in order for filament voltage to be applied to the final tubes.

Kenwood hybrids do not have their filaments routed through a rear panel Remote or ACC socket. The filament voltage to the driver and both final tubes is routed through the "Heater" switch. Therefore, turning the Heater switch OFF removes filament voltage to the driver and both final tubes.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "na7i_dick" <jrich@...> wrote:
>
> "Wim" :
>
> What in heck is the 'accessory socket', and where is it located?
>
> Without knowing, it sounds like a messy unsoldering job. If so, the meter method is far to be preferred.
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> Dick NA7I
>
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> > Hi Will,
> ...
> > Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.
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> >
> > 73, Wim PA0PGA
> >
>

30017. Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 15:49:07 UTC
From: PGA
Topic: 29977 Message: 30017

Hi Dick,
On the ts-830 you use the SG switch, on the Yaesu's FT101zd/901dm you use the accessory socket.
I just mixed things up.
see the previous posts.

Matter closed.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "na7i_dick" <jrich@...> wrote:
>
> "Wim" :
>
> What in heck is the 'accessory socket', and where is it located?
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>

30018. TS-830 and PSK31

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 16:41:30 UTC
From: sv0xbq
Topic: 30018 Message: 30018

The TS-830 is really good on PSK. I've been on 20m this afternoon and got a report of S/N 7db and IMD -28

Chris SV0XBQ/9

30019. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 16:51:55 UTC
From: Joseph Stiles
Topic: 29945 Message: 30019

Wim,

Your answer was exactly what I was "looking" for. I thought that was what your were talking about..but wanted to be sure. TNX!

73's joe wb7uqu

From: PGA <wpenders@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, February 28, 2011 4:55:38 AM
Subject: [TS-520_820_530_830] Re: TS 830S L-4

Joe,

For reading the audio voltages in DB, the meter should have a input impedance of 600 ohms, because this kind of measurements are done with a 600 ohm source. 600 ohms is a norm just as 50 ohms is used for RF voltage measurement.

0db = 775mv/600 ohm.

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> Subject: Re: [TS-520_820_530_830] Re: TS 830S L-4
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> While we are on the subject of VTVM... If anyone has a hardcover copy of the
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> me off-list.
>
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> > well, and I couldn't do without it now... This one has a analogue meter, 5
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30020. Re: [TS-520_820_530_830] Re: TS 830S L-4

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 15:30:22 UTC
From: Bob Macklin
Topic: 29945 Message: 30020

This is not correct! Audio VTVMs read AC volts correctly no matter what the load impedance is. They also read DBs correctly.

It's DBM that requires a 600 ohm load. And the meter measures the voltage across the load just like any other VTVM.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "PGA" <wpenders@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 28, 2011 4:55 AM
Subject: [TS-520_820_530_830] Re: TS 830S L-4

>
>
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>
>
>
> 73, Wim PA0PGA
>
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>
>
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> <stilesjoseph@...> wrote:
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>> Wim,
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>> Tnx fer the info. stupid question: you mentioned putting a "600 ohm
>> resistor
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>> tnx...................
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>>
>>
>>
>>
>> _________________________________
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>> To: TS-520_820_530_830@yahoogroups.com
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>> > ranges up to 500mV, 1V, 5V, 10V and 20V.
>> >
>> > If anyone wants the design details and component list, please let me
>> > know.
>> >
>> > Thanks
>> > Chris, ZL1CDP
>> >
>> > Sent from my iPhone
>> >
>> > On 27/02/2011, at 7:56 PM, PGA <wpenders@...> wrote:
>> >
>> > > Joe,
>> > >
>> > > A AF VTVM is a voltmeter with a calibrated scale in db, with an input
>> > impedance of 600 ohms. You can substitute this by using your own VTVM
>> > and
>> > put a 600 ohms resistor over the input, that will do the trick too.
>> > Almost
>> > every VTVM meter has a seldom used db scale.
>> > >
>> > > hope this helps,
>> > >
>> > > 73, Wim PA0PGA
>> > >
>> > > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles
>> > > <stilesjoseph@>
>> > wrote:
>> > > >
>> > > > Mike & group,
>> > > >
>> > > > Found a good L4 on a bad RF board in the parts bin and replaced the
>> > broken
>> > > > one. While I was in there, took out the IF board too and cleaning
>> > > > it
>> > and the RF
>> > > >
>> > > > snip
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>> > > [Non-text portions of this message have been removed]
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30021. Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 21:02:01 UTC
From: Ken
Topic: 29947 Message: 30021

Amazing? Back in the day.... We all operated that way. Novice license, regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to cover the 40 and 15 meter bands. You called CQ and tuned the whole band hoping to hear your callsign. Nobody thought it strange or amazing back then, why should they now?

;0)

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Well, 500 hz away from another operator when working CW is still a pretty good hop, unless you are purposefully running "split". However, I have heard stations running up to 500 hz apart, and neither operator seems to be aware that he is that far away from the other station! Amazing!
>

30022. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 21:17:26 UTC
From: Bob Macklin
Topic: 29947 Message: 30022

In those days we used unrepentant receivers and transmitters. In the 70's
the move was to transceivers. And then Novices were allowed VFOs!

There are still some of us that do work the old way except we may have more
crystals.

But a transmitter like a DX-60 only has 5 crystal sockets and they are only
accessible from the back. So I don't change them very often.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Ken" <atm_ken_hunter@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 28, 2011 1:02 PM
Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

> Amazing? Back in the day.... We all operated that way. Novice license,
> regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to
> cover the 40 and 15 meter bands. You called CQ and tuned the whole band
> hoping to hear your callsign. Nobody thought it strange or amazing back
> then, why should they now?
>
> ;0)
>
> Ken - KB7H
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>>
>> Well, 500 hz away from another operator when working CW is still a pretty
>> good hop, unless you are purposefully running "split". However, I have
>> heard stations running up to 500 hz apart, and neither operator seems to
>> be aware that he is that far away from the other station! Amazing!
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30023. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 22:19:22 UTC
From: Jim S
Topic: 29947 Message: 30023

What is "amazing" to me, is that we no LONGER HAVE to operate in that manner. I would think that people would have the ability to match the incoming signal with their sidetone. That is how most modern transceivers operate, isn't it? I can understand someone being somewhere up to 100 hz off the other station, but 500 is a bit of a stretch, unless the separation is intentional !

I cannot understand why modern rigs are not equipped with a "spotting" switch. Almost all older ones did. One would have to be almost tone deaf NOT to be able to tell the difference between the received staion's tone, and one put out by the spotting switch.

I believe the art of "zero-beating" is yet another one of those skills that is disappearing.

73, Jim AG3Y

----- Original Message -----
From: Ken
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, February 28, 2011 4:02 PM
Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Amazing? Back in the day.... We all operated that way. Novice license, regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to cover the 40 and 15 meter bands. You called CQ and tuned the whole band hoping to hear your callsign. Nobody thought it strange or amazing back then, why should they now?

;0)

Ken - KB7H

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Well, 500 hz away from another operator when working CW is still a pretty good hop, unless you are purposefully running "split". However, I have heard stations running up to 500 hz apart, and neither operator seems to be aware that he is that far away from the other station! Amazing!
>

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(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17000)
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17000)

http://www.pctools.com/
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[Non-text portions of this message have been removed]

30024. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 22:15:20 UTC
From: Bob Macklin
Topic: 29947 Message: 30024

Stupid spell checker got me. I was saying INDEPENDANT receivers.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: "Bob Macklin" <macklinbob@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 28, 2011 1:17 PM
Subject: Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

> In those days we used unrepentant receivers and transmitters. In the 70's
> the move was to transceivers. And then Novices were allowed VFOs!
>
> There are still some of us that do work the old way except we may have
> more
> crystals.
>
> But a transmitter like a DX-60 only has 5 crystal sockets and they are
> only
> accessible from the back. So I don't change them very often.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: "Ken" <atm_ken_hunter@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, February 28, 2011 1:02 PM
> Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
>
>
>> Amazing? Back in the day.... We all operated that way. Novice license,
>> regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to
>> cover the 40 and 15 meter bands. You called CQ and tuned the whole band
>> hoping to hear your callsign. Nobody thought it strange or amazing back
>> then, why should they now?
>>
>> ;0)
>>
>> Ken - KB7H
>>
>>

>> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>>>
>>> Well, 500 hz away from another operator when working CW is still a
>>> pretty
>>> good hop, unless you are purposefully running "split". However, I have
>>> heard stations running up to 500 hz apart, and neither operator seems to
>>> be aware that he is that far away from the other station! Amazing!
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30025. Re: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 23:33:48 UTC
From: Will Beattie
Topic: 29977 Message: 30025

Guys,want to thank everyone for their inputs regarding neutralisation. Mike (W5RKL) clearly came out on top with his explanation and detailed info regarding power/plate current/HV calculation too and its been a great period of learning for me. A beer all round for you learned gentlemen. What we gonna do when you guys aren't around to furnish us youngsters with detailed valve operational info ? It would be great to get down on paper all the very much needed information relating to day to day operating of these aged hybrids and I may just take that on. It will, of course, mean that I may bug you for the stuff I don't yet know or understand. Many grateful thanks once again
Will / GM0HKS

--- On Mon, 28/2/11, PGA <wpenders@...> wrote:

From: PGA <wpenders@...>
Subject: [TS-520_820_530_830] Re: TS830 _ 6146b Neutralisation
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, 28 February, 2011, 15:49

Hi Dick,

On the ts-830 you use the SG switch, on the Yaesu's FT101zd/901dm you use the accessory socket.

I just mixed things up.

see the previous posts.

Matter closed.

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "na7i_dick" <jrich@...> wrote:

>

> "Wim" :

>

> What in heck is the 'accessory socket', and where is it located?

>

> Without knowing, it sounds like a messy unsoldering job. If so, the meter method is far to be preferred.

>

> Dick NA7I

>

> --- In TS-520_820_530_830@yahoogroups.com, "PGA" <wpenders@> wrote:

> >

> > Hi Will,

> ...

> > Then you switch off the heaters of the final tubes by removing the accessory socket. The driver tube stays on.

> ...

> > hope this helps

> >

> > 73, Wim PA0PGA

> >

>

[Non-text portions of this message have been removed]

30026. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-02-28 22:33:08 UTC
From: Bob Macklin
Topic: 29947 Message: 30026

There are still people operating old independent transmitters and receivers
like a DX-60/HR-10 combo.

What irritates me is people using transceivers that don't know how to use
RIT! Every time they come back their frequency has changed!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: "Jim S" <jimstan@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, February 28, 2011 2:19 PM
Subject: Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

> What is "amazing" to me, is that we no LONGER HAVE to operate in that
> manner. I would think that people would have the ability to match the
> incoming signal with their sidetone. That is how most modern transceivers
> operate, isn't it? I can understand someone being somewhere up to 100 hz
> off the other station, but 500 is a bit of a stretch, unless the
> separation is intentional !
>
> I cannot understand why modern rigs are not equipped with a "spotting"
> switch. Almost all older ones did. One would have to be almost tone deaf
> NOT to be able to tell the difference between the received staion's tone,
> and one put out by the spotting switch.
>
> I believe the art of "zero-beating" is yet another one of those skills
> that is disappearing.
>
> 73, Jim AG3Y
>
>
> ----- Original Message -----
> From: Ken
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, February 28, 2011 4:02 PM
> Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
>
>
>
> Amazing? Back in the day.... We all operated that way. Novice license,
> regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to
> cover the 40 and 15 meter bands. You called CQ and tuned the whole band

> hoping to hear your callsign. Nobody thought it strange or amazing back
> then, why should they now?
>
> ;0)
>
> Ken - KB7H
>
> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
> >
> > Well, 500 hz away from another operator when working CW is still a
> pretty good hop, unless you are purposefully running "split". However, I
> have heard stations running up to 500 hz apart, and neither operator seems
> to be aware that he is that far away from the other station! Amazing!
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30027. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 01:51:14 UTC
From: John Davidson
Topic: 29989 Message: 30027

My TS520 has a very similar PA section and I have no trouble getting 100 W CW output with 200 MA on all bands except 10M.
I have had 825 V on the HV meter with no load since the rig was new. Your current reading seems quite high for the output stated.

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, February 27, 2011 10:08:51 AM
Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

[Non-text portions of this message have been removed]

30028. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 02:58:27 UTC
From: James Allen
Topic: 29947 Message: 30028

Ha, I can only imagine the antics those old, evil, unrepentant recievers and transmitters use to come up with! Maybe if they worked better if you sent them to church every week... :-)

Paul Allen
KE7TYY

On Mon, Feb 28, 2011 at 3:15 PM, Bob Macklin <macklinbob@...> wrote:

>
>
> Stupid spell checker got me. I was saying INDEPENDANT receivers.
>
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: "Bob Macklin" <macklinbob@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, February 28, 2011 1:17 PM
> Subject: Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
>
> > In those days we used unrepentant receivers and transmitters. In the 70's
> > the move was to transceivers. And then Novices were allowed VFOs!
> > >
> > There are still some of us that do work the old way except we may have
> > more
> > crystals.
> > >
> > But a transmitter like a DX-60 only has 5 crystal sockets and they are
> > only
> > accessible from the back. So I don't change them very often.
> > >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: "Ken" <atm_ken_hunter@...>
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Monday, February 28, 2011 1:02 PM
> > Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
> > >

> >
> >> Amazing? Back in the day.... We all operated that way. Novice license,
> >> regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals to
> >> cover the 40 and 15 meter bands. You called CQ and tuned the whole band
> >> hoping to hear your callsign. Nobody thought it strange or amazing back
> >> then, why should they now?
> >>
> >> ;0)
> >>
> >> Ken - KB7H
> >>
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
> >>>
> >>> Well, 500 hz away from another operator when working CW is still a
> >>> pretty
> >>> good hop, unless you are purposefully running "split". However, I have
> >>> heard stations running up to 500 hz apart, and neither operator seems
> to
> >>> be aware that he is that far away from the other station! Amazing!
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30029. Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 03:09:35 UTC
From: Jim S
Topic: 29947 Message: 30029

I thought "UNREPENTANT" was EXACTLY what he meant ! ! ! <bg>

Jim AG3Y

----- Original Message -----
From: "James Allen" <jp.paul.allen@...>
To: <TS-520_820_530_830@yahoogroups.com>
Cc: "Bob Macklin" <macklinbob@...>
Sent: Monday, February 28, 2011 9:58 PM
Subject: Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter

> Ha, I can only imagine the antics those old, evil, unrepentant recievers
> and
> transmitters use to come up with! Maybe if they worked better if you sent
> them to church every week... :-)
>
>
> Paul Allen
> KE7TYY
>
> On Mon, Feb 28, 2011 at 3:15 PM, Bob Macklin <macklinbob@...>
> wrote:
>
>>
>>
>> Stupid spell checker got me. I was saying INDEPENDANT receivers.
>>
>>
>> Bob Macklin
>> K5MYJ
>> Seattle, Wa.
>> "Real Radios Glow In The Dark"
>>
>> ----- Original Message -----
>> From: "Bob Macklin" <macklinbob@...>
>> To: <TS-520_820_530_830@yahoogroups.com>
>> Sent: Monday, February 28, 2011 1:17 PM
>> Subject: Re: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency
>> meter
>>
>> > In those days we used unrepentant receivers and transmitters. In the
>> > 70's
>> > the move was to transceivers. And then Novices were allowed VFOs!
>> >
>> > There are still some of us that do work the old way except we may have
>> > more

>> > crystals.
>> >
>> > But a transmitter like a DX-60 only has 5 crystal sockets and they are
>> > only
>> > accessible from the back. So I don't change them very often.
>> >
>> > Bob Macklin
>> > K5MYJ
>> > Seattle, Wa.
>> > "Real Radios Glow In The Dark"
>> > ----- Original Message -----
>> > From: "Ken" <atm_ken_hunter@...>
>> > To: <TS-520_820_530_830@yahoogroups.com>
>> > Sent: Monday, February 28, 2011 1:02 PM
>> > Subject: [TS-520_820_530_830] Re: TS520SE and Heathkit frequency meter
>> >
>> >
>> >> Amazing? Back in the day.... We all operated that way. Novice license,
>> >> regenerative receiver, Homebrew 807 tube osc/amp, 2 maybe 3 crystals
>> >> to
>> >> cover the 40 and 15 meter bands. You called CQ and tuned the whole
>> >> band
>> >> hoping to hear your callsign. Nobody thought it strange or amazing
>> >> back
>> >> then, why should they now?
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>> >> ;0)
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>> >> Ken - KB7H
>> >>
>> >>
>> >> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...>
>> >> wrote:
>> >>>
>> >>> Well, 500 hz away from another operator when working CW is still a
>> >>> pretty
>> >>> good hop, unless you are purposefully running "split". However, I
>> >>> have
>> >>> heard stations running up to 500 hz apart, and neither operator seems
>> >> to
>> >>> be aware that he is that far away from the other station! Amazing!
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(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17000)
http://www.pctools.com/
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30030. Re: [TS-520_820_530_830] RF Voltmeter design files

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 03:22:28 UTC
From: Charles Rodecap
Topic: 29992 Message: 30030

Chris

Thanks for the information!! I hope this will make tune ups on my TEMPO easier.

Charlie
KA9HDG

--- On Sun, 2/27/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: [TS-520_820_530_830] RF Voltmeter design files
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Sunday, February 27, 2011, 12:36 PM

Hi all,

I couldn't post this to the group as it's 2MB in a zip file, so I have

hosted it on my www.ft-2000.com website.

You can download the file here:

http://www.ft-2000.com/RFVTM.zip

If you want to download the file from a web browser, please ensure that the

RFVTM portion of the url is in UPPERCASE, as it's hosted on a unix server

and therefore case-sensitive.

As mentioned in a previous email to the group, this is not an older Vacum

Tube variety, but a very accurate, modern, RF VTM that is easy to build and

use which helps tremendously with aligning your HF hybrid rigs. - Great for

neutralization and general alignment.

Lastly, just to mention that this is not my design, it is from a VK ham.

Thanks

Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30031. Re: TS-830S Low Output 17m SOLVED

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 06:29:39 UTC
From: k7zs
Topic: 29933 Message: 30031

A special THANKS to Bill, K5GCW, who passed along his experience with the same problem (low output on one band only) and oddly enough also on the 17m band.

Bill recommended I check the inline choke, L36, a 470 microhenry choke in the Driver tube plate line, located on the RF board. He found that the value had changed, and apparently it became resonant around the 17m frequency. Replacing that part, along with a .01 bypass capacitor restored normal operation.

So, I pull the radio apart, removed L36 and used my AADE LCII L/C Meter (a FANTASTIC tool, by the way!). Well, it was still an inductor, but the reading was only about 6 NANOhenries, certainly not 470 MICROhenries. I only had an 800 microhenry molded choke to try, but what the heck, there was NO choke in line before. I put it back in place and fired it up.

SURE ENOUGH! The 17m band DRIVE coil now peaked up normally in the alignment process, and the power output is the same as the other low bands.

Apparently the fault that brought the radio to me, was a shorted driver tube, with enough current drawn to open the inline resistor on the IF board, a 2 watt unit, and this event also took out that teeny little choke it would seem. Nothing visually would indicate it was bad, and it was not open - just way off value.

I will have the exact replacement choke in a couple of days (THANKS to another Yahoo Groups reader) and this TS-830 will re-enter daily service, hopefully for another 30 years!

73 Kevin K7ZS

30032. TS830S low receive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 10:51:58 UTC
From: Ken
Topic: 30032 Message: 30032

Hello to all in the group. I have one of my 830s that has a lower receive than the others, S9 on all the others will be about S1 on it. I know it is in the IF board, I replaced the IF board with a spare one I had and now all is fine. Does anyone know if there is a common (most likey component failure on this board)? Thanks for your time hope everyone has a great day!

Ken
NZ4Q

30033. Re: TS830S low receive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 14:59:07 UTC
From: w5rkl
Topic: 30032 Message: 30033

Hi Ken,

Did you try putting the old IF Unit board back into the 830, cleaning the pins and plugs to see if it works? The RIF signal from the RF Unit board is applied through IF Unit plug 6 pin 6. If that plug and pins are dirty and are not making good connection then the signal level will be less possibly resulting in similar symptoms.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ken" <nz4q@...> wrote:
>
> Hello to all in the group. I have one of my 830s that has a lower receive than the others, S9 on all the others will be about S1 on it. I know it is in the IF board, I replaced the IF board with a spare one I had and now all is fine. Does anyone know if there is a common (most likey component failure on this board)? Thanks for your time hope everyone has a great day!
>
> Ken
> NZ4Q
>

30034. Re: TS830S low receive.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 17:19:11 UTC
From: Ken
Topic: 30032 Message: 30034

Hello Mike, thanks for your time! Yes I did clean the plugs and pins (deoxit)in & out several times before replacing the IF board. I also did the mod 6.18 in the survival guide. I did check voltages Q1 thru Q8 IF board all seem to be in the range as per the schematic. I was hoping that maybe some common problem with these boards that would be a quick fix. I can always buy another IF board but this one, I would like to find the problem!

Ken
NZ4Q

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Ken,
>
> Did you try putting the old IF Unit board back into the 830, cleaning the pins and plugs to see if it works? The RIF signal from the RF Unit board is applied through IF Unit plug 6 pin 6. If that plug and pins are dirty and are not making good connection then the signal level will be less possibly resulting in similar symptoms.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ken" <nz4q@> wrote:
> >
> > Hello to all in the group. I have one of my 830s that has a lower receive than the others, S9 on all the others will be about S1 on it. I know it is in the IF board, I replaced the IF board with a spare one I had and now all is fine. Does anyone know if there is a common (most likey component failure on this board)? Thanks for your time hope everyone has a great day!
> >
> > Ken
> > NZ4Q
> >
>

30035. DC-DC Converter FS

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 22:19:15 UTC
From: jsloss
Topic: 30035 Message: 30035

Kenwood DC-DC converter for TS-520S and TS-820/820S. Mounts on back of transceiver and permits it to be operated from 13.6 VDC. Photo available - $45 + USPS. Pse reply direct.
Thanks,
Joe k7mks

[Non-text portions of this message have been removed]

30036. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-01 23:42:47 UTC
From: Will Beattie
Topic: 29989 Message: 30036

Thank you Joe, I will sure do what you say. Greatly appreciate your inputregards
Will
--- On Mon, 28/2/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, 28 February, 2011, 2:51

Will,

Are you sure that the "meter" is accurate? Measure the the 4 20 ohm

resistors on the final board. You do not have to remove the board to test. They

should be no more than 6 ohms to ground(20% tolerance), the closer to 5 ohms to

ground the better. The higher the ohms, the more the Ip reads and the lower the

power. If I remember right, these affect plate current metering. Find an X-RAY

view of the final board to locate the resistors in question. Check out

n6wk.com and the high-rez service manual. My 830S & 820S will usually put out a

full 100 watts on all bands (except 10 meters) with 220 - 240 mA of Ip. Also,

don't trust the meter on the front to be accurate reading the HV. Measure at the

HV caps or the "800" terminal on the rectifier board. I have seen meters be of

by as much as 90v due to out of value resistors in the metering circuit.

Good luck.....

73's Joe wb7uqu

From: Robert Herendeen <w6jzr@prodigy.net>

To: TS-520_820_530_830@yahoogroups.com

Sent: Sun, February 27, 2011 4:13:37 PM

Subject: RE: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

I get 90 watts at 200ma and 105 watts at 230ma on 40mtrs.

More plate current does not get me more power out, so 230ma is about max on 40 for this 830.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Will Beattie

Sent: Sunday, February 27, 2011 12:34 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Thanks Alan, yep, I think the IP on this rig is running a little high and that is why I am trying to ascertain from as many individual 830 owners as is possible, if their plate current versus output power differs greatly from mine. Once I get some figures from others, I can then set about working out what is going on with this rig

regards

Will

--- On Sun, 27/2/11, Alan Riley <arr44@... <mailto:arr44%40suddenlink.net> > wrote:

From: Alan Riley <arr44@... <mailto:arr44%40suddenlink.net> >

Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>

Date: Sunday, 27 February, 2011, 20:12

My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

73,

Alan, KD5R

----- Original Message -----

From: Will

To: TS-520_820_530_830@yahoogroups.com

<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Sunday, February 27, 2011 9:08 AM

Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30037. Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 02:46:20 UTC
From: Joseph Stiles
Topic: 29989 Message: 30037

Will,

Check out K4EAA's web site. LOTS of info regarding KW hybrids. He "talks" about the the effects of out of spec resistors that I mentioned. He has a "tech mailbag" that I have found to be very useful. Good luck.....

73's joe wb7uqu

From: Will Beattie <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 1, 2011 3:42:47 PM
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Thank you Joe, I will sure do what you say. Greatly appreciate your inputregards
Will
--- On Mon, 28/2/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, 28 February, 2011, 2:51

Will,

Are you sure that the "meter" is accurate? Measure the the 4 20 ohm

resistors on the final board. You do not have to remove the board to test. They

should be no more than 6 ohms to ground(20% tolerance), the closer to 5 ohms to

ground the better. The higher the ohms, the more the Ip reads and the lower the

power. If I remember right, these affect plate current metering. Find an X-RAY

view of the final board to locate the resistors in question. Check out

n6wk.com and the high-rez service manual. My 830S & 820S will usually put out a

full 100 watts on all bands (except 10 meters) with 220 - 240 mA of Ip. Also,

don't trust the meter on the front to be accurate reading the HV. Measure at the

HV caps or the "800" terminal on the rectifier board. I have seen meters be of

by as much as 90v due to out of value resistors in the metering circuit.

Good luck.....

73's Joe wb7uqu

From: Robert Herendeen <w6jzr@prodigy.net>

To: TS-520_820_530_830@yahoogroups.com

Sent: Sun, February 27, 2011 4:13:37 PM

Subject: RE: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

I get 90 watts at 200ma and 105 watts at 230ma on 40mtrs.

More plate current does not get me more power out, so 230ma is about max on

40 for this 830.

Bob/W6JZR

From: TS-520_820_530_830@yahoogroups.com

[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Will Beattie

Sent: Sunday, February 27, 2011 12:34 PM

To: TS-520_820_530_830@yahoogroups.com

Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Thanks Alan, yep, I think the IP on this rig is running a little high and

that is why I am trying to ascertain from as many individual 830 owners as

is possible, if their plate current versus output power differs greatly from

mine. Once I get some figures from others, I can then set about working out

what is going on with this rig

regards

Will

--- On Sun, 27/2/11, Alan Riley <arr44@...

<mailto:arr44%40suddenlink.net> > wrote:

From: Alan Riley <arr44@... <mailto:arr44%40suddenlink.net> >

Subject: Re: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

To: TS-520_820_530_830@yahoogroups.com

<mailto:TS-520_820_530_830%40yahoogroups.com>

Date: Sunday, 27 February, 2011, 20:12

My TS-820S runs 100W out with an Ip of 200mA on 40M. 225mA will give me 125W out but I don't push the tubes that hard.

73,

Alan, KD5R

----- Original Message -----

From: Will

To: TS-520_820_530_830@yahoogroups.com

<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Sunday, February 27, 2011 9:08 AM

Subject: [TS-520_820_530_830] PLATE CURRENT VERSUS OUTPUT POWER

Is there a reasonable mean average/relationship between plate current and power output with regard to the TS830s. I should be able to calculate I2R, P=VxI etc but what I think I am trying to say is that I would like to establish if my rig is operating within safe parameters for example, on 40 metres with an output power of 60 watts my IP reading is 210ma and at 100 watts it readings 270ma. Is this around the norm or does the plate current seem a little high ?

regards

Will

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30038. TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 03:46:59 UTC
From: k5myj
Topic: 30038 Message: 30038

Recently I have taken an interest in buying a TS-520.

I have a set of Benton Harbor S-Line Twins and a set of Drake 4 Twins. So I am familiar with this kind of equipment.

I am interested in the TS-520 because it does not have solid state finals.

What should I know when buying one of these units?

Bob Macklin
K5MYJ

30039. Re: [TS-520_820_530_830] TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 04:21:47 UTC
From: Bob
Topic: 30038 Message: 30039

Well, 1st of all, I can tell you from my experience of haning one, that they're just a really nice radio! (guess that's kinda general.)

Like you, I like the fact that it has valve outputs (and a valve driver too). I think it's a hallmark tranceiver, as I think many here will attest to that.

I have a TS-520SE and an Icom IC-718, of which I believe the 520 out performes the 718. The 718 certainly is not a bad radio either; but I've found that the 520 has lower IMD products for 1, and it seems to have a better sounding front end. The only downside I can think of, is that it does not have AM and it does not have a digital readout. Other than that, it's a breeze to operate and to tune up.

Also, as I understand it, you're only sposed to used the 6146B tubes in it -NOT the other type 6146's. Someone may correct me on this, but that's the way I understand it.

Just make sure the 1 yer think'n bout buy'n hasn't been butchered up, and that it's in good shape. I know this user group is a great resource for fixing 'em when they're broke. ;-D

73,

Bob, KD5MHQ

--- On Tue, 3/1/11, k5myj <macklinbob@...> wrote:

Recently I have taken an interest in buying a TS-520.

I have a set of Benton Harbor S-Line Twins and a set of Drake 4 Twins. So I am familiar with this kind of equipment.

I am interested in the TS-520 because it does not have solid state finals.

What should I know when buying one of these units?

Bob Macklin
K5MYJ

30040. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 13:12:34 UTC
From: w5rkl
Topic: 30038 Message: 30040

Good morning Bob,

There are 4 different models of Kenwood hybrids, TS-520 (3 versions), TS-820, TS-820S, TS-530S, and TS-830S.

For details on each one I recommend downloading each model's operating manuals at Gordon's website www.n6wk.com/kenwood/ for details.

If you have any questions about the different models please feel free to ask.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "k5myj" <macklinbob@...> wrote:
>
> Recently I have taken an interest in buying a TS-520.
>
> I have a set of Benton Harbor S-Line Twins and a set of Drake 4 Twins. So I am familiar with this kind of equipment.
>
> I am interested in the TS-520 because it does not have solid state finals.
>
> What should I know when buying one of these units?
>
> Bob Macklin
> K5MYJ
>

30041. QRP on ts520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 06:58:42 UTC
From: jeffrey l
Topic: 30041 Message: 30041

Hi All,

I am new to the Group, I have a FOUNDATION LIC , and own a TS520S ,
due to Lic restrictions I need to reduce output RF to 10 Watts.

Has anyone used the mod that is in the FILES (9v battery and 220k OHM pot), and if so how successfull is it???

Jeff
vk4fnrs

30042. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 16:49:35 UTC
From: kd8hmo
Topic: 30038 Message: 30042

I have a mint condition 520S and I love it. I think everyone should have one of these on their desk just for nostalgia's sake. I was given a 530S that needs restored, and when Gordon is finished working his magic, I will have a desk full of hybrid goodness :)

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Bob,
>
> There are 4 different models of Kenwood hybrids, TS-520 (3 versions), TS-820, TS-820S, TS-530S, and TS-830S.
>
> For details on each one I recommend downloading each model's operating manuals at Gordon's website www.n6wk.com/kenwood/ for details.
>
> If you have any questions about the different models please feel free to ask.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5myj" <macklinbob@> wrote:
> >
> > Recently I have taken an interest in buying a TS-520.
> >
> > I have a set of Benton Harbor S-Line Twins and a set of Drake 4 Twins. So I am familiar with this kind of equipment.
> >
> > I am interested in the TS-520 because it does not have solid state finals.
> >
> > What should I know when buying one of these units?
> >
> > Bob Macklin
> > K5MYJ
> >
>

30043. Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 17:00:41 UTC
From: Bob Macklin
Topic: 30038 Message: 30043

I could not afford all this GOOD STUFF when I was young. Now due mostly to eBay I am able to afford a lot of it but I am running out of space to put it.

At the present time I do not have a HF transceiver but I would like to try one.

I live in a 20X20 (400sqft) RETIREMENT CLOSET!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 02, 2011 8:49 AM
Subject: [TS-520_820_530_830] Re: TS-520? What's to Know?

I have a mint condition 520S and I love it. I think everyone should have one of these on their desk just for nostalgia's sake. I was given a 530S that needs restored, and when Gordon is finished working his magic, I will have a desk full of hybrid goodness :)

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Good morning Bob,
>
> There are 4 different models of Kenwood hybrids, TS-520 (3 versions), TS-820, TS-820S, TS-530S, and TS-830S.
>
> For details on each one I recommend downloading each model's operating manuals at Gordon's website www.n6wk.com/kenwood/ for details.
>
> If you have any questions about the different models please feel free to ask.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "k5myj" <macklinbob@> wrote:
> >
> > Recently I have taken an interest in buying a TS-520.

> >
> > I have a set of Benton Harbor S-Line Twins and a set of Drake 4 Twins. So I am familiar with this kind of equipment.
> >
> > I am interested in the TS-520 because it does not have solid state finals.
> >
> > What should I know when buying one of these units?
> >
> > Bob Macklin
> > K5MYJ
> >
>

[Non-text portions of this message have been removed]

30044. Re: QRP on ts520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 17:36:02 UTC
From: w5rkl
Topic: 30041 Message: 30044

Hello Jeff,

I mean no disrespect in my response below.

If you have a 50 ohm dummy load or have access to one and a watt meter, you might consider building the simple circuit and connecting it to your transceiver as shown on the diagram so you can see first hand for yourself how well it works.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jeffrey l" <jc_2aussie@...> wrote:
>
> Hi All,
>
> I am new to the Group, I have a FOUNDATION LIC , and own a TS520S ,
> due to Lic restrictions I need to reduce output RF to 10 Watts.
>
> Has anyone used the mod that is in the FILES (9v battery and 220k OHM pot), and if so how successfull is it???
>
> Jeff
> vk4fnrs
>

30045. Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 18:16:24 UTC
From: pmarkavage@juno.com
Topic: 30038 Message: 30045

Bob:
As Mike points out, there are 4 basically different hybrid models. But, be aware, depending on where you are shopping, several of these models may be offered with a different suffix and slightly different features. i.e. the TS-530 can show up as a 530S, or 530SP, or a 530D. The 830 can show up as a 830S or a 830M (has the AM mode with a 6 KHz filter). Another set of Kenwood hybrids, although not a transceiver, is the 599 series of separate receiver/transmitter combos. If you see a model up for sale that perks your interest, a quick Google can probably shed some light on its over all features, performance, accessories, etc. or ask the question here.

Pete, wa2cwa

On Wed, 02 Mar 2011 13:12:34 -0000 "w5rkl" <w5rkl@...> writes:
> Good morning Bob,
>
> There are 4 different models of Kenwood hybrids, TS-520 (3
> versions), TS-820, TS-820S, TS-530S, and TS-830S.
>
> For details on each one I recommend downloading each model's
> operating manuals at Gordon's website www.n6wk.com/kenwood/ for
> details.
>
> If you have any questions about the different models please feel
> free to ask.
>
> 73s
> Mike
> W5RKL
>
>
>
>
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> --- In TS-520_820_530_830@yahoogroups.com, "k5myj" <macklinbob@...>
> wrote:
> >
> > Recently I have taken an interest in buying a TS-520.
> >
> > I have a set of Benton Harbor S-Line Twins and a set of Drake 4
> Twins. So I am familiar with this kind of equipment.
> >

> > I am interested in the TS-520 because it does not have solid state
> finals.
> >
> > What should I know when buying one of these units?
> >
> > Bob Macklin
> > K5MYJ

30046. Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-02 18:56:28 UTC
From: Bob Macklin
Topic: 30038 Message: 30046

Hi Pete,

Thanks for your input. Right now I am thinking about starting wit a 520 something?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 02, 2011 10:16 AM
Subject: Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Bob:
As Mike points out, there are 4 basically different hybrid models. But,
be aware, depending on where you are shopping, several of these models
may be offered with a different suffix and slightly different features.
i.e. the TS-530 can show up as a 530S, or 530SP, or a 530D. The 830 can
show up as a 830S or a 830M (has the AM mode with a 6 KHz filter).
Another set of Kenwood hybrids, although not a transceiver, is the 599
series of separate receiver/transmitter combos. If you see a model up for
sale that perks your interest, a quick Google can probably shed some
light on its over all features, performance, accessories, etc. or ask the
question here.

Pete, wa2cwa

On Wed, 02 Mar 2011 13:12:34 -0000 "w5rkl" <w5rkl@...> writes:
> Good morning Bob,
>
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> versions), TS-820, TS-820S, TS-530S, and TS-830S.
>
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> operating manuals at Gordon's website www.n6wk.com/kenwood/ for
> details.
>
> If you have any questions about the different models please feel
> free to ask.
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> 73s
> Mike
> W5RKL
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>
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> --- In TS-520_820_530_830@yahoogroups.com, "k5myj" <macklinbob@...>
> wrote:
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> > Recently I have taken an interest in buying a TS-520.
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> finals.
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> > What should I know when buying one of these units?
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> > Bob Macklin
> > K5MYJ

[Non-text portions of this message have been removed]

30047. Re: QRP on ts520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 04:14:47 UTC
From: jeffrey l
Topic: 30041 Message: 30047

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Jeff,
>
> I mean no disrespect in my response below.
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> If you have a 50 ohm dummy load or have access to one and a watt meter, you might consider building the simple circuit and connecting it to your transceiver as shown on the diagram so you can see first hand for yourself how well it works.
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> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "jeffrey l" <jc_2aussie@> wrote:
Mike,

Thanks for the reply,
I have brought the necessary POT and Battery connector to build the circuit.

Only have to find a suitable container and get one of the full Lic holders at the club to fit for me.

I will take ithe radio to the club and get it properly tested , to ensure that all is working as it should..
Cheer,

Jeff
VK4FNRS
> >
> > Hi All,
> >
> > I am new to the Group, I have a FOUNDATION LIC , and own a TS520S ,
> > due to Lic restrictions I need to reduce output RF to 10 Watts.
> >
> > Has anyone used the mod that is in the FILES (9v battery and 220k OHM pot), and if so how successfull is it???
> >
> > Jeff
> > vk4fnrs
> >
>

30048. 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 16:08:01 UTC
From: Joseph Stiles
Topic: 30048 Message: 30048

Greetings group!

Have 820S. Digital display inop/erratic. Cleaned connector on counter unit and slide contact inside VFO. Display works as it should. But have a problem that I have not seen before:
The display reads correct frequency in receive but, when the send/rcv switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read 29.000.0 Mhz. If have seen this in receive mode on other rigs, but not in transmit. I am a bit confused by the troubleshooting flfow chard in the service manual. ANY help as usual, is appreciated!

73's joe wb7uqu

[Non-text portions of this message have been removed]

30049. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 16:50:21 UTC
From: Greg Anders
Topic: 30038 Message: 30049

I would have to include the TS-900S in any list of Kenwood Hybrids IMHO. Although not many were produced it is definitely a hybrid and from the "right-era:.
I am lucky enough to have found one and enjoy every minute using it. Very fancy for its day, the TS-900 was introduced as an "upscale" model during the years that
The 520/520S were Kenwood's mainstay rigs. The radio features a continuously adjustable receive attenuator and several other features including plug in (glass epoxy) boards with
A tilt-able card rack for troubleshooting. A good pair of 6LQ6's will get you an easy 150W PEP on 75M. The cheap speaker in the separate power supply does "suck"
But it can be replaced...

FYI,

Greg

[Non-text portions of this message have been removed]

30050. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 18:01:16 UTC
From: w5rkl
Topic: 30048 Message: 30050

Hi Joe,

You said you cleaned the connector on the counter unit. Are you talking about the multiple pins on the top of the Counter Unit, the pins that connect through a plug to the display tubes behind the front panel to the Counter Unit? If so then there are additional connections on the bottom and inside the Counter Unit.

The Counter Unit has 2 boards inside the metal enclosure that are connected together with fixed pins mounted inside the metal enclosure. You have to remove the Counter Unit from the 820, take the outer metal cover OFF, then remove each board, one at a time, and clean the fixed pins on the metal bracket and clean the sockets on the boards. Next, clean the pins on the bottom of the Counter Unit. Once you have done all that, put the Counter Unit back together and install it back in the 820, connect the top and bottom plugs, and test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group!
>
> Have 820S. Digital display inop/erratic. Cleaned connector on counter unit
> and slide contact inside VFO. Display works as it should. But have a problem
> that I have not seen before:
> The display reads correct frequency in receive but, when the send/rcv
> switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
> 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read 29.000.0 Mhz. If
> have seen this in receive mode on other rigs, but not in transmit. I am a bit
> confused by the troubleshooting flfow chard in the service manual. ANY help as
> usual, is appreciated!
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30051. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 20:01:33 UTC
From: kevin
Topic: 30038 Message: 30051

An I own a 520X
Kevin
KD0ILM

-

30052. Re: [TS-520_820_530_830] VFO coil spring

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 20:10:16 UTC
From: John Cox
Topic: 28004 Message: 30052

Never mind. Got it fixed. Works like new.

--- On Wed, 9/22/10, n4mcy <n4mcy@...> wrote:

From: n4mcy <n4mcy@...>
Subject: [TS-520_820_530_830] VFO coil spring
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, September 22, 2010, 11:19 PM

I picked up a TS-820S at a good price because it had a few problems. The VFO coil spring between the gears came loose somehow and was making the dial feel like it was hitting a bump or binding in a couple of spots. I have the knob, brass and aluminum bushings out and other parts out until I found the spring. It is # 4 on page 37 of the TS-820 service manual. If you have ever seen this spring then you know my problem. What is the trick or easy way to put the spring back on and reassemble the VFO without the spring falling out in the process. I'm having trouble putting the spring in place and trying to put the first gear back in place with out the spring falling down.
Also once or if ever I get this done correctly, do I rotate the gear to tighten the spring like winding a clock, or just leave it unwound.
Thank you in advance for your help. N4MCY

[Non-text portions of this message have been removed]

30053. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 20:33:24 UTC
From: Joseph Stiles
Topic: 30048 Message: 30053

Mike,

Again..I am guilty of not stating enough..hihi...I only did the ones on the top, However, I'll get to the other pins and boards and give them a through inspection...with a DEOXIT "bath." I have found that, just some simple cleaning can solve a multitude of problems. I was a bit paranoid..especially after those 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 3, 2011 10:01:16 AM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Hi Joe,

You said you cleaned the connector on the counter unit. Are you talking about the multiple pins on the top of the Counter Unit, the pins that connect through a plug to the display tubes behind the front panel to the Counter Unit? If so then there are additional connections on the bottom and inside the Counter Unit.

The Counter Unit has 2 boards inside the metal enclosure that are connected together with fixed pins mounted inside the metal enclosure. You have to remove the Counter Unit from the 820, take the outer metal cover OFF, then remove each board, one at a time, and clean the fixed pins on the metal bracket and clean the sockets on the boards. Next, clean the pins on the bottom of the Counter Unit. Once you have done all that, put the Counter Unit back together and install it back in the 820, connect the top and bottom plugs, and test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Greetings group!
>
> Have 820S. Digital display inop/erratic. Cleaned connector on counter unit
>
> and slide contact inside VFO. Display works as it should. But have a problem
> that I have not seen before:
> The display reads correct frequency in receive but, when the
>send/rcv

>
> switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
> 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read 29.000.0 Mhz. If

> have seen this in receive mode on other rigs, but not in transmit. I am a bit
> confused by the troubleshooting flfow chard in the service manual. ANY help as
>
> usual, is appreciated!
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30054. Re: [TS-520_820_530_830] VFO coil spring

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 21:04:31 UTC
From: W LEWIS
Topic: 28004 Message: 30054

What did you have to do?

--- On Thu, 3/3/11, John Cox <n4mcy@...> wrote:

From: John Cox <n4mcy@...>
Subject: Re: [TS-520_820_530_830] VFO coil spring
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, March 3, 2011, 2:10 PM

Never mind. Got it fixed. Works like new.

--- On Wed, 9/22/10, n4mcy <n4mcy@...> wrote:

From: n4mcy <n4mcy@yahoo.com>
Subject: [TS-520_820_530_830] VFO coil spring
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, September 22, 2010, 11:19 PM

I picked up a TS-820S at a good price because it had a few problems. The VFO coil spring between the gears came loose somehow and was making the dial feel like it was hitting a bump or binding in a couple of spots. I have the knob, brass and aluminum bushings out and other parts out until I found the spring. It is # 4 on page 37 of the TS-820 service manual. If you have ever seen this spring then you know my problem. What is the trick or easy way to put the spring back on and reassemble the VFO without the spring falling out in the process. I'm having trouble putting the spring in place and trying to put the first gear back in place with out the spring falling down.
Also once or if ever I get this done correctly, do I rotate the gear to tighten the spring like winding a clock, or just leave it unwound.
Thank you in advance for your help. N4MCY

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30055. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 22:55:17 UTC
From: w5rkl
Topic: 30048 Message: 30055

Hi Joe,

No problem, we all tend to forget now and then.

I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets where the pin slide into. Then install and remove the board a few times. This provides "scrubbing" action between the board sockets and the pins, cleaning the sockets and pin. Use canned air to remove any/all cleaner residue then install the board back onto the pin and secure it with the mounting screws. Repeat this process with the other board. Put the metal cover back on the Counter Unit and install the Counter Unit back into the 820 and secure it to the chassis with the mounting screws and plug the bottom and top plug back into the Counter Unit and test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Again..I am guilty of not stating enough..hihi...I only did the ones on the
> top, However, I'll get to the other pins and boards and give them a through
> inspection...with a DEOXIT "bath." I have found that, just some simple cleaning
> can solve a multitude of problems. I was a bit paranoid..especially after those
> 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!
>
> 73's joe wb7uqu
>
>
>

30056. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-03 23:14:47 UTC
From: Joseph Stiles
Topic: 30048 Message: 30056

Mike & group,

Again, poor choice of words..."bath." The pins/connectors in question were cleaned as stated below...I had high hopes..but alas..no change. Some further info: this problem happens when mode switch is in the CW or FSK posit. and the send switch is in" send." When mode switch is in the USB/LSB posit and the switch is in the send posit..or keyed with a mic connected...no change of displayed freq. So..I have no clue....counter unit?.....PLL/VCO unit...or ? I am not the sharpest pencil in the diagnostic box...so please don't worry about any disrespect. Tnx!

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 3, 2011 2:55:17 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Hi Joe,

No problem, we all tend to forget now and then.

I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets where the pin slide into. Then install and remove the board a few times. This provides "scrubbing" action between the board sockets and the pins, cleaning the sockets and pin. Use canned air to remove any/all cleaner residue then install the board back onto the pin and secure it with the mounting screws. Repeat this process with the other board. Put the metal cover back on the Counter Unit and install the Counter Unit back into the 820 and secure it to the chassis with the mounting screws and plug the bottom and top plug back into the Counter Unit and test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Mike,
>
> Again..I am guilty of not stating enough..hihi...I only did the ones on the

> top, However, I'll get to the other pins and boards and give them a through
> inspection...with a DEOXIT "bath." I have found that, just some simple cleaning

>
> can solve a multitude of problems. I was a bit paranoid..especially after those
>
> 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!
>
> 73's joe wb7uqu
>
>
>

[Non-text portions of this message have been removed]

30057. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 01:39:06 UTC
From: Bill
Topic: 30038 Message: 30057

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
---other good info snipped---

> Another set of Kenwood hybrids, although not a transceiver, is the 599
> series of separate receiver/transmitter combos.
---more snipped---
>
> Pete, wa2cwa
>

Hi Pete...
... and Bob,

I have the 599 Twins. They do function together as a transceiver depending on whether you connect the transceive cable and set the switches for transceive operation. Even with the cable connected they can still be used as a separate transmitter and receiver. Either piece can be used with any other transmitter or receiver as "separates" - that is, they can stand on their own.

A set of twins is going to take up a little more space on your desk as far as my own memory serves and that might be critical in your retirement closet. It might be like having one of the newer transceivers with an external VFO and maybe external speaker as for desktop real estate.

I think a 520 would serve you very well.

73,

Bill KU8H

30058. Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 02:06:01 UTC
From: Bob Macklin
Topic: 30038 Message: 30058

I'm seeing a significant number of 520s, 530s, 820s, and 830s listed on eBay. But I have not seen 599s very often.

Right now I am looking for a 520 for $300 or less.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Bill
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 03, 2011 5:39 PM
Subject: [TS-520_820_530_830] Re: TS-520? What's to Know?

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
---other good info snipped---

> Another set of Kenwood hybrids, although not a transceiver, is the 599
> series of separate receiver/transmitter combos.
---more snipped---
>
> Pete, wa2cwa
>

Hi Pete...
... and Bob,

I have the 599 Twins. They do function together as a transceiver depending on whether you connect the transceive cable and set the switches for transceive operation. Even with the cable connected they can still be used as a separate transmitter and receiver. Either piece can be used with any other transmitter or receiver as "separates" - that is, they can stand on their own.

A set of twins is going to take up a little more space on your desk as far as my own memory serves and that might be critical in your retirement closet. It might be like having one of the newer transceivers with an external VFO and maybe external speaker as for desktop real estate.

I think a 520 would serve you very well.

73,

Bill KU8H

[Non-text portions of this message have been removed]

30059. Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 15:44:01 UTC
From: w5rkl
Topic: 30038 Message: 30059

The 599 twins are pretty scarce. I see them from time to time on qth.com's classified section. A ham friend of mine who I have known since I was 18 found an R599A for me in Seattle Washington. I paid $150 for it and it has the 6 and 2 meter converters plus all the filters. It has a warble problem that needs to be fixed. I have narrowed the problem down to the VFO. One of these days I'll pull the VFO and find out what's causing the problem and fix it. I hope one day to find a T599A to match up with this R599A. Not in a hurry to find the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> I'm seeing a significant number of 520s, 530s, 820s, and 830s listed on eBay. But I have not seen 599s very often.
>
> Right now I am looking for a 520 for $300 or less.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

30060. Re: [TS-520_820_530_830] Re: TS-520? What's to Know?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 17:16:55 UTC
From: pmarkavage@juno.com
Topic: 30038 Message: 30060

The 520/530/820/830 sold here in the U.S. are classic SSB/CW type rigs so there's lots of them around. The 830 was especially popular as a workhorse contesting and DX rig. Many of these models also found there way into the hands of CB operators. The 599 Twins are unique in that, besides being a SSB/CW rig, it also had the AM mode. When transmitting in the AM mode, it was hard to distinguish it from a plate modulated rig on the air. The receiver selectivity control for controlling the filters could be set to automatic and would choose the correct filter when changing modes or you could manually set the filters (from .5 Khz to 25 KHz). The receiver even has a squelch control that operates in all modes and can also receive FM. Great noise blanker and even the analog dial is accurate. Great receiver/transmitter combination that for me, never lose their appeal.

Pete, wa2cwa

On Thu, 3 Mar 2011 18:06:01 -0800 Bob Macklin <macklinbob@...>
writes:
> I'm seeing a significant number of 520s, 530s, 820s, and 830s listed
> on eBay. But I have not seen 599s very often.
>
> Right now I am looking for a 520 for $300 or less.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Bill
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 03, 2011 5:39 PM
> Subject: [TS-520_820_530_830] Re: TS-520? What's to Know?
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
> >
> ---other good info snipped---
>
> > Another set of Kenwood hybrids, although not a transceiver, is
> the 599
> > series of separate receiver/transmitter combos.
> ---more snipped---

> >
> > Pete, wa2cwa

30061. VFO-820 tuning knob replacement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 19:55:30 UTC
From: bill_seward
Topic: 30061 Message: 30061

I've been fortunate enough to come by a decently priced VFO-820. Of course, in return for the decent price, it has a few warts. The worst is the tuning knob, which has a big ding in the nice shiney center. Does anyone know where I might obtain an undinged knob? Thanks.

30062. Re: VFO-820 tuning knob replacement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 20:51:40 UTC
From: w5rkl
Topic: 30061 Message: 30062

Drop Bob Mansker, ke5ftf, an e-mail (ke5ftf at mail.com). He may be able to help you.

Ken, K4EAA, sells a very nice weighted replacement knob, see his website for details

www.k4eaa.com

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "bill_seward" <bill.seward@...> wrote:
>
> I've been fortunate enough to come by a decently priced VFO-820. Of course, in return for the decent price, it has a few warts. The worst is the tuning knob, which has a big ding in the nice shiney center. Does anyone know where I might obtain an undinged knob? Thanks.
>

30063. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 21:03:26 UTC
From: Joseph Stiles
Topic: 30048 Message: 30063

Mike & group,

So far I have been unable to track down the problem. I have substituted a known good PLL unit which did not change the problem. I have a known good counter unit which I have not as yet tried. ANY help would be appreciated!

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 3, 2011 3:14:47 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Mike & group,

Again, poor choice of words..."bath." The pins/connectors in question were cleaned as stated below...I had high hopes..but alas..no change. Some further info: this problem happens when mode switch is in the CW or FSK posit. and the send switch is in" send." When mode switch is in the USB/LSB posit and the switch is in the send posit..or keyed with a mic connected...no change of displayed freq. So..I have no clue....counter unit?.....PLL/VCO unit...or ? I am

not the sharpest pencil in the diagnostic box...so please don't worry about any disrespect. Tnx!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 3, 2011 2:55:17 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Hi Joe,

No problem, we all tend to forget now and then.

I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets where the pin slide into. Then install and remove the board a few times. This provides "scrubbing" action between the board sockets and the pins, cleaning the

sockets and pin. Use canned air to remove any/all cleaner residue then install the board back onto the pin and secure it with the mounting screws. Repeat this process with the other board. Put the metal cover back on the Counter Unit and install the Counter Unit back into the 820 and secure it to the chassis with the

mounting screws and plug the bottom and top plug back into the Counter Unit and test for proper operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Again..I am guilty of not stating enough..hihi...I only did the ones on the

> top, However, I'll get to the other pins and boards and give them a through
> inspection...with a DEOXIT "bath." I have found that, just some simple cleaning
>
>
> can solve a multitude of problems. I was a bit paranoid..especially after those
>
>
> 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!
>
> 73's joe wb7uqu
>
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30064. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 21:47:13 UTC
From: w5rkl
Topic: 30048 Message: 30064

Joe,

Have you checked the Counter Unit's standard oscillator frequency? The formal check and adjustment is on page 49 at the top left of the page. A frequency counter is required to perform the formal adjustment which I believe is more accurate than the WWV adjustment on page 48.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> So far I have been unable to track down the problem. I have substituted a
> known good PLL unit which did not change the problem. I have a known good
> counter unit which I have not as yet tried. ANY help would be appreciated!
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 3:14:47 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
>
>
> Mike & group,
>
> Again, poor choice of words..."bath." The pins/connectors in question were
> cleaned as stated below...I had high hopes..but alas..no change. Some further
> info: this problem happens when mode switch is in the CW or FSK posit. and the
> send switch is in" send." When mode switch is in the USB/LSB posit and the
> switch is in the send posit..or keyed with a mic connected...no change of
> displayed freq. So..I have no clue....counter unit?.....PLL/VCO unit...or ? I am
>
> not the sharpest pencil in the diagnostic box...so please don't worry about any
> disrespect. Tnx!
>
> 73's joe wb7uqu
>

> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@...m
> Sent: Thu, March 3, 2011 2:55:17 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
>
> Hi Joe,
>
> No problem, we all tend to forget now and then.
>
> I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact
> cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets
> where the pin slide into. Then install and remove the board a few times. This
> provides "scrubbing" action between the board sockets and the pins, cleaning the
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> sockets and pin. Use canned air to remove any/all cleaner residue then install
> the board back onto the pin and secure it with the mounting screws. Repeat this
> process with the other board. Put the metal cover back on the Counter Unit and
> install the Counter Unit back into the 820 and secure it to the chassis with the
>
> mounting screws and plug the bottom and top plug back into the Counter Unit and
> test for proper operation.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
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> > Mike,
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> > Again..I am guilty of not stating enough..hihi...I only did the ones on the
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> > top, However, I'll get to the other pins and boards and give them a through
> > inspection...with a DEOXIT "bath." I have found that, just some simple cleaning
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> > 73's joe wb7uqu
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30065. Re: [TS-520_820_530_830] VFO-820 tuning knob replacement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 22:19:13 UTC
From: Mel Farrer
Topic: 30061 Message: 30065

There is a ham making the replacement center pieces. Can't remember who, but will try and find out. Good Luck,

Mel, K6KBE

--- On Fri, 3/4/11, bill_seward <bill.seward@...> wrote:

From: bill_seward <bill.seward@...>
Subject: [TS-520_820_530_830] VFO-820 tuning knob replacement
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, March 4, 2011, 11:55 AM

I've been fortunate enough to come by a decently priced VFO-820. Of course, in return for the decent price, it has a few warts. The worst is the tuning knob, which has a big ding in the nice shiney center. Does anyone know where I might obtain an undinged knob? Thanks.

[Non-text portions of this message have been removed]

30066. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-04 23:29:18 UTC
From: Joseph Stiles
Topic: 30048 Message: 30066

Mike,

I have not. I do have a freq. counter. I'll run the check/adjustment and post what I found. This has me really confused.

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 4, 2011 1:47:13 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Joe,

Have you checked the Counter Unit's standard oscillator frequency? The formal check and adjustment is on page 49 at the top left of the page. A frequency counter is required to perform the formal adjustment which I believe is more accurate than the WWV adjustment on page 48.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> So far I have been unable to track down the problem. I have substituted a
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> known good PLL unit which did not change the problem. I have a known good
> counter unit which I have not as yet tried. ANY help would be appreciated!
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> 73's joe wb7uqu
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>
> ---
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 3:14:47 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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>

> Mike & group,
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> Again, poor choice of words..."bath." The pins/connectors in question were
> cleaned as stated below...I had high hopes..but alas..no change. Some further
> info: this problem happens when mode switch is in the CW or FSK posit. and the

> send switch is in" send." When mode switch is in the USB/LSB posit and the
> switch is in the send posit..or keyed with a mic connected...no change of
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> not the sharpest pencil in the diagnostic box...so please don't worry about any
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> disrespect. Tnx!
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> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 2:55:17 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
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> Hi Joe,
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> No problem, we all tend to forget now and then.
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> I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact
> cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets
> where the pin slide into. Then install and remove the board a few times. This
> provides "scrubbing" action between the board sockets and the pins, cleaning
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> sockets and pin. Use canned air to remove any/all cleaner residue then install

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> mounting screws and plug the bottom and top plug back into the Counter Unit and
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> test for proper operation.
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30067. Re: [TS-520_820_530_830] VFO-820 tuning knob replacement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 00:27:40 UTC
From: Mel Farrer
Topic: 30061 Message: 30067

Try this guy. While he doesn't list other brands, maybe you can get him to do one.

Charles Talbott - K3ICH

13192 Pinnacle Lane

Leesburg , VA
20176

Phone: 540-822-5643

Aluminum Knob inlays for
S-Line

MHz drum dials & meter faces for 75A-2,3,4 & 51J

51S-1 repair & restoration

Mel,K6KBE

--- On Fri, 3/4/11, bill_seward <bill.seward@...> wrote:

From: bill_seward <bill.seward@...>
Subject: [TS-520_820_530_830] VFO-820 tuning knob replacement
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, March 4, 2011, 11:55 AM

I've been fortunate enough to come by a decently priced VFO-820. Of course, in return for the decent price, it has a few warts. The worst is the tuning knob, which has a big ding in the nice shiney center. Does anyone know where I might obtain an undinged knob? Thanks.

[Non-text portions of this message have been removed]

30068. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 00:30:34 UTC
From: Joseph Stiles
Topic: 30048 Message: 30068

Mike & group,

Did check as stated on pg 49 of service manual. Freq is exactly 1.000.00Mhz. I just don't know where else to look. The receive frequency tracks along with the VFO(indicated) digital frequency. As stated prior, "9.000" 19.000, or "29.000" only come up when rig in CW/FSK and switch is in send or, if in USB/LSB with mic connected and "keyed" . HELP!!!

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@...m
Sent: Fri, March 4, 2011 3:29:18 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Mike,

I have not. I do have a freq. counter. I'll run the check/adjustment and post what I found. This has me really confused.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 4, 2011 1:47:13 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Joe,

Have you checked the Counter Unit's standard oscillator frequency? The formal check and adjustment is on page 49 at the top left of the page. A frequency counter is required to perform the formal adjustment which I believe is more accurate than the WWV adjustment on page 48.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> Mike & group,
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> So far I have been unable to track down the problem. I have substituted a
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> known good PLL unit which did not change the problem. I have a known good
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 3:14:47 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> Mike & group,
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> Again, poor choice of words..."bath." The pins/connectors in question were
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> send switch is in" send." When mode switch is in the USB/LSB posit and the
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> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 2:55:17 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
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> Hi Joe,
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> No problem, we all tend to forget now and then.
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> I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact
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30069. Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 13:24:00 UTC
From: John Hennessy
Topic: 30069 Message: 30069

Hi, I am fortunate to have two of these, a perfect condition one and a not so good one. The not so good one is not tuning up correctly up even thought the same procedure tunes the good radio properly. I have followed the manual and Kens (K4EAA) tune-up procedure to the letter but as soon as I dip the plate in CW mode I get odd results. As I'm adjusting the plate current can jump up to around 300mA and if it does I can't adjust it any lower. Returning to Rec and waiting a moment seems to give me another go at dipping the plate. Any attempt to load even a little result in current reading of 300mA. Output power is at 100W but shouldn't I be able to achieve this with 225mA?

Could it simply be a dummy load problem failing under high output power. I am being quick to tune up. I have also tried tuning against a resonant antenna (antenna close to resonance + tuner = resonant) and still see the same problem.

Any assistance would be much appreciated.

thanks

John.

30070. Re: [TS-520_820_530_830] Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 13:37:19 UTC
From: Adrian Ellison
Topic: 30069 Message: 30070

Hi John,

I would check the plate tuning capacitor, ensuring that the rotating vanes are indeed grounded throughout the entire rotation, and I would definitely check the PA neutralization, the latter being the most likely cause.

Also ensure that you have 6146Bs installed, not the A ...

Regards

Adrian - ZS1TTZ

On Saturday 05 March 2011 15:24:00 you wrote:
> Hi, I am fortunate to have two of these, a perfect condition one and a
> not so good one. The not so good one is not tuning up correctly up even
> thought the same procedure tunes the good radio properly. I have
> followed the manual and Kens (K4EAA) tune-up procedure to the letter but
> as soon as I dip the plate in CW mode I get odd results. As I'm
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> I am being quick to tune up. I have also tried tuning against a resonant
> antenna (antenna close to resonance + tuner = resonant) and still see
> the same problem.
>
> Any assistance would be much appreciated.
>
> thanks
>
> John.
>
>

30071. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 14:29:57 UTC
From: roberteleazer@rocketmail.com
Topic: 30048 Message: 30071

Joe:

Perhaps you have already described all the symptoms of the radio, but does it transmit Okay? As on the right frequency?

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> Did check as stated on pg 49 of service manual. Freq is exactly 1.000.00Mhz.
> I just don't know where else to look. The receive frequency tracks along with
> the VFO(indicated) digital frequency. As stated prior, "9.000" 19.000, or
> "29.000" only come up when rig in CW/FSK and switch is in send or, if in USB/LSB
> with mic connected and "keyed" . HELP!!!
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> 73's joe wb7uqu
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> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, March 4, 2011 3:29:18 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> Mike,
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> I have not. I do have a freq. counter. I'll run the check/adjustment and post
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> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, March 4, 2011 1:47:13 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
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> Joe,
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> Have you checked the Counter Unit's standard oscillator frequency? The formal

> check and adjustment is on page 49 at the top left of the page. A frequency
> counter is required to perform the formal adjustment which I believe is more
> accurate than the WWV adjustment on page 48.
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> 73s
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, March 3, 2011 3:14:47 PM
> > Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> >
> > Mike & group,
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> > Again, poor choice of words..."bath." The pins/connectors in question were
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30072. tuning 811 w/820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 10:44:46 UTC
From: kj4fcj
Topic: 30072 Message: 30072

Hi everyone, I need to know the detailed. Tuning procedure for using an 811 with my 820s for ssb operation. I do know how to tune the 820s but, I know the amp is different,& the manual doesn't help. I know they have videos for this but, they are using a modern rig and adjusting the input drive(as far as I know) is a different ballgame. I'm sure its a very simple process to do right. Any help, is greatly appreciated. Charles Kj4fcj

30073. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 17:47:09 UTC
From: Joseph Stiles
Topic: 30048 Message: 30073

Robert,

Short answer....NO. Once the rig is placed in "send" and the digital frequency readout indicates the "9.000"...etc...no further operations are possible, except I can obtain 60mA of Ip. From reading the service manual, this is a stated problem...I have seen it before in receive..but NOT transmit. I am loosing what little hair I have left. I have limited diagnostic knowledge.. and equipment...but trying to get better...

73's joe wb7uqu

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 5, 2011 6:29:57 AM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Joe:

Perhaps you have already described all the symptoms of the radio, but does it transmit Okay? As on the right frequency?

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
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> To: TS-520_820_530_830@yahoogroups.com

> Sent: Fri, March 4, 2011 3:29:18 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> To: TS-520_820_530_830@yahoogroups.com
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> > send switch is in" send." When mode switch is in the USB/LSB posit and the
> > switch is in the send posit..or keyed with a mic connected...no change of
> > displayed freq. So..I have no clue....counter unit?.....PLL/VCO unit...or ? I
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> >am
> >
> >
> > not the sharpest pencil in the diagnostic box...so please don't worry about
>any
>
> >
> >
> > disrespect. Tnx!
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, March 3, 2011 2:55:17 PM
> > Subject: [TS-520_820_530_830] Re: 820S freq. readout
> >
> > Hi Joe,
> >
> > No problem, we all tend to forget now and then.
> >
> > I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact
> > cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets
> > where the pin slide into. Then install and remove the board a few times. This
>
> > provides "scrubbing" action between the board sockets and the pins, cleaning

> >the
> >
> >
> > sockets and pin. Use canned air to remove any/all cleaner residue then

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>
> > the board back onto the pin and secure it with the mounting screws. Repeat
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> > process with the other board. Put the metal cover back on the Counter Unit
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> >
> > mounting screws and plug the bottom and top plug back into the Counter Unit
>and
>
> >
> >
> > test for proper operation.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> > wrote:
> > >
> > > Mike,
> > >
> > > Again..I am guilty of not stating enough..hihi...I only did the ones on

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> >
> > > top, However, I'll get to the other pins and boards and give them a through
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> > > inspection...with a DEOXIT "bath." I have found that, just some simple
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> > > can solve a multitude of problems. I was a bit paranoid..especially after
> >those
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> > > 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!
> > >
> > > 73's joe wb7uqu
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30074. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 20:22:14 UTC
From: w5rkl
Topic: 30069 Message: 30074

Hello John,

The PLATE control is set within the PLATE control arc silk screen indication based on the band switch setting. Furthermore, the LOAD control is set to maximum capacitance, meaning the LOAD knob points to 9 o'clock. Both controls, PLATE and LOAD, are set as described above before starting the tune up procedures regardless of the band.

Please provide information for the following:

1. You can achieve a good and stable ALC peak indication in TUNE mode, meaning the meter switch is set to ALC and adjusting the "DRIVE" control results in a peak indication. Is this true?

2. When adjusting the PLATE control, with the meter switch set to "IP", there is very little, if any, "dip" in IP current. Is that true

Again, please let us know the answers to both 1 and 2.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> Hi, I am fortunate to have two of these, a perfect condition one and a
> not so good one. The not so good one is not tuning up correctly up even
> thought the same procedure tunes the good radio properly. I have
> followed the manual and Kens (K4EAA) tune-up procedure to the letter but
> as soon as I dip the plate in CW mode I get odd results. As I'm
> adjusting the plate current can jump up to around 300mA and if it does I
> can't adjust it any lower. Returning to Rec and waiting a moment seems
> to give me another go at dipping the plate. Any attempt to load even a
> little result in current reading of 300mA. Output power is at 100W but
> shouldn't I be able to achieve this with 225mA?
>
> Could it simply be a dummy load problem failing under high output power.
> I am being quick to tune up. I have also tried tuning against a resonant
> antenna (antenna close to resonance + tuner = resonant) and still see
> the same problem.
>
> Any assistance would be much appreciated.
>
> thanks
>
> John.
>

30075. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 20:34:03 UTC
From: Joseph Stiles
Topic: 30048 Message: 30075

Group,

I substituted a KNOWN GOOD DG-1 unit. The problem persists. I just can not figure out where else to look/check.

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 4, 2011 4:30:34 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Mike & group,

Did check as stated on pg 49 of service manual. Freq is exactly 1.000.00Mhz. I just don't know where else to look. The receive frequency tracks along with the VFO(indicated) digital frequency. As stated prior, "9.000" 19.000, or "29.000" only come up when rig in CW/FSK and switch is in send or, if in USB/LSB

with mic connected and "keyed" . HELP!!!

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 4, 2011 3:29:18 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Mike,

I have not. I do have a freq. counter. I'll run the check/adjustment and post what I found. This has me really confused.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 4, 2011 1:47:13 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Joe,

Have you checked the Counter Unit's standard oscillator frequency? The formal check and adjustment is on page 49 at the top left of the page. A frequency counter is required to perform the formal adjustment which I believe is more

accurate than the WWV adjustment on page 48.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Mike & group,
>
> So far I have been unable to track down the problem. I have substituted a
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>
>
> known good PLL unit which did not change the problem. I have a known good
> counter unit which I have not as yet tried. ANY help would be appreciated!
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 3:14:47 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
>
>
> Mike & group,
>
> Again, poor choice of words..."bath." The pins/connectors in question were
> cleaned as stated below...I had high hopes..but alas..no change. Some further
> info: this problem happens when mode switch is in the CW or FSK posit. and the

> send switch is in" send." When mode switch is in the USB/LSB posit and the
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> disrespect. Tnx!
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> 73's joe wb7uqu
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> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, March 3, 2011 2:55:17 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
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> Hi Joe,
>
> No problem, we all tend to forget now and then.
>
> I wouldn't soak the boards in a DeoXit bath. Use a Q'Tip wet with contact
> cleaner, rub the Q'Tip on the pins and press the Q'Tip on the board sockets
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> sockets and pin. Use canned air to remove any/all cleaner residue then install

> the board back onto the pin and secure it with the mounting screws. Repeat this
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> process with the other board. Put the metal cover back on the Counter Unit and

> install the Counter Unit back into the 820 and secure it to the chassis with
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> mounting screws and plug the bottom and top plug back into the Counter Unit and
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>
> test for proper operation.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Mike,
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> > Again..I am guilty of not stating enough..hihi...I only did the ones on
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> > 2 820's with the PLL/VCO CB HACK jobs. Thanks for the reminder!
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30076. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 20:39:45 UTC
From: roberteleazer@rocketmail.com
Topic: 30048 Message: 30076

Okay, with those symptoms it is not just the display unit.

Since you have already swapped out the VCO/PD unit (I assume you removed and replaced the whole module; they are two boards in that can, the top one for the VCO and the bottom one for the PD) the next thing that comes to mind is the carrier unit.

If the carrier unit failed to produce the required signal in transmit that would cause a problem. It may even be that the carrier unit is working but fails to produce a signal level high enough for transmit.

Now, the 820S manual has some errors with respect to the carrier unit. They got confused as to what board they were talking about. I suggest you go over to Mods.DK and download the rewritten alignment procedure they have there - it has the correct data for the carrier unit alignment as well as some additional data not incdued in the manual - and the whole thing reads easier, too. By the way, there are multiple additional alignment instructions on that website - be sure to download the larger one, not the newest one posted.

You say you have a frequency counter. That will do for setting the freq on the carrier boards, but it is best to have an oscilloscope to set the output levels. Otherwise you could use an RF probe with a VTVM or digital VOM.

Check the carrier signal at the input to the IF board, using the freq counter when the rig is in Receive mode and when it is in transmit mode It is on the IF board way up toward the front of the rig, back near where the connectors for the IF board are. You can best get to it by looking under the board with the rig sitting upright on its right side. Obviously, do this with the SG switch "off."

If the carrier signal goes away in transmit in any or all modes mode then you have found the problem.

It is relatively easy to remove the carrier unit and take the boards out of it so you can clean the contacts and do repairs. The bottom board on the carrier unit uses a tantalum capacitor and they are notorious for going bad. There is an article on Mods.DK about changing out that cap in order to fix a frequency instability problem with the carrier unit. I suppose if the cap went really bad it might take out the board entirely, but I have not looked at the schematic to see.

Of course a loose or bad connection on the connector to the carrier unit will cause problems too. The connectors on the TS-820S beat anything I have ever seen when it comes to their propensity to fall off and cause problems. A partial conenction can cause truly weird stuff, some of which is catastrophic to the finals.

Good luck and let us know what you find!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Robert,
>
> Short answer....NO. Once the rig is placed in "send" and the digital
> frequency readout indicates the "9.000"...etc...no further operations are
> possible, except I can obtain 60mA of Ip. From reading the service manual, this
> is a stated problem...I have seen it before in receive..but NOT transmit. I am
> loosing what little hair I have left. I have limited diagnostic knowledge.. and
> equipment...but trying to get better...
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, March 5, 2011 6:29:57 AM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
>
>
> Joe:
>
> Perhaps you have already described all the symptoms of the radio, but does it
> transmit Okay? As on the right frequency?
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Mike & group,
> >
> > Did check as stated on pg 49 of service manual. Freq is exactly 1.000.00Mhz.
> >
> > I just don't know where else to look. The receive frequency tracks along with
> > the VFO(indicated) digital frequency. As stated prior, "9.000" 19.000, or
> > "29.000" only come up when rig in CW/FSK and switch is in send or, if in
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> > From: Joseph Stiles <stilesjoseph@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, March 4, 2011 3:29:18 PM
> > Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> > I have not. I do have a freq. counter. I'll run the check/adjustment and post
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> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, March 4, 2011 1:47:13 PM
> > Subject: [TS-520_820_530_830] Re: 820S freq. readout
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> > Joe,
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> > W5RKL
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> > > From: Joseph Stiles <stilesjoseph@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thu, March 3, 2011 3:14:47 PM
> > > Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
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> > > Mike & group,
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30077. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 20:54:26 UTC
From: w5rkl
Topic: 30048 Message: 30077

Afternoon Joe,

Based on your new information, loss of transmitter output, no RF output etc in transmit, the carrier signal is missing in transmit.

First, check for the presence of 9VDC on CAR UNIT plug CJ2 pin 6 in transmit. It doesn't matter what mode.

If the 9VDC is missing, check the Relay Unit plug RL2 pin 13 for 9VDC in transmit. If 9VDC is missing or very low, pull the relay from the Relay Unit, remove the plastic cover, and gently cleaning the relay contacts with contact cleaner.

The problem could also be caused by too low of a CAR UNIT signal, see page 45 in the 820 service manual, "CARRIER UNIT ADJUSTMENT", 2-1. The CAR UNIT output signal level should be adjusted for an output level as measured at the CAR UNIT Plug CJ3 pins 2 and 5 on page 58 of the 820 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group!
>
> Have 820S. Digital display inop/erratic. Cleaned connector on counter unit
> and slide contact inside VFO. Display works as it should. But have a problem
> that I have not seen before:
> The display reads correct frequency in receive but, when the send/rcv
> switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
> 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read 29.000.0 Mhz. If
> have seen this in receive mode on other rigs, but not in transmit. I am a bit
> confused by the troubleshooting flfow chard in the service manual. ANY help as
> usual, is appreciated!
>
> 73's joe wb7uqu
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> [Non-text portions of this message have been removed]
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30078. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 22:14:13 UTC
From: Joseph Stiles
Topic: 30048 Message: 30078

Mike(w5rkl) & Robert(wb5wsv),

Mike, I was thinking about that relay. All seems well until, rig in send. I will do that check/clean. I have a known good relay that I can sub. Also, I'll do that testing that both you and robert suggest. Tnx fer all the assistance! Keep ya posted.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 5, 2011 12:54:26 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Afternoon Joe,

Based on your new information, loss of transmitter output, no RF output etc in transmit, the carrier signal is missing in transmit.

First, check for the presence of 9VDC on CAR UNIT plug CJ2 pin 6 in transmit. It doesn't matter what mode.

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73s
Mike
W5RKL

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>
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30079. 830 Warc Mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 23:22:18 UTC
From: Chris Parnell
Topic: 30079 Message: 30079

Hi all,

Just a quick question. - Aside from removing the blue wire from Pin 4, connector 6 on the AF board in order to open up WARC bands on the 830s, is there another way to obtain this?

The only reason I ask is that I purchased a RF board and fitted it to my 830s, and there was a note saying "No WARC mod done" on the RF board. - Of course, it doesn't transmit on the WARC bands, but I wondered what was different on the RF board with this one to my previous RF board that had WARC enabled (hope this makes sense)☐.

In other words I didn't have to remove blue wire from AF board previously.

Thanks in advance.

Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

30080. Re: [TS-520_820_530_830] 830 Warc Mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 23:31:11 UTC
From: Joseph Stiles
Topic: 30079 Message: 30080

Chris,

Look at the owner's manual, Pg 27, Section 5.5 "TRANSMITTING ON WARC BANDS" bottom right corner. There are some diodes you can cut to activate individual WARC bands on the RF board. However, it's easier just to cut the wire. Good luck.....

73's joe wb7uqu

From: Chris Parnell <cparnell1001@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@...m>
Sent: Sat, March 5, 2011 3:22:18 PM
Subject: [TS-520_820_530_830] 830 Warc Mod

Hi all,

Just a quick question. - Aside from removing the blue wire from Pin 4, connector 6 on the AF board in order to open up WARC bands on the 830s, is there another way to obtain this?

The only reason I ask is that I purchased a RF board and fitted it to my 830s, and there was a note saying "No WARC mod done" on the RF board. - Of course, it doesn't transmit on the WARC bands, but I wondered what was different on the RF board with this one to my previous RF board that had WARC enabled (hope this makes sense)Š.

In other words I didn't have to remove blue wire from AF board previously.

Thanks in advance.

Chris Parnell, ZL1CDP

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[Non-text portions of this message have been removed]

30081. Re: [TS-520_820_530_830] 830 Warc Mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-05 23:37:09 UTC
From: Chris Parnell
Topic: 30079 Message: 30081

Thanks Joe,

Makes sense (D4, D5 and D6)... But oddly enough, just checked the old RF board and they have not been cut! ;-) very strange.

Anyway, pulled the blue wire from it's socket and all fine.

Cheers... Chris, ZL1CDP

From: Joseph Stiles <stilesjoseph@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Sat, 05 Mar 2011 15:31:11 -0800 (PST)
To: <TS-520_820_530_830@yahoogroups.com>
Subject: Re: [TS-520_820_530_830] 830 Warc Mod

Chris,

Look at the owner's manual, Pg 27, Section 5.5 "TRANSMITTING ON WARC BANDS" bottom right corner. There are some diodes you can cut to activate individual
WARC bands on the RF board. However, it's easier just to cut the wire. Good luck.....................

73's joe wb7uqu

_____
From: Chris Parnell <cparnell1001@... <mailto:cparnell1001%40me.com> >
To: "TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> "
<TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> >
Sent: Sat, March 5, 2011 3:22:18 PM
Subject: [TS-520_820_530_830] 830 Warc Mod

Hi all,

Just a quick question. - Aside from removing the blue wire from Pin 4, connector 6 on the AF board in order to open up WARC bands on the 830s, is there another way to obtain this?

The only reason I ask is that I purchased a RF board and fitted it to my 830s, and there was a note saying "No WARC mod done" on the RF board. - Of course, it doesn't transmit on the WARC bands, but I wondered what was different on the RF board with this one to my previous RF board that had WARC enabled (hope this makes sense)?.

In other words I didn't have to remove blue wire from AF board previously.

Thanks in advance.

Chris Parnell, ZL1CDP

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30082. Re: VFO-820 tuning knob replacement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 03:31:14 UTC
From: bill_seward
Topic: 30061 Message: 30082

K4EAA has sold out of his repro K1 knobs, and apparently isn't anticipating producing any more. Darn shame; they were very nice indeed.

I'll try the other suggestions from you and the rest. If I find a source, I'll post it "for the record".

Bill

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Drop Bob Mansker, ke5ftf, an e-mail (ke5ftf at mail.com). He may be able to help you.
>
> Ken, K4EAA, sells a very nice weighted replacement knob, see his website for details
>
> www.k4eaa.com
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "bill_seward" <bill.seward@> wrote:
> >
> > I've been fortunate enough to come by a decently priced VFO-820. Of course, in return for the decent price, it has a few warts. The worst is the tuning knob, which has a big ding in the nice shiney center. Does anyone know where I might obtain an undinged knob? Thanks.
> >
>

30083. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 03:40:19 UTC
From: Joseph Stiles
Topic: 30048 Message: 30083

Mike & Robert,

9.0V obtained on CAR UNIT plug CJ2 pin 6 in transmit. 9.0V on RL2 pin 13. In the CAR UNIT adjustment on pg 45, could not obtain proper voltage level regarding T-1 on CAR-2 (50mV). Dug around in parts bin and found CAR UNIT and subed that. Adjusted voltages to specs. Digital display now reads as it should(but it's still about 1Khz high). I think I'll let it run tonight and adjust to specs tomorrow. What an experience that was! TNX Mike & Robert for your guidance! I'll keep you & the group up on this.

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 5, 2011 2:14:13 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Mike(w5rkl) & Robert(wb5wsv),

Mike, I was thinking about that relay. All seems well until, rig in send. I will do that check/clean. I have a known good relay that I can sub. Also, I'll do that testing that both you and robert suggest. Tnx fer all the assistance! Keep ya posted.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 5, 2011 12:54:26 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Afternoon Joe,

Based on your new information, loss of transmitter output, no RF output etc in transmit, the carrier signal is missing in transmit.

First, check for the presence of 9VDC on CAR UNIT plug CJ2 pin 6 in transmit. It

doesn't matter what mode.

If the 9VDC is missing, check the Relay Unit plug RL2 pin 13 for 9VDC in transmit. If 9VDC is missing or very low, pull the relay from the Relay Unit, remove the plastic cover, and gently cleaning the relay contacts with contact cleaner.

The problem could also be caused by too low of a CAR UNIT signal, see page 45 in

the 820 service manual, "CARRIER UNIT ADJUSTMENT", 2-1. The CAR UNIT output signal level should be adjusted for an output level as measured at the CAR UNIT Plug CJ3 pins 2 and 5 on page 58 of the 820 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group!
>
> Have 820S. Digital display inop/erratic. Cleaned connector on counter unit
>
>
> and slide contact inside VFO. Display works as it should. But have a problem
> that I have not seen before:
> The display reads correct frequency in receive but, when the
>send/rcv
>
> switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
> 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read 29.000.0 Mhz. If

> have seen this in receive mode on other rigs, but not in transmit. I am a bit
> confused by the troubleshooting flfow chard in the service manual. ANY help as
>
>
> usual, is appreciated!
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> 73's joe wb7uqu
>
>
>
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30084. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 04:43:42 UTC
From: n6wk@n6wk.com
Topic: 30048 Message: 30084

Joe,
I have found on many of the TS-820 radios that the little spring contact clips inside the plastic connectors break.
They look fine from the outside, but do not make contact with the pins when the connector is plugged on to the boards.
I have chased my tail a few times because of this and it has only been on the TS-820 radios for some reason.
Hope it might help you.
73,
Gordon

On 3/5/2011 7:40 PM, Joseph Stiles wrote:
>
> Mike & Robert,
>
> 9.0V obtained on CAR UNIT plug CJ2 pin 6 in transmit. 9.0V on RL2 pin 13.
> In the CAR UNIT adjustment on pg 45, could not obtain proper voltage
> level
> regarding T-1 on CAR-2 (50mV). Dug around in parts bin and found CAR
> UNIT and
> subed that. Adjusted voltages to specs. Digital display now reads as it
> should(but it's still about 1Khz high). I think I'll let it run
> tonight and
> adjust to specs tomorrow. What an experience that was! TNX Mike &
> Robert for
> your guidance! I'll keep you & the group up on this.
>
> 73's joe wb7uqu
>
> _____
> From: Joseph Stiles <stilesjoseph@...
> <mailto:stilesjoseph%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 5, 2011 2:14:13 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
>
> Mike(w5rkl) & Robert(wb5wsv),
>
> Mike, I was thinking about that relay. All seems well until, rig in
> send. I
> will do that check/clean. I have a known good relay that I can sub.
> Also, I'll
> do that testing that both you and robert suggest. Tnx fer all the
> assistance!

> Keep ya posted.....
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 5, 2011 12:54:26 PM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
>
> Afternoon Joe,
>
> Based on your new information, loss of transmitter output, no RF
> output etc in
> transmit, the carrier signal is missing in transmit.
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> First, check for the presence of 9VDC on CAR UNIT plug CJ2 pin 6 in
> transmit. It
>
> doesn't matter what mode.
>
> If the 9VDC is missing, check the Relay Unit plug RL2 pin 13 for 9VDC in
> transmit. If 9VDC is missing or very low, pull the relay from the
> Relay Unit,
> remove the plastic cover, and gently cleaning the relay contacts with
> contact
> cleaner.
>
> The problem could also be caused by too low of a CAR UNIT signal, see
> page 45 in
>
> the 820 service manual, "CARRIER UNIT ADJUSTMENT", 2-1. The CAR UNIT
> output
> signal level should be adjusted for an output level as measured at the
> CAR UNIT
> Plug CJ3 pins 2 and 5 on page 58 of the 820 service manual.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...>
> wrote:
> >
> > Greetings group!
> >
> > Have 820S. Digital display inop/erratic. Cleaned connector on

> counter unit
> >
> >
> > and slide contact inside VFO. Display works as it should. But have a
> problem
> > that I have not seen before:
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> > switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
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30085. No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 04:50:39 UTC
From: Chris Parnell
Topic: 30085 Message: 30085

Hi all,

Having replaced the RF unit on my 830s, and after a few problems I have the receive working very well now.
There is current on the IP meter when heater is on at 60mA and all seems ok, except I have no actual output power at all (on either RF meter on 830, or external power meter).

I can hear a signal (reads around S7) on another receiver in the shack)☐
It's not the tubes as I have changed them, so I am beginning to look elsewhere and am suspecting that there is still an issue in the rectifier unit. (I blew R14 previously).

Any help on letting me know what to test for voltage wise in the rectifier unit would be much appreciated.

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

30086. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 06:40:13 UTC
From: Joseph Stiles
Topic: 30048 Message: 30086

Hey Gordon,

I was wondering where you had gotten too. I hope that you are continuing to feel great. I inspected those pesky connectors under HIGH magnification and really bright light and found them ok. I made up a dummy pin connector that I can plug in to a connector in question and run a continuity check that way. The CAR UNIT that I put in(found in parts box) is working FB. Part of the original one failed. Will finish checking the rest out tomorrow. This has been a real good exercise for me. Just kind of frustrating sometimes.....

73's joe wb7uqu

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 5, 2011 8:43:42 PM
Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout

Joe,
I have found on many of the TS-820 radios that the little spring contact clips inside the plastic connectors break.
They look fine from the outside, but do not make contact with the pins when the connector is plugged on to the boards.
I have chased my tail a few times because of this and it has only been on the TS-820 radios for some reason.
Hope it might help you.
73,
Gordon

On 3/5/2011 7:40 PM, Joseph Stiles wrote:
>
> Mike & Robert,
>
> 9.0V obtained on CAR UNIT plug CJ2 pin 6 in transmit. 9.0V on RL2 pin 13.
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> level
> regarding T-1 on CAR-2 (50mV). Dug around in parts bin and found CAR
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> tonight and
> adjust to specs tomorrow. What an experience that was! TNX Mike &
> Robert for
> your guidance! I'll keep you & the group up on this.
>
> 73's joe wb7uqu

>
> _____
> From: Joseph Stiles <stilesjoseph@...
> <mailto:stilesjoseph%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 5, 2011 2:14:13 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
>
> Mike(w5rkl) & Robert(wb5wsv),
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> will do that check/clean. I have a known good relay that I can sub.
> Also, I'll
> do that testing that both you and robert suggest. Tnx fer all the
> assistance!
> Keep ya posted.....
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 5, 2011 12:54:26 PM
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> signal level should be adjusted for an output level as measured at the
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> 73s
> Mike
> W5RKL
>
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Yahoo! Groups Links

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30087. Re: [TS-520_820_530_830] Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 09:54:24 UTC
From: John Hennessy
Topic: 30069 Message: 30087

Hi Adrian, thanks for your reply. Can you please provide a little more detail as to how I check the grounding through the tuning rotation. I will read a little more to try and understand how I check the PA neutralization, this is new to me. Next time I have the radio open I will check the tubes. Having said that the radio is all original so I'd expect original valves.

John.

On 5/03/11 9:37 PM, Adrian Ellison wrote:
>
> Hi John,
>
> I would check the plate tuning capacitor, ensuring that the rotating
> vanes are
> indeed grounded throughout the entire rotation, and I would definitely
> check
> the PA neutralization, the latter being the most likely cause.
>
> Also ensure that you have 6146Bs installed, not the A ...
>
> Regards
>
> Adrian - ZS1TTZ
>
> On Saturday 05 March 2011 15:24:00 you wrote:
> > Hi, I am fortunate to have two of these, a perfect condition one and a
> > not so good one. The not so good one is not tuning up correctly up even
> > thought the same procedure tunes the good radio properly. I have
> > followed the manual and Kens (K4EAA) tune-up procedure to the letter
> but
> > as soon as I dip the plate in CW mode I get odd results. As I'm
> > adjusting the plate current can jump up to around 300mA and if it
> does I
> > can't adjust it any lower. Returning to Rec and waiting a moment seems
> > to give me another go at dipping the plate. Any attempt to load even a
> > little result in current reading of 300mA. Output power is at 100W but
> > shouldn't I be able to achieve this with 225mA?
> >
> > Could it simply be a dummy load problem failing under high output
> power.
> > I am being quick to tune up. I have also tried tuning against a
> resonant
> > antenna (antenna close to resonance + tuner = resonant) and still see
> > the same problem.

> >
> > Any assistance would be much appreciated.
> >
> > thanks
> >
> > John.
> >
> >
>
>

[Non-text portions of this message have been removed]

30088. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 10:08:10 UTC
From: John Hennessy
Topic: 30069 Message: 30088

Hi Mike, thanks for your reply. initial settings are as you've described in your first paragraph.

1. Yes I get a peak reading that is exactly vertical with a carrier control set to 1/2 way (12 oclock). Although twitching twice while adjusting upwards I do arrive at an obvious and stable peak. The twitching is a sudden drop backwards followed by forward in response to further turning of the drive control clockwise. This always happens twice in the same position on the adjustment.

2. The IP reading is around 125mA at the top of the silk-screened 7m band scale and dips to 90mA when adjusted.

Thanks for all the help received so far. I'm looking forward to fixing this one.

John
VK6LJH

On 6/03/11 4:22 AM, w5rkl wrote:
>
>
> Hello John,
>
> The PLATE control is set within the PLATE control arc silk screen
> indication based on the band switch setting. Furthermore, the LOAD
> control is set to maximum capacitance, meaning the LOAD knob points to
> 9 o'clock. Both controls, PLATE and LOAD, are set as described above
> before starting the tune up procedures regardless of the band.
>
> Please provide information for the following:
>
> 1. You can achieve a good and stable ALC peak indication in TUNE mode,
> meaning the meter switch is set to ALC and adjusting the "DRIVE"
> control results in a peak indication. Is this true?
>
> 2. When adjusting the PLATE control, with the meter switch set to
> "IP", there is very little, if any, "dip" in IP current. Is that true
>
> Again, please let us know the answers to both 1 and 2.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> <john@...> wrote:
> >
> > Hi, I am fortunate to have two of these, a perfect condition one and a
> > not so good one. The not so good one is not tuning up correctly up even
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> > shouldn't I be able to achieve this with 225mA?
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> > Could it simply be a dummy load problem failing under high output
> power.
> > I am being quick to tune up. I have also tried tuning against a
> resonant
> > antenna (antenna close to resonance + tuner = resonant) and still see
> > the same problem.
> >
> > Any assistance would be much appreciated.
> >
> > thanks
> >
> > John.
> >
>
>

[Non-text portions of this message have been removed]

30089. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 15:30:02 UTC
From: w5rkl
Topic: 30069 Message: 30089

Hello John and Adrian,

I do not believe the final tubes, "A" verses "B", is the source of your problem.

When comparing inter-electrode capacitance differences between the 6146A and 6146B, the only inter-electrode capacitance difference is the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and ".22pf" in the 6146B. All the other inter-electrode capacitance values are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 - .22 = .02) when operating the final amplifier in the HF spectrum is not a "significant" difference that warrants using only 6146Bs in the hybrids. If the final amplifier were to be operating in the VHF spectrum then I would be concerned but that's not the case with the hybrids. When using "A" verses "B" tubes, neutralizing the final amplifier is required.

The final amplifier's neutralization adjustment does not drift or change due to tube age.

I am aware of and have read Glen Zook's "The 6146 Family of Tubes" document in the files section.

John, what position do you set the LOAD control when you start your tune up procedure? I recommend setting the LOAD control fully CCW (knob points to 9 o'clock) then start your tune up procedures, peak ALC then dip the plate. Once you are at this point, advance the LOAD control CW for a peak RF output and watch the IP meter while adjusting the LOAD control. If the IP meter erratically jumps higher, not in a smooth fashion, the I suspect the fixed and variable plates are shorting due to corrosion, dirt, or the plates themselves are shorting.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> Hi Adrian, thanks for your reply. Can you please provide a little more
> detail as to how I check the grounding through the tuning rotation. I
> will read a little more to try and understand how I check the PA
> neutralization, this is new to me. Next time I have the radio open I
> will check the tubes. Having said that the radio is all original so I'd
> expect original valves.
>
> John.
>
> On 5/03/11 9:37 PM, Adrian Ellison wrote:
> >
> > Hi John,
> >
> > I would check the plate tuning capacitor, ensuring that the rotating
> > vanes are

> > indeed grounded throughout the entire rotation, and I would definitely
> > check
> > the PA neutralization, the latter being the most likely cause.
> >
> > Also ensure that you have 6146Bs installed, not the A ...
> >
> > Regards
> >
> > Adrian - ZS1TTZ

30090. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 15:39:38 UTC
From: roberteleazer@rocketmail.com
Topic: 30048 Message: 30090

Joe:

The 50MV spec in the manual is WRONG!

Correct carrier module output should be 0.30 V - SIX times higher!

And in the manual they are wrong when they say which adjustment to use for what.

Here is the correct procedure:

Connect a freq counter to either pin 7 of socket Cj3 or to the carrier input on the IF board.

Set the mode switch to LSB and the IF-shift control to its center position.

NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You have to reach down through the holes in the top board, which is the CW transmit board, CAR-2, in order to get to the USB and LSB adjustments.

Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the adjustment is pretty twitchy so just get as close as you can). It will help a lot if you can find a nonmetallic screwdriver with which to do this. Me, I am still looking for one that will work; the plastic ones I have are all too flimsy. And the metal ones affect the frequency.

Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.

Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high as you can get it. It probably won't go much over 0.3V in any case.

Switch to transmit (SG Switch Off) and put the transmit switch in Send position and adjust VR1 on the CAR-1 board so that the frequency for USB and LSB transmit does not change between receive and transmit.

Switch to CW mode. With the transmit switch in Send adjust TC-1 on the CAR-1 board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board to get 0.3 V output.

The other two adjustments on the CAR 1 board, TC2 and TC3, are for adjusting the FSK frequencies in case you are interested.

I hope this makes sense to you. Given the errors in the manual and omissions in other sources it took me a while and some technical help from people like Mike help to figure all of this out.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Hey Gordon,

> I was wondering where you had gotten too. I hope that you are continuing to
> feel great. I inspected those pesky connectors under HIGH magnification and
> really bright light and found them ok. I made up a dummy pin connector that I
> can plug in to a connector in question and run a continuity check that way. The
> CAR UNIT that I put in(found in parts box) is working FB. Part of the original
> one failed. Will finish checking the rest out tomorrow. This has been a real
> good exercise for me. Just kind of frustrating sometimes.....
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, March 5, 2011 8:43:42 PM
> Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
>
> Joe,
> I have found on many of the TS-820 radios that the little spring contact
> clips inside the plastic connectors break.
> They look fine from the outside, but do not make contact with the pins
> when the connector is plugged on to the boards.
> I have chased my tail a few times because of this and it has only been
> on the TS-820 radios for some reason.
> Hope it might help you.
> 73,
> Gordon
>
> On 3/5/2011 7:40 PM, Joseph Stiles wrote:
> >
> > Mike & Robert,
> >
> > 9.0V obtained on CAR UNIT plug CJ2 pin 6 in transmit. 9.0V on RL2 pin 13.
> > In the CAR UNIT adjustment on pg 45, could not obtain proper voltage
> > level
> > regarding T-1 on CAR-2 (50mV). Dug around in parts bin and found CAR
> > UNIT and
> > subed that. Adjusted voltages to specs. Digital display now reads as it
> > should(but it's still about 1Khz high). I think I'll let it run
> > tonight and
> > adjust to specs tomorrow. What an experience that was! TNX Mike &
> > Robert for
> > your guidance! I'll keep you & the group up on this.
> >
> > 73's joe wb7uqu
> >
> > _____

> > From: Joseph Stiles <stilesjoseph@...
> > <mailto:stilesjoseph%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sat, March 5, 2011 2:14:13 PM
> > Subject: Re: [TS-520_820_530_830] Re: 820S freq. readout
> >
> > Mike(w5rkl) & Robert(wb5wsv),
> >
> > Mike, I was thinking about that relay. All seems well until, rig in
> > send. I
> > will do that check/clean. I have a known good relay that I can sub.
> > Also, I'll
> > do that testing that both you and robert suggest. Tnx fer all the
> > assistance!
> > Keep ya posted.....................
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sat, March 5, 2011 12:54:26 PM
> > Subject: [TS-520_820_530_830] Re: 820S freq. readout
> >
> > Afternoon Joe,
> >
> > Based on your new information, loss of transmitter output, no RF
> > output etc in
> > transmit, the carrier signal is missing in transmit.
> >
> > First, check for the presence of 9VDC on CAR UNIT plug CJ2 pin 6 in
> > transmit. It
> >
> > doesn't matter what mode.
> >
> > If the 9VDC is missing, check the Relay Unit plug RL2 pin 13 for 9VDC in
> > transmit. If 9VDC is missing or very low, pull the relay from the
> > Relay Unit,
> > remove the plastic cover, and gently cleaning the relay contacts with
> > contact
> > cleaner.
> >
> > The problem could also be caused by too low of a CAR UNIT signal, see
> > page 45 in
> >
> > the 820 service manual, "CARRIER UNIT ADJUSTMENT", 2-1. The CAR UNIT
> > output
> > signal level should be adjusted for an output level as measured at the

> > CAR UNIT
> > Plug CJ3 pins 2 and 5 on page 58 of the 820 service manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > <stilesjoseph@>
> > wrote:
> > >
> > > Greetings group!
> > >
> > > Have 820S. Digital display inop/erratic. Cleaned connector on
> > counter unit
> > >
> > >
> > > and slide contact inside VFO. Display works as it should. But have a
> > problem
> > > that I have not seen before:
> > > The display reads correct frequency in receive but, when the
> > >send/rcv
> > >
> > > switch is put to send this is what occurs: 1.8, 3.5, and 7.0 will read
> > > 9.000.0Mhz, 14 will read 19.000.0 Mhz, 21Mhz and up will read
> > 29.000.0 Mhz. If
> > >
> > > have seen this in receive mode on other rigs, but not in transmit. I
> > am a bit
> > > confused by the troubleshooting flfow chard in the service manual.
> > ANY help as
> > >
> > >
> > > usual, is appreciated!
> > >
> > > 73's joe wb7uqu
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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30091. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 17:46:49 UTC
From: w5rkl
Topic: 30048 Message: 30091

Hello Joe and Robert,

I believe the "50mv" signal level is only a starting point signal level even though Kenwood's 820 service manual does not state this. When I make that adjustment, I ignore the reference to CAR1 T1 but rather adjust T1 on CAR2 for a reading on TP5 on the IF Unit.

I also believe step 2-1 that states to adjust T1 on the "CAR1" board while measuring the voltage level at TP5 on the IF Unit is wrong.

To see this you have to look at the main 820 schematic along with the IF Unit and CAR Unit schematics.

The output from CAR1 is applied to the balance detector from CAR UNIT plug CJ3 pin 5, through the wiring harness, to the IF Unit plug IF4 pin 2 labeled "C1A". This provides the required "BFO" signal, in "receive", that beats with the IF signal on the IF UNIT to produce the "recovered" audio at the output of the balance detector. If you follow the CAR1 output signal to the IF Unit board then look at the schematic of the IF UNIT board you will see how this takes place. Furthermore, if you follow the output from the balance detector through plug IF4 you will see the balance detector's recovered audio is applied through the wiring hardness to the AF AVR Unit for further processing and ultimately to the audio amplifier and finally the speaker.

Next, if you look at the CAR UNIT schematic, you will notice that both CAR1 and CAR2 have a transformer labeled "T1". However, if you follow the output from CAR2, through the main 820 schematic, you will notice CAR2 output is applied to the IF UNIT plug IF5 pin 13 which, through the IF UNIT board's foil connection, connects directly to IF Unit "TP5". Therefore, step 2-1 that refers to adjusting T1 on CAR1 board is wrong. What the step should say is adjust T1 on "CAR2" for a voltage measurement found at TP5 on the IF Unit board.

The correct voltage level is not 50mv but rather ".3 volt" or "300 milli-volts" at CAR UNIT plug CJ3 pins 2 and 5 as shown on the CAR UNIT schematic on page 58.

If the CAR UNIT output signal levels are much lower than required, it is quite possible switching from receive to transmit can and will cause the symptoms you are experiencing where the digital display appears to work fine in receive but in transmit the digital display shows 9,000, 19,000, and 29,000 in transmit. Therefore, I recommend you adjust the CAR UNIT output signals so they are .3 volt at CJ3 pins 2 and 5 and not 50mv at stated in step 2-1.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Joe:
>

> The 50MV spec in the manual is WRONG!
>
> Correct carrier module output should be 0.30 V - SIX times higher!
>
> And in the manual they are wrong when they say which adjustment to use for what.
>
> Here is the correct procedure:
>
> Connect a freq counter to either pin 7 of socket Cj3 or to the carrier input on the IF board.
>
> Set the mode switch to LSB and the IF-shift control to its center position.
>
> NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You have to reach down through the holes in the top board, which is the CW transmit board, CAR-2, in order to get to the USB and LSB adjustments.
>
> Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the adjustment is pretty twitchy so just get as close as you can). It will help a lot if you can find a nonmetallic screwdriver with which to do this. Me, I am still looking for one that will work; the plastic ones I have are all too flimsy. And the metal ones affect the frequency.
>
> Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.
>
> Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high as you can get it. It probably won't go much over 0.3V in any case.
>
> Switch to transmit (SG Switch Off) and put the transmit switch in Send position and adjust VR1 on the CAR-1 board so that the frequency for USB and LSB transmit does not change between receive and transmit.
>
> Switch to CW mode. With the transmit switch in Send adjust TC-1 on the CAR-1 board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board to get 0.3 V output.
>
> The other two adjustments on the CAR 1 board, TC2 and TC3, are for adjusting the FSK frequencies in case you are interested.
>
> I hope this makes sense to you. Given the errors in the manual and omissions in other sources it took me a while and some technical help from people like Mike help to figure all of this out.
>
> Robert
> WB5WSV

30092. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 18:07:52 UTC
From: w5rkl
Topic: 30048 Message: 30092

One additional comment about the CAR UNIT output signal level. When adjusting CAR1 and CAR2 for .3 volt rms at CJ3 pins 2 and 5, note that CJ3 pin 7 has a ".2 volt rms" signal level. Pins 5 and 7 are from CAR1 and you adjust T1 on CAR1 for a signal level of .3 volt rms at pin 5 which will result in a .2 volt rms signal level at CJ3 pin 7. Pin 7 is the carrier unit signal that is applied to the PLL Unit and if this level is too low for the PLL Unit to use the symptoms you are experiencing will occur. Therefore, adjust T1 on CAR1 for .3 volt rms at pin 5 and check CJ3 pin 7 for .2 volt rms.

If you perform the adjustments on the CAR UNIT board as described and there are no other problems with the 820 then I suspect your problem will be fixed.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Joe and Robert,
>
> I believe the "50mv" signal level is only a starting point signal level even though Kenwood's 820 service manual does not state this. When I make that adjustment, I ignore the reference to CAR1 T1 but rather adjust T1 on CAR2 for a reading on TP5 on the IF Unit.
>
> I also believe step 2-1 that states to adjust T1 on the "CAR1" board while measuring the voltage level at TP5 on the IF Unit is wrong.
>
> To see this you have to look at the main 820 schematic along with the IF Unit and CAR Unit schematics.
>
> The output from CAR1 is applied to the balance detector from CAR UNIT plug CJ3 pin 5, through the wiring harness, to the IF Unit plug IF4 pin 2 labeled "C1A". This provides the required "BFO" signal, in "receive", that beats with the IF signal on the IF UNIT to produce the "recovered" audio at the output of the balance detector. If you follow the CAR1 output signal to the IF Unit board then look at the schematic of the IF UNIT board you will see how this takes place. Furthermore, if you follow the output from the balance detector through plug IF4 you will see the balance detector's recovered audio is applied through the wiring hardness to the AF AVR Unit for further processing and ultimately to the audio amplifier and finally the speaker.
>
> Next, if you look at the CAR UNIT schematic, you will notice that both CAR1 and CAR2 have a transformer labeled "T1". However, if you follow the output from CAR2, through the main 820 schematic, you will notice CAR2 output is applied to the IF UNIT plug IF5 pin 13 which, through the IF UNIT board's foil connection, connects directly to IF Unit "TP5". Therefore, step 2-1 that refers to adjusting T1 on CAR1 board is wrong. What the step should say is adjust T1 on "CAR2" for a voltage measurement found at TP5 on the IF Unit board.
>

> The correct voltage level is not 50mv but rather ".3 volt" or "300 milli-volts" at CAR UNIT plug CJ3 pins 2 and 5 as shown on the CAR UNIT schematic on page 58.
>
> If the CAR UNIT output signal levels are much lower than required, it is quite possible switching from receive to transmit can and will cause the symptoms you are experiencing where the digital display appears to work fine in receive but in transmit the digital display shows 9,000, 19,000, and 29,000 in transmit. Therefore, I recommend you adjust the CAR UNIT output signals so they are .3 volt at CJ3 pins 2 and 5 and not 50mv at stated in step 2-1.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Joe:
> >
> > The 50MV spec in the manual is WRONG!
> >
> > Correct carrier module output should be 0.30 V - SIX times higher!
> >
> > And in the manual they are wrong when they say which adjustment to use for what.
> >
> > Here is the correct procedure:
> >
> > Connect a freq counter to either pin 7 of socket Cj3 or to the carrier input on the IF board.
> >
> > Set the mode switch to LSB and the IF-shift control to its center position.
> >
> > NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You have to reach down through the holes in the top board, which is the CW transmit board, CAR-2, in order to get to the USB and LSB adjustments.
> >
> > Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the adjustment is pretty twitchy so just get as close as you can). It will help a lot if you can find a nonmetallic screwdriver with which to do this. Me, I am still looking for one that will work; the plastic ones I have are all too flimsy. And the metal ones affect the frequency.
> >
> > Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.
> >
> > Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high as you can get it. It probably won't go much over 0.3V in any case.
> >
> > Switch to transmit (SG Switch Off) and put the transmit switch in Send position and

adjust VR1 on the CAR-1 board so that the frequency for USB and LSB transmit does not change between receive and transmit.
> >
> > Switch to CW mode. With the transmit switch in Send adjust TC-1 on the CAR-1 board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board to get 0.3 V output.
> >
> > The other two adjustments on the CAR 1 board, TC2 and TC3, are for adjusting the FSK frequencies in case you are interested.
> >
> > I hope this makes sense to you. Given the errors in the manual and omissions in other sources it took me a while and some technical help from people like Mike help to figure all of this out.
> >
> > Robert
> > WB5WSV
>

30093. mic drive problems.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 20:09:31 UTC
From: yash@aol.com
Topic: 30093 Message: 30093

Have been using my 830 for a year ,no problems. Tunes up into the dummy load 100+ out. switch to ssb ,key the mic ,speak the alc meter moves to proper alc scale range and watt meter shows {pep} meter 70-90 watts on peak audio,after a second or two the alc almost sits on the left pin and the watt meter shows maybe 30-50 watts on peak. If I whistle into the mic the alc goes to proper scale as does the watt meter. tried 2 different mic's....same result. any ideas?
thanks
dale wt4t

[Non-text portions of this message have been removed]

30094. Re: mic drive problems.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 21:46:04 UTC
From: w5rkl
Topic: 30093 Message: 30094

Hi Dale,

I suspect either a weak driver or weak final tubes.

A driver tube that is become weak will show a falling ALC indication during tune up after peaking the ALC meter in TUNE mode. The ALC will peak but the ALC indication will not be stable, the meter will slowly or rapidly, depending how weak the driver tube is, back towards zero in TUNE mode. There should be more than enough RF drive from the driver tube to peg the ALC meter full scale to the right in TUNE mode and that ALC indication should be stable and not drop back towards zero if the driver tube is good.

A weak final tube(s) will initially show full, or almost full RF output when initial tune up occurs. However, as the tubes operate and become warmer, power output will become less even if the peak ALC indication in TUNE mode is stable. A good set of final tubes should produce a stable full power output whether during initial tune up, 10 to 20 minutes of operating, or 1 hour of operation. If power output drops even when the ALC peak is stable in TUNE mode, then the final tubes are getting weak.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, yash@... wrote:
>
>
> Have been using my 830 for a year ,no problems. Tunes up into the dummy load 100+ out. switch to ssb ,key the mic ,speak the alc meter moves to proper alc scale range and watt meter shows {pep} meter 70-90 watts on peak audio,after a second or two the alc almost sits on the left pin and the watt meter shows maybe 30-50 watts on peak. If I whistle into the mic the alc goes to proper scale as does the watt meter. tried 2 different mic's....same result. any ideas?
> thanks
> dale wt4t
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30095. Re: mic drive problems.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 21:54:56 UTC
From: w5rkl
Topic: 30093 Message: 30095

Dale,

One additional comment about ALC meter indication in sideband.

The ALC meter, with normal voice levels, does not need to be consistently at mid or full ALC scale.

ALC is the transmitter's "gain control" voltage. Every time ALC is produce (grid current flowing in the final tubes), the gain of the IF stage is "reduced". When the gain of the IF stage is reduced, so is the RF power output of the 830. The final amplifier in the 830, just like the other final amplifiers in other hybrids, operates in Class AB1. Class AB1 amplifiers are not suppose to have grid current flowing at any time during the RF sine wave cycle. When grid current flows in the final tubes then ALC gain control voltage is produced and the ALC gain control voltage is fed back to the "IF" stage to "reduce" the gain of the IF stage. This results in a reduction in driving signal to the final tubes and ultimately lowers the RF output from the final amplifier as long as ALC voltage is present.

Tuning up the MIC gain so you see peak RF output and an ALC meter indication of mid to full ALC scale is not the right way to adjust the MIC gain. When speaking into the microphone at a normal voice level, the MIC gain should be adjusted to the point where the ALC meter just flickers above zero, not consistently at mid to full ALC scale.

It's not how loud you sound on the air but how clean your signal is. When the ALC meter just starts to flicker above zero is the MIC gain setting that is producing maximum RF peak power output. Any further increase in MIC gain will result in further reduction in overall gain in the 830 and can lead to splatter if the MIC gain is turned up too high. The higher the ALC meter display is the more gain reduction occurs in the 830 resulting in a reduction in RF output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, yash@... wrote:
>
>
> Have been using my 830 for a year ,no problems. Tunes up into the dummy load 100+ out. switch to ssb ,key the mic ,speak the alc meter moves to proper alc scale range and watt meter shows {pep} meter 70-90 watts on peak audio,after a second or two the alc almost sits on the left pin and the watt meter shows maybe 30-50 watts on peak. If I whistle into the mic the alc goes to proper scale as does the watt meter. tried 2 different mic's....same result. any ideas?
> thanks
> dale wt4t
>
>
>

>
>
>
> [Non-text portions of this message have been removed]
>

30096. Re: [TS-520_820_530_830] Re: mic drive problems.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 22:15:06 UTC
From: yash@aol.com
Topic: 30093 Message: 30096

Mike
the alc reading was always about 0 to 1/4" above ,untill now always had reports of clean audio with the 830. Now to see what a new driver tube will do.
thanks
dale wt4t

-----Original Message-----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, Mar 6, 2011 4:54 pm
Subject: [TS-520_820_530_830] Re: mic drive problems.

Dale,

One additional comment about ALC meter indication in sideband.

The ALC meter, with normal voice levels, does not need to be consistently at mid or full ALC scale.

ALC is the transmitter's "gain control" voltage. Every time ALC is produce (grid current flowing in the final tubes), the gain of the IF stage is "reduced". When the gain of the IF stage is reduced, so is the RF power output of the 830. The final amplifier in the 830, just like the other final amplifiers in other hybrids, operates in Class AB1. Class AB1 amplifiers are not suppose to have grid current flowing at any time during the RF sine wave cycle. When grid current flows in the final tubes then ALC gain control voltage is produced and the ALC gain control voltage is fed back to the "IF" stage to "reduce" the gain of the IF stage. This results in a reduction in driving signal to the final tubes and ultimately lowers the RF output from the final amplifier as long as ALC voltage is present.

Tuning up the MIC gain so you see peak RF output and an ALC meter indication of mid to full ALC scale is not the right way to adjust the MIC gain. When speaking into the microphone at a normal voice level, the MIC gain should be adjusted to the point where the ALC meter just flickers above zero, not consistently at mid to full ALC scale.

It's not how loud you sound on the air but how clean your signal is. When the ALC meter just starts to flicker above zero is the MIC gain setting that is producing maximum RF peak power output. Any further increase in MIC gain will result in further reduction in overall gain in the 830 and can lead to splatter if the MIC gain is turned up too high. The higher the ALC meter display is the more gain reduction occurs in the 830 resulting in a reduction in RF output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, yash@... wrote:
>

>
> Have been using my 830 for a year ,no problems. Tunes up into the dummy load 100+ out. switch to ssb ,key the mic ,speak the alc meter moves to proper alc scale range and watt meter shows {pep} meter 70-90 watts on peak audio,after a second or two the alc almost sits on the left pin and the watt meter shows maybe 30-50 watts on peak. If I whistle into the mic the alc goes to proper scale as does the watt meter. tried 2 different mic's....same result. any ideas?
> thanks
> dale wt4t
>
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>
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30097. Re: [TS-520_820_530_830] Re: mic drive problems.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-06 22:11:54 UTC
From: yash@aol.com
Topic: 30093 Message: 30097

The driver tube was where I was going to start. I read the back of the manual latter and think your correct. Have to hunt down a tube,all my other gear is drake or collins ,so will have to look in the junk box.
thanks for the help.
dale wt4t

-----Original Message-----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, Mar 6, 2011 4:46 pm
Subject: [TS-520_820_530_830] Re: mic drive problems.

Hi Dale,

I suspect either a weak driver or weak final tubes.

A driver tube that is become weak will show a falling ALC indication during tune up after peaking the ALC meter in TUNE mode. The ALC will peak but the ALC indication will not be stable, the meter will slowly or rapidly, depending how weak the driver tube is, back towards zero in TUNE mode. There should be more than enough RF drive from the driver tube to peg the ALC meter full scale to the right in TUNE mode and that ALC indication should be stable and not drop back towards zero if the driver tube is good.

A weak final tube(s) will initially show full, or almost full RF output when initial tune up occurs. However, as the tubes operate and become warmer, power output will become less even if the peak ALC indication in TUNE mode is stable. A good set of final tubes should produce a stable full power output whether during initial tune up, 10 to 20 minutes of operating, or 1 hour of operation. If power output drops even when the ALC peak is stable in TUNE mode, then the final tubes are getting weak.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, yash@... wrote:
>
>
> Have been using my 830 for a year ,no problems. Tunes up into the dummy load 100+ out. switch to ssb ,key the mic ,speak the alc meter moves to proper alc scale range and watt meter shows {pep} meter 70-90 watts on peak audio,after a second or two the alc almost sits on the left pin and the watt meter shows maybe 30-50 watts on peak. If I whistle into the mic the alc goes to proper scale as does the watt meter. tried 2 different mic's....same result. any ideas?
> thanks
> dale wt4t
>
>

>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30098. 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 04:42:47 UTC
From: wrench101
Topic: 30098 Message: 30098

Hello all, been a while since I've been on. In the meantime, I've acquired a 530 on fleebay that's seen better days. I have no transmit and no receive. Rig powers up, meter lights up (now that I've changed the bulb!), no ALC, no IP, no RF, HV is around 450 to 500. Some idiot in the past decided to wrap the 6A fuse with aluminum foil when it blew which you can imagine what the rig looks like. I've changed the HV caps, there are burn marks on the rectifier board which I've changed many diodes and resistors, the final board was burned, so I replaced the screen and cathode resistors, I performed the final cage repair that is noted on Ken's (k4eaa) website. So I've done some work, but my troubleshooting ability is poor. I noticed after working on the rectifier board that I lost some HV. I had about 900 before, but was worried about all the fried parts on the board. There was one bad diode, D10 if I remember correctly, and several resistors that were well out of tolerance. I'm not sure where to go next, any help would be greatly appreciated. 73 de AI4NV - Steve

30099. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 11:12:03 UTC
From: w5rkl
Topic: 30098 Message: 30099

Hello Steve,

Check and make ensure the rear panel "SG" switch is set to "ON".

Next, measure the voltages on the following Rectifier Unit terminals. The voltages on these terminals is "DC" and your volt meter must be set to measure "DC". Your DC volt meter must be capable of measuring at least 1,000VDC. Do not attempt to measure these voltages using a cheap "hardware store" $10 volt meter.

1. 800
2. 300B
3. 210A
4. 210A
5. -C
6. 12

Next, measure the DC voltages at the following final tube socket terminals in receive.

Pin 1
Pin 3
Pin 5

Last, measure the voltage at the top of RF choke "L2". RF Choke "L2" is inside the final amplifier's metal enclosure and is between the 2 final tubes. The top of RF Choke L2 connects to each of the final tube plates through the parasitic suppressors (each parasitic suppressor has a coil wrapped around a resistor and connected between RF Choke L2 and the top plate connector of each tube). The top cover of the final amplifier must be removed to make this measurement. RF Choke "L2" is the tall white cylinder with wire wrapped around it. Measure the voltage at the top of the RF Choke. The voltage at the top of RF Choke L2 should be the same as the voltage measured at the Rectifier Unit's "800" terminal.

Use "extreme caution" when measuring these voltages. There are voltages inside the 530 that can kill you. All voltages are measure between the terminals indicated above and chassis ground. That measure the Red meter lead is connected to each terminal and the Black meter lead is connected to the 530's chassis.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Hello all, been a while since I've been on. In the meantime, I've acquired a 530 on fleebay that's seen better days. I have no transmit and no receive. Rig powers up, meter lights up (now that I've changed the bulb!), no ALC, no IP, no RF, HV is around 450 to 500. Some idiot in the past decided to wrap the 6A fuse with aluminum foil when it blew which you can imagine what the rig looks like. I've changed the HV caps, there are burn marks on

the rectifier board which I've changed many diodes and resistors, the final board was burned, so I replaced the screen and cathode resistors, I performed the final cage repair that is noted on Ken's (k4eaa) website. So I've done some work, but my troubleshooting ability is poor. I noticed after working on the rectifier board that I lost some HV. I had about 900 before, but was worried about all the fried parts on the board. There was one bad diode, D10 if I remember correctly, and several resistors that were well out of tolerance. I'm not sure where to go next, any help would be greatly appreciated. 73 de AI4NV - Steve
>

30100. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 11:47:07 UTC
From: w5rkl
Topic: 30098 Message: 30100

Measure the DC voltages on the AF Unit board at the following terminals and plug pin;

12
TP-4
TP-6
Plug 11 pin 5

The voltages present at the above terminals/plug pins are 12VDC or less. The voltages are measured in receive.

73s
Mike

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Steve,
>
> Check and make ensure the rear panel "SG" switch is set to "ON".
>
> Next, measure the voltages on the following Rectifier Unit terminals. The voltages on these terminals is "DC" and your volt meter must be set to measure "DC". Your DC volt meter must be capable of measuring at least 1,000VDC. Do not attempt to measure these voltages using a cheap "hardware store" $10 volt meter.
>
> 1. 800
> 2. 300B
> 3. 210A
> 4. 210A
> 5. -C
> 6. 12
>
> Next, measure the DC voltages at the following final tube socket terminals in receive.
>
> Pin 1
> Pin 3
> Pin 5
>
> Last, measure the voltage at the top of RF choke "L2". RF Choke "L2" is inside the final amplifier's metal enclosure and is between the 2 final tubes. The top of RF Choke L2 connects to each of the final tube plates through the parasitic suppressors (each parasitic suppressor has a coil wrapped around a resistor and connected between RF Choke L2 and the top plate connector of each tube). The top cover of the final amplifier must be removed to make this measurement. RF Choke "L2" is the tall white cylinder with wire wrapped around it. Measure the voltage at the top of the RF Choke. The voltage at the top of RF Choke L2 should be the same as the voltage measured at the Rectifier Unit's "800" terminal.
>

> Use "extreme caution" when measuring these voltages. There are voltages inside the 530 that can kill you. All voltages are measure between the terminals indicated above and chassis ground. That measure the Red meter lead is connected to each terminal and the Black meter lead is connected to the 530's chassis.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Hello all, been a while since I've been on. In the meantime, I've acquired a 530 on fleebay that's seen better days. I have no transmit and no receive. Rig powers up, meter lights up (now that I've changed the bulb!), no ALC, no IP, no RF, HV is around 450 to 500. Some idiot in the past decided to wrap the 6A fuse with aluminum foil when it blew which you can imagine what the rig looks like. I've changed the HV caps, there are burn marks on the rectifier board which I've changed many diodes and resistors, the final board was burned, so I replaced the screen and cathode resistors, I performed the final cage repair that is noted on Ken's (k4eaa) website. So I've done some work, but my troubleshooting ability is poor. I noticed after working on the rectifier board that I lost some HV. I had about 900 before, but was worried about all the fried parts on the board. There was one bad diode, D10 if I remember correctly, and several resistors that were well out of tolerance. I'm not sure where to go next, any help would be greatly appreciated. 73 de AI4NV - Steve
> >
>

30101. Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 16:54:02 UTC
From: k7zs
Topic: 30085 Message: 30101

Hi Chris

Congrats on getting the RF board replaced, and getting the radio to receive.

No power out on any band? You might want to ensure the SG switch on the rear apron is ON, and don't take the switch position for granted - measure the voltage on the SG pin of the FINAL UNIT. When the SG switch is OFF, the voltage on PIN 3 of the tubes will me NEGATIVE, perhaps -50v or so. If the SG switch is dirty and not switching to a POSITIVE voltage, that would prevent transmit. In receive, you'll should see around 264v (132v if in mode switch is in the TUNE position). No positive screen voltage, no transmit PERIOD! So, start at the back end and work forwards - sounds like you are getting the proper frequency mixed.

You are certain that the BANDSWITCH WAFERS in the final unit are 'in sync' with the ones on the RF unit. It is possible to get them 180 degrees out of sync. You might get SOME power out on a band here and there, but overall this will prevent much if any output.

Do you get the expected deviation on the meter when tuning, with the meter switch in the ALC position? This indicates the signal is being amplified by the driver tube and delivered to the final unit, closing in on the problem.

Hope this helps, by at least eliminating the 'easy stuff'you'll get closer to the culprit.

73 Kevin K7ZS

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all,
>
> Having replaced the RF unit on my 830s, and after a few problems I have the
> receive working very well now.
> There is current on the IP meter when heater is on at 60mA and all seems ok,
> except I have no actual output power at all (on either RF meter on 830, or
> external power meter).
>
> I can hear a signal (reads around S7) on another receiver in the shack)☐
> It's not the tubes as I have changed them, so I am beginning to look
> elsewhere and am suspecting that there is still an issue in the rectifier
> unit. (I blew R14 previously).
>
> Any help on letting me know what to test for voltage wise in the rectifier
> unit would be much appreciated.
>
> Thanks
> Chris, ZL1CDP
>
>

>
>
>
>
> [Non-text portions of this message have been removed]
>

30102. 520 VFO versus 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 18:16:00 UTC
From: kevin
Topic: 30102 Message: 30102

I have a 520S and have a chance to get a 520(no S) remote VFO cheap. Will it work?
Kevin
KD0ILM

30103. Re: [TS-520_820_530_830] 520 VFO versus 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 18:34:02 UTC
From: mike mackin
Topic: 30102 Message: 30103

Kevin,
I have a VFO-520s that I run with a Ts-520 and it works fine but the description of the functions on the function switch on the Vfo is not really correct. But it wires up, plugs in and works fine once you get used to the switching. I would think it would be the same in your case

73s
Mike N8YOK

--- On Mon, 3/7/11, kevin <kmx888@...> wrote:

From: kevin <kmx888@...>
Subject: [TS-520_820_530_830] 520 VFO versus 520S
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 1:16 PM

I have a 520S and have a chance to get a 520(no S) remote VFO cheap. Will it work?
Kevin
KD0ILM

Yahoo! Groups Links

[Non-text portions of this message have been removed]

30104. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 19:58:29 UTC
From: Joseph Stiles
Topic: 30048 Message: 30104

Mike, Robert, & group,

Well, all is now right with the world...or at least the 820S that has given me fits. With your assistance, I have gotten the rig to operate as it should. My wife thought I was leaving her..for the "other women." I thank you both & all, for making this possible. I have learned more in the short time that I have been a member of this group versus the overall 32 years of "hamming" TNX!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 6, 2011 10:07:52 AM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

One additional comment about the CAR UNIT output signal level. When adjusting CAR1 and CAR2 for .3 volt rms at CJ3 pins 2 and 5, note that CJ3 pin 7 has a ".2 volt rms" signal level. Pins 5 and 7 are from CAR1 and you adjust T1 on CAR1 for a signal level of .3 volt rms at pin 5 which will result in a .2 volt rms signal level at CJ3 pin 7. Pin 7 is the carrier unit signal that is applied to the PLL Unit and if this level is too low for the PLL Unit to use the symptoms you are experiencing will occur. Therefore, adjust T1 on CAR1 for .3 volt rms at pin 5 and check CJ3 pin 7 for .2 volt rms.

If you perform the adjustments on the CAR UNIT board as described and there are no other problems with the 820 then I suspect your problem will be fixed.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Joe and Robert,
>
> I believe the "50mv" signal level is only a starting point signal level even
>though Kenwood's 820 service manual does not state this. When I make that
>adjustment, I ignore the reference to CAR1 T1 but rather adjust T1 on CAR2 for a
>reading on TP5 on the IF Unit.
>
> I also believe step 2-1 that states to adjust T1 on the "CAR1" board while
>measuring the voltage level at TP5 on the IF Unit is wrong.
>
> To see this you have to look at the main 820 schematic along with the IF Unit
>and CAR Unit schematics.
>

>
> The output from CAR1 is applied to the balance detector from CAR UNIT plug CJ3
>pin 5, through the wiring harness, to the IF Unit plug IF4 pin 2 labeled "C1A".
>This provides the required "BFO" signal, in "receive", that beats with the IF
>signal on the IF UNIT to produce the "recovered" audio at the output of the
>balance detector. If you follow the CAR1 output signal to the IF Unit board then
>look at the schematic of the IF UNIT board you will see how this takes place.
>Furthermore, if you follow the output from the balance detector through plug IF4
>you will see the balance detector's recovered audio is applied through the
>wiring hardness to the AF AVR Unit for further processing and ultimately to the
>audio amplifier and finally the speaker.
>
> Next, if you look at the CAR UNIT schematic, you will notice that both CAR1 and
>CAR2 have a transformer labeled "T1". However, if you follow the output from
>CAR2, through the main 820 schematic, you will notice CAR2 output is applied to
>the IF UNIT plug IF5 pin 13 which, through the IF UNIT board's foil connection,
>connects directly to IF Unit "TP5". Therefore, step 2-1 that refers to adjusting
>T1 on CAR1 board is wrong. What the step should say is adjust T1 on "CAR2" for a
>voltage measurement found at TP5 on the IF Unit board.
>
> The correct voltage level is not 50mv but rather ".3 volt" or "300 milli-volts"
>at CAR UNIT plug CJ3 pins 2 and 5 as shown on the CAR UNIT schematic on page 58.
>
> If the CAR UNIT output signal levels are much lower than required, it is quite
>possible switching from receive to transmit can and will cause the symptoms you
>are experiencing where the digital display appears to work fine in receive but
>in transmit the digital display shows 9,000, 19,000, and 29,000 in transmit.
>Therefore, I recommend you adjust the CAR UNIT output signals so they are .3
>volt at CJ3 pins 2 and 5 and not 50mv at stated in step 2-1.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
>wrote:
> >
> > Joe:
> >
> > The 50MV spec in the manual is WRONG!
> >
> > Correct carrier module output should be 0.30 V - SIX times higher!
> >
> > And in the manual they are wrong when they say which adjustment to use for
>what.
> >

> > Here is the correct procedure:
> >
> > Connect a freq counter to either pin 7 of socket Cj3 or to the carrier input
>on the IF board.
>
> >
> > Set the mode switch to LSB and the IF-shift control to its center position.
> >
> > NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You
>have to reach down through the holes in the top board, which is the CW transmit
>board, CAR-2, in order to get to the USB and LSB adjustments.
> >
> > Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the
>adjustment is pretty twitchy so just get as close as you can). It will help a
>lot if you can find a nonmetallic screwdriver with which to do this. Me, I am
>still looking for one that will work; the plastic ones I have are all too
>flimsy. And the metal ones affect the frequency.
>
> >
> > Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.
> >
> > Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high
>as you can get it. It probably won't go much over 0.3V in any case.
> >
> > Switch to transmit (SG Switch Off) and put the transmit switch in Send
>position and adjust VR1 on the CAR-1 board so that the frequency for USB and LSB
>transmit does not change between receive and transmit.
> >
> > Switch to CW mode. With the transmit switch in Send adjust TC-1 on the CAR-1
>board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board to
>get 0.3 V output.
> >
> > The other two adjustments on the CAR 1 board, TC2 and TC3, are for adjusting
>the FSK frequencies in case you are interested.
> >
> > I hope this makes sense to you. Given the errors in the manual and omissions
>in other sources it took me a while and some technical help from people like
>Mike help to figure all of this out.
> >
> > Robert
> > WB5WSV
>

[Non-text portions of this message have been removed]

30105. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 20:29:46 UTC
From: Chris Parnell
Topic: 30085 Message: 30105

Thanks for the suggestions Kevin.

Will do some further testing based on this. - I have some comunique going with the excellent Mike W5RKL to help trace this fault too, so I am sure we will get there in the end.

Thanks again
Chris, ZL1CDP

From: k7zs <klahaie@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Mon, 07 Mar 2011 16:54:02 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: No transmit output power on 830s

Hi Chris

Congrats on getting the RF board replaced, and getting the radio to receive.

No power out on any band? You might want to ensure the SG switch on the rear apron is ON, and don't take the switch position for granted - measure the voltage on the SG pin of the FINAL UNIT. When the SG switch is OFF, the voltage on PIN 3 of the tubes will me NEGATIVE, perhaps -50v or so. If the SG switch is dirty and not switching to a POSITIVE voltage, that would prevent transmit. In receive, you'll should see around 264v (132v if in mode switch is in the TUNE position). No positive screen voltage, no transmit PERIOD! So, start at the back end and work forwards - sounds like you are getting the proper frequency mixed.

You are certain that the BANDSWITCH WAFERS in the final unit are 'in sync' with the ones on the RF unit. It is possible to get them 180 degrees out of sync. You might get SOME power out on a band here and there, but overall this will prevent much if any output.

Do you get the expected deviation on the meter when tuning, with the meter switch in the ALC position? This indicates the signal is being amplified by the driver tube and delivered to the final unit, closing in on the problem.

Hope this helps, by at least eliminating the 'easy stuff'you'll get closer to the culprit.

73 Kevin K7ZS

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell
<cparnell1001@...> wrote:
>
> Hi all,

>
> Having replaced the RF unit on my 830s, and after a few problems I have the
> receive working very well now.
> There is current on the IP meter when heater is on at 60mA and all seems ok,
> except I have no actual output power at all (on either RF meter on 830, or
> external power meter).
>
> I can hear a signal (reads around S7) on another receiver in the shack)?
> It's not the tubes as I have changed them, so I am beginning to look
> elsewhere and am suspecting that there is still an issue in the rectifier
> unit. (I blew R14 previously).
>
> Any help on letting me know what to test for voltage wise in the rectifier
> unit would be much appreciated.
>
> Thanks
> Chris, ZL1CDP
>
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>
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>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30106. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 20:48:31 UTC
From: Mel Farrer
Topic: 30085 Message: 30106

Also check the band switch nylon coupler in the final. I had to replace several as they split at the set screw and the band switch on the front panel didn't always switch the final wafers, ugh.

Mel, K6KBE

--- On Mon, 3/7/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 12:29 PM

Thanks for the suggestions Kevin.

Will do some further testing based on this. - I have some comunique going

with the excellent Mike W5RKL to help trace this fault too, so I am sure we

will get there in the end.

Thanks again

Chris, ZL1CDP

From: k7zs <klahaie@...>

Reply-To: <TS-520_820_530_830@yahoogroups.com>

Date: Mon, 07 Mar 2011 16:54:02 +0000

To: <TS-520_820_530_830@yahoogroups.com>

Subject: [TS-520_820_530_830] Re: No transmit output power on 830s

Hi Chris

Congrats on getting the RF board replaced, and getting the radio to receive.

No power out on any band? You might want to ensure the SG switch on the

rear apron is ON, and don't take the switch position for granted - measure

the voltage on the SG pin of the FINAL UNIT. When the SG switch is OFF, the

voltage on PIN 3 of the tubes will me NEGATIVE, perhaps -50v or so. If the

SG switch is dirty and not switching to a POSITIVE voltage, that would

prevent transmit. In receive, you'll should see around 264v (132v if in

mode switch is in the TUNE position). No positive screen voltage, no transmit PERIOD! So, start at the back end and work forwards - sounds like you are getting the proper frequency mixed.

You are certain that the BANDSWITCH WAFERS in the final unit are 'in sync' with the ones on the RF unit. It is possible to get them 180 degrees out of sync. You might get SOME power out on a band here and there, but overall this will prevent much if any output.

Do you get the expected deviation on the meter when tuning, with the meter switch in the ALC position? This indicates the signal is being amplified by the driver tube and delivered to the final unit, closing in on the problem.

Hope this helps, by at least eliminating the 'easy stuff'you'll get closer to the culprit.

73 Kevin K7ZS

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell <cparnell1001@...> wrote:

>

> Hi all,

>

> Having replaced the RF unit on my 830s, and after a few problems I have the
> receive working very well now.
> There is current on the IP meter when heater is on at 60mA and all seems ok,
> except I have no actual output power at all (on either RF meter on 830, or
> external power meter).

>

> I can hear a signal (reads around S7) on another receiver in the shack)?
> It's not the tubes as I have changed them, so I am beginning to look
> elsewhere and am suspecting that there is still an issue in the rectifier
> unit. (I blew R14 previously).

>

> Any help on letting me know what to test for voltage wise in the rectifier

> unit would be much appreciated.

>

> Thanks

> Chris, ZL1CDP

>

>

>

>

>

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> [Non-text portions of this message have been removed]

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[Non-text portions of this message have been removed]

30107. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 21:04:31 UTC
From: Bob Macklin
Topic: 30085 Message: 30107

I just had to do this on my SB-401. It is not unique to the Kenwoods.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mel Farrer
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 07, 2011 12:48 PM
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Also check the band switch nylon coupler in the final. I had to replace several as they split at the set screw and the band switch on the front panel didn't always switch the final wafers, ugh.

Mel, K6KBE

--- On Mon, 3/7/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 12:29 PM

Thanks for the suggestions Kevin.

Will do some further testing based on this. - I have some comunique going

with the excellent Mike W5RKL to help trace this fault too, so I am sure we

will get there in the end.

Thanks again

Chris, ZL1CDP

From: k7zs <klahaie@...>

Reply-To: <TS-520_820_530_830@yahoogroups.com>

Date: Mon, 07 Mar 2011 16:54:02 +0000

To: <TS-520_820_530_830@yahoogroups.com>

Subject: [TS-520_820_530_830] Re: No transmit output power on 830s

Hi Chris

Congrats on getting the RF board replaced, and getting the radio to receive.
No power out on any band? You might want to ensure the SG switch on the
rear apron is ON, and don't take the switch position for granted - measure
the voltage on the SG pin of the FINAL UNIT. When the SG switch is OFF, the
voltage on PIN 3 of the tubes will me NEGATIVE, perhaps -50v or so. If the
SG switch is dirty and not switching to a POSITIVE voltage, that would
prevent transmit. In receive, you'll should see around 264v (132v if in
mode switch is in the TUNE position). No positive screen voltage, no
transmit PERIOD! So, start at the back end and work forwards - sounds like
you are getting the proper frequency mixed.
You are certain that the BANDSWITCH WAFERS in the final unit are 'in sync'
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sync. You might get SOME power out on a band here and there, but overall
this will prevent much if any output.
Do you get the expected deviation on the meter when tuning, with the meter
switch in the ALC position? This indicates the signal is being amplified by
the driver tube and delivered to the final unit, closing in on the problem.
Hope this helps, by at least eliminating the 'easy stuff'you'll get closer
to the culprit.
73 Kevin K7ZS
--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell
<cparnell1001@...> wrote:
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> Thanks
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30108. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 21:09:11 UTC
From: Mel Farrer
Topic: 30085 Message: 30108

Yes, and I gave up on the couplers made with #4 or smaller set screws. I make my own out of Delrin and put in 8-32 set screws. Nothing breaks or gets loose.

Mel, K6KBE

--- On Mon, 3/7/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 1:04 PM

I just had to do this on my SB-401. It is not unique to the Kenwoods.

Bob Macklin

K5MYJ

Seattle, Wa.

"Real Radios Glow In The Dark"

----- Original Message -----

From: Mel Farrer

To: TS-520_820_530_830@yahoogroups.com

Sent: Monday, March 07, 2011 12:48 PM

Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Also check the band switch nylon coupler in the final. I had to replace several as they split at the set screw and the band switch on the front panel didn't always switch the final wafers, ugh.

Mel, K6KBE

--- On Mon, 3/7/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>

Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

To: TS-520_820_530_830@yahoogroups.com

Date: Monday, March 7, 2011, 12:29 PM

Thanks for the suggestions Kevin.

Will do some further testing based on this. - I have some comunique going with the excellent Mike W5RKL to help trace this fault too, so I am sure we will get there in the end.

Thanks again

Chris, ZL1CDP

From: k7zs <klahaie@...>

Reply-To: <TS-520_820_530_830@yahoogroups.com>

Date: Mon, 07 Mar 2011 16:54:02 +0000

To: <TS-520_820_530_830@yahoogroups.com>

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30109. Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 21:16:34 UTC
From: w5rkl
Topic: 30048 Message: 30109

Hi Joe,

What did you do that made it work properly?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike, Robert, & group,
>
> Well, all is now right with the world...or at least the 820S that has given
> me fits. With your assistance, I have gotten the rig to operate as it should.
> My wife thought I was leaving her..for the "other women." I thank you both &
> all, for making this possible. I have learned more in the short time that I have
> been a member of this group versus the overall 32 years of "hamming" TNX!
>
> 73's joe wb7uqu
>
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, March 6, 2011 10:07:52 AM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
>
>
> One additional comment about the CAR UNIT output signal level. When adjusting
> CAR1 and CAR2 for .3 volt rms at CJ3 pins 2 and 5, note that CJ3 pin 7 has a ".2
> volt rms" signal level. Pins 5 and 7 are from CAR1 and you adjust T1 on CAR1 for
> a signal level of .3 volt rms at pin 5 which will result in a .2 volt rms signal
> level at CJ3 pin 7. Pin 7 is the carrier unit signal that is applied to the PLL
> Unit and if this level is too low for the PLL Unit to use the symptoms you are
> experiencing will occur. Therefore, adjust T1 on CAR1 for .3 volt rms at pin 5
> and check CJ3 pin 7 for .2 volt rms.
>
> If you perform the adjustments on the CAR UNIT board as described and there are
> no other problems with the 820 then I suspect your problem will be fixed.
>
> 73s
> Mike
> W5RKL

>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Joe and Robert,
> >
> > I believe the "50mv" signal level is only a starting point signal level even
> >though Kenwood's 820 service manual does not state this. When I make that
> >adjustment, I ignore the reference to CAR1 T1 but rather adjust T1 on CAR2 for a
> >reading on TP5 on the IF Unit.
> >
> > I also believe step 2-1 that states to adjust T1 on the "CAR1" board while
> >measuring the voltage level at TP5 on the IF Unit is wrong.
> >
> > To see this you have to look at the main 820 schematic along with the IF Unit
> >and CAR Unit schematics.
> >
> >
> > The output from CAR1 is applied to the balance detector from CAR UNIT plug CJ3
> >pin 5, through the wiring harness, to the IF Unit plug IF4 pin 2 labeled "C1A".
> >This provides the required "BFO" signal, in "receive", that beats with the IF
> >signal on the IF UNIT to produce the "recovered" audio at the output of the
> >balance detector. If you follow the CAR1 output signal to the IF Unit board then
> >look at the schematic of the IF UNIT board you will see how this takes place.
> >Furthermore, if you follow the output from the balance detector through plug IF4
> >you will see the balance detector's recovered audio is applied through the
> >wiring hardness to the AF AVR Unit for further processing and ultimately to the
> >audio amplifier and finally the speaker.
> >
> > Next, if you look at the CAR UNIT schematic, you will notice that both CAR1 and
> >CAR2 have a transformer labeled "T1". However, if you follow the output from
> >CAR2, through the main 820 schematic, you will notice CAR2 output is applied to
> >the IF UNIT plug IF5 pin 13 which, through the IF UNIT board's foil connection,
> >connects directly to IF Unit "TP5". Therefore, step 2-1 that refers to adjusting
> >T1 on CAR1 board is wrong. What the step should say is adjust T1 on "CAR2" for a
> >voltage measurement found at TP5 on the IF Unit board.
> >
> > The correct voltage level is not 50mv but rather ".3 volt" or "300 milli-volts"
> >at CAR UNIT plug CJ3 pins 2 and 5 as shown on the CAR UNIT schematic on page 58.
> >
> > If the CAR UNIT output signal levels are much lower than required, it is quite
> >possible switching from receive to transmit can and will cause the symptoms you
> >are experiencing where the digital display appears to work fine in receive but
> >in transmit the digital display shows 9,000, 19,000, and 29,000 in transmit.
> >Therefore, I recommend you adjust the CAR UNIT output signals so they are .3
> >volt at CJ3 pins 2 and 5 and not 50mv at stated in step 2-1.
> >
> >
> > 73s
> > Mike
> > W5RKL

> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
> >wrote:
> > >
> > > Joe:
> > >
> > > The 50MV spec in the manual is WRONG!
> > >
> > > Correct carrier module output should be 0.30 V - SIX times higher!
> > >
> > > And in the manual they are wrong when they say which adjustment to use for
> >what.
> > >
> > > Here is the correct procedure:
> > >
> > > Connect a freq counter to either pin 7 of socket Cj3 or to the carrier input
> >on the IF board.
> >
> > >
> > > Set the mode switch to LSB and the IF-shift control to its center position.
> > >
> > > NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You
> >have to reach down through the holes in the top board, which is the CW transmit
> >board, CAR-2, in order to get to the USB and LSB adjustments.
> > >
> > > Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the
> >adjustment is pretty twitchy so just get as close as you can). It will help a
> >lot if you can find a nonmetallic screwdriver with which to do this. Me, I am
> >still looking for one that will work; the plastic ones I have are all too
> >flimsy. And the metal ones affect the frequency.
> >
> > >
> > > Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.
> > >
> > > Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high
> >as you can get it. It probably won't go much over 0.3V in any case.
> > >
> > > Switch to transmit (SG Switch Off) and put the transmit switch in Send
> >position and adjust VR1 on the CAR-1 board so that the frequency for USB and LSB
> >transmit does not change between receive and transmit.
> > >
> > > Switch to CW mode. With the transmit switch in Send adjust TC-1 on the CAR-1
> >board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board to
> >get 0.3 V output.
> > >
> > > The other two adjustments on the CAR 1 board, TC2 and TC3, are for adjusting
> >the FSK frequencies in case you are interested.

> > >
> > > I hope this makes sense to you. Given the errors in the manual and omissions
> >in other sources it took me a while and some technical help from people like
> >Mike help to figure all of this out.
> > >
> > > Robert
> > > WB5WSV
> >
>
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> [Non-text portions of this message have been removed]
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30110. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 21:20:29 UTC
From: Bob Macklin
Topic: 30085 Message: 30110

I made mine front a nylon spacer from my local hardware store. I use to keep a bunch of brass couplers around but I could not locate one.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Mel Farrer
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 07, 2011 1:09 PM
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yes, and I gave up on the couplers made with #4 or smaller set screws. I make my own out of Delrin and put in 8-32 set screws. Nothing breaks or gets loose.

Mel, K6KBE

--- On Mon, 3/7/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 1:04 PM

I just had to do this on my SB-401. It is not unique to the Kenwoods.

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Seattle, Wa.

"Real Radios Glow In The Dark"

----- Original Message -----

From: Mel Farrer

To: TS-520_820_530_830@yahoogroups.com

Sent: Monday, March 07, 2011 12:48 PM

Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Also check the band switch nylon coupler in the final. I had to replace several as they split at the set screw and the band switch on the front panel didn't always switch the final wafers, ugh.

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--- On Mon, 3/7/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>

Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s

To: TS-520_820_530_830@yahoogroups.com

Date: Monday, March 7, 2011, 12:29 PM

Thanks for the suggestions Kevin.

Will do some further testing based on this. - I have some comunique going with the excellent Mike W5RKL to help trace this fault too, so I am sure we will get there in the end.

Thanks again

Chris, ZL1CDP

From: k7zs <klahaie@...>

Reply-To: <TS-520_820_530_830@yahoogroups.com>

Date: Mon, 07 Mar 2011 16:54:02 +0000

To: <TS-520_820_530_830@yahoogroups.com>

Subject: [TS-520_820_530_830] Re: No transmit output power on 830s

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30111. Re: [TS-520_820_530_830] Re: No transmit output power on 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-07 22:00:26 UTC
From: Mel Farrer
Topic: 30085 Message: 30111

Nylon is OK, if you leave enough meat around the set screw. The point contact of the #4 setscrews is just too flimsy.

Mel

--- On Mon, 3/7/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] Re: No transmit output power on 830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 7, 2011, 1:20 PM

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30112. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 01:11:37 UTC
From: John Hennessy
Topic: 30069 Message: 30112

Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I then peak the ALC and dip the plate as you've stated. The IP meter is jumping erractically while loading also as you've stated. Where exactly are the fixed and variable plates you are speaking of? The radio appears perfectly clean but has sat idle for many years. The rig has also been cleaned out gently with compressed air.

thanks

John.

On 6/03/11 11:30 PM, w5rkl wrote:
>
> Hello John and Adrian,
>
> I do not believe the final tubes, "A" verses "B", is the source of
> your problem.
>
> When comparing inter-electrode capacitance differences between the
> 6146A and 6146B, the only inter-electrode capacitance difference is
> the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and
> ".22pf" in the 6146B. All the other inter-electrode capacitance values
> are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 -
> .22 = .02) when operating the final amplifier in the HF spectrum is
> not a "significant" difference that warrants using only 6146Bs in the
> hybrids. If the final amplifier were to be operating in the VHF
> spectrum then I would be concerned but that's not the case with the
> hybrids. When using "A" verses "B" tubes, neutralizing the final
> amplifier is required.
>
> The final amplifier's neutralization adjustment does not drift or
> change due to tube age.
>
> I am aware of and have read Glen Zook's "The 6146 Family of Tubes"
> document in the files section.
>
> John, what position do you set the LOAD control when you start your
> tune up procedure? I recommend setting the LOAD control fully CCW
> (knob points to 9 o'clock) then start your tune up procedures, peak
> ALC then dip the plate. Once you are at this point, advance the LOAD
> control CW for a peak RF output and watch the IP meter while adjusting
> the LOAD control. If the IP meter erratically jumps higher, not in a
> smooth fashion, the I suspect the fixed and variable plates are
> shorting due to corrosion, dirt, or the plates themselves are shorting.
>
> 73s

> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> <john@...> wrote:
> >
> > Hi Adrian, thanks for your reply. Can you please provide a little more
> > detail as to how I check the grounding through the tuning rotation. I
> > will read a little more to try and understand how I check the PA
> > neutralization, this is new to me. Next time I have the radio open I
> > will check the tubes. Having said that the radio is all original so I'd
> > expect original valves.
> >
> > John.
> >
> > On 5/03/11 9:37 PM, Adrian Ellison wrote:
> > >
> > > Hi John,
> > >
> > > I would check the plate tuning capacitor, ensuring that the rotating
> > > vanes are
> > > indeed grounded throughout the entire rotation, and I would
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> > > check
> > > the PA neutralization, the latter being the most likely cause.
> > >
> > > Also ensure that you have 6146Bs installed, not the A ...
> > >
> > > Regards
> > >
> > > Adrian - ZS1TTZ
>
>

[Non-text portions of this message have been removed]

30113. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 01:48:39 UTC
From: Joseph Stiles
Topic: 30069 Message: 30113

John,

The variable plates Mike is talking about, I think, are the ones in the "final cage" area..where the final amp tubes are. The are also 3 others connected to the "DRIVE" shaft. Get yourself some DEOXIT or similiar. UNPLUG rig, and let it sit. Remove top and bottom cover. There are...I think 6 screws that hold the cover on. Use an insulated screw driver to short to ground the plate choke...that's the thing with the two caps on it going to the tops of the finals..there is LETHAL VOLTAGE that can lurk in there. The load control is on the left...it has slider contacts..spray(sparingly) the plates and the contacts..work back and forth numerous times..blow off with "canned air." Do the same with the plate control....it.is in the middle. While your in there..remove the finals..and clean the large wafer switch..spray and rotate..blow dry. Inspect the band switch coupler...they crack where the hold-down screws are. And...have some more fun!....remove every connector...one at a time..use DEOXIT as above (remove and replace several times), also every switch, and/or pot. I have "fixed" problems..just by cleaning a rig that has sat around..collecting dust..etc.....good luck

73's joe wb7uqu

From: John Hennessy <john@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 7, 2011 5:11:37 PM
Subject: Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I then peak the ALC and dip the plate as you've stated. The IP meter is jumping erractically while loading also as you've stated. Where exactly are the fixed and variable plates you are speaking of? The radio appears perfectly clean but has sat idle for many years. The rig has also been cleaned out gently with compressed air.

thanks

John.

On 6/03/11 11:30 PM, w5rkl wrote:
>
> Hello John and Adrian,
>
> I do not believe the final tubes, "A" verses "B", is the source of
> your problem.
>
> When comparing inter-electrode capacitance differences between the
> 6146A and 6146B, the only inter-electrode capacitance difference is

> the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and
> ".22pf" in the 6146B. All the other inter-electrode capacitance values
> are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 -
> .22 = .02) when operating the final amplifier in the HF spectrum is
> not a "significant" difference that warrants using only 6146Bs in the
> hybrids. If the final amplifier were to be operating in the VHF
> spectrum then I would be concerned but that's not the case with the
> hybrids. When using "A" verses "B" tubes, neutralizing the final
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> > > Regards
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> > > Adrian - ZS1TTZ
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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30114. Re: [TS-520_820_530_830] Re: 820S freq. readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 02:08:53 UTC
From: Joseph Stiles
Topic: 30048 Message: 30114

Mike,

Once I was "in there" I took the PLL and CAR boxes out...and opened them up. Well...something had really contaminated both units...maybe "coffee with cream and sugar." Also I found a couple of broken solder traces: one on PLL-1 pin 6 and PLL-1 pin 5. Looks like the connector had really been pushed down hard a few times. Then..somebody had the CAR voltages way off....and some of the tuning slugs on the PLL had also really been messed with. This may have been a poorly "fixed" CB hack. I found some screw holes with no screws...etc. I did a "basic" tune up on the ANT, MIX, and DRIVE coils..etc.. (I do not have the equipment/skill to do a full alignment). It still has the S2001A's in the final cage...screen and cathode R's are original..and within specs....all bands function..with anywhere from 110 to 90 watts into dummy load with 205-230mA of Ip..still has plenty of HV on key down. Had to take XYL to dinner though...hihi..... agn.. TNX fer all the help!

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 7, 2011 1:16:34 PM
Subject: [TS-520_820_530_830] Re: 820S freq. readout

Hi Joe,

What did you do that made it work properly?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Mike, Robert, & group,
>
> Well, all is now right with the world...or at least the 820S that has given

> me fits. With your assistance, I have gotten the rig to operate as it should.
> My wife thought I was leaving her..for the "other women." I thank you both &
> all, for making this possible. I have learned more in the short time that I
>have
>
> been a member of this group versus the overall 32 years of "hamming" TNX!
>
> 73's joe wb7uqu
>
>

>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, March 6, 2011 10:07:52 AM
> Subject: [TS-520_820_530_830] Re: 820S freq. readout
>
>
> One additional comment about the CAR UNIT output signal level. When adjusting
> CAR1 and CAR2 for .3 volt rms at CJ3 pins 2 and 5, note that CJ3 pin 7 has a
>".2
>
> volt rms" signal level. Pins 5 and 7 are from CAR1 and you adjust T1 on CAR1
>for
>
> a signal level of .3 volt rms at pin 5 which will result in a .2 volt rms
>signal
>
> level at CJ3 pin 7. Pin 7 is the carrier unit signal that is applied to the PLL
>
> Unit and if this level is too low for the PLL Unit to use the symptoms you are

> experiencing will occur. Therefore, adjust T1 on CAR1 for .3 volt rms at pin 5

> and check CJ3 pin 7 for .2 volt rms.
>
> If you perform the adjustments on the CAR UNIT board as described and there are
>
> no other problems with the 820 then I suspect your problem will be fixed.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Joe and Robert,
> >
> > I believe the "50mv" signal level is only a starting point signal level even

> >though Kenwood's 820 service manual does not state this. When I make that
> >adjustment, I ignore the reference to CAR1 T1 but rather adjust T1 on CAR2 for
>a
>
> >reading on TP5 on the IF Unit.
> >
> > I also believe step 2-1 that states to adjust T1 on the "CAR1" board while
> >measuring the voltage level at TP5 on the IF Unit is wrong.
> >

> > To see this you have to look at the main 820 schematic along with the IF Unit
>
> >and CAR Unit schematics.
> >
> >
> > The output from CAR1 is applied to the balance detector from CAR UNIT plug
>CJ3
>
> >pin 5, through the wiring harness, to the IF Unit plug IF4 pin 2 labeled
>"C1A".
>
> >This provides the required "BFO" signal, in "receive", that beats with the IF

> >signal on the IF UNIT to produce the "recovered" audio at the output of the
> >balance detector. If you follow the CAR1 output signal to the IF Unit board
>then
>
> >look at the schematic of the IF UNIT board you will see how this takes place.

> >Furthermore, if you follow the output from the balance detector through plug
>IF4
>
> >you will see the balance detector's recovered audio is applied through the
> >wiring hardness to the AF AVR Unit for further processing and ultimately to
>the
>
> >audio amplifier and finally the speaker.
> >
> > Next, if you look at the CAR UNIT schematic, you will notice that both CAR1
>and
>
> >CAR2 have a transformer labeled "T1". However, if you follow the output from
> >CAR2, through the main 820 schematic, you will notice CAR2 output is applied
>to
>
> >the IF UNIT plug IF5 pin 13 which, through the IF UNIT board's foil
>connection,
>
> >connects directly to IF Unit "TP5". Therefore, step 2-1 that refers to
>adjusting
>
> >T1 on CAR1 board is wrong. What the step should say is adjust T1 on "CAR2" for
>a
>
> >voltage measurement found at TP5 on the IF Unit board.
> >
> > The correct voltage level is not 50mv but rather ".3 volt" or "300
>milli-volts"
>
> >at CAR UNIT plug CJ3 pins 2 and 5 as shown on the CAR UNIT schematic on page
>58.

> >
> > If the CAR UNIT output signal levels are much lower than required, it is
>quite
>
> >possible switching from receive to transmit can and will cause the symptoms
>you
>
> >are experiencing where the digital display appears to work fine in receive but
>
> >in transmit the digital display shows 9,000, 19,000, and 29,000 in transmit.
> >Therefore, I recommend you adjust the CAR UNIT output signals so they are .3
> >volt at CJ3 pins 2 and 5 and not 50mv at stated in step 2-1.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>

> >wrote:
> > >
> > > Joe:
> > >
> > > The 50MV spec in the manual is WRONG!
> > >
> > > Correct carrier module output should be 0.30 V - SIX times higher!
> > >
> > > And in the manual they are wrong when they say which adjustment to use for

> >what.
> > >
> > > Here is the correct procedure:
> > >
> > > Connect a freq counter to either pin 7 of socket Cj3 or to the carrier
>input
>
> >on the IF board.
> >
> > >
> > > Set the mode switch to LSB and the IF-shift control to its center
position.
> > >
> > > NOTE: The USB and LSB board, CAR-1, is ON THE BOTTOM of the module. You
> >have to reach down through the holes in the top board, which is the CW
>transmit
>
> >board, CAR-2, in order to get to the USB and LSB adjustments.

> > >
> > > Adjust TC1 to 8828.5 KHZ within 10 Hz (its hard to do this, I know, the
> >adjustment is pretty twitchy so just get as close as you can). It will help a
>
> >lot if you can find a nonmetallic screwdriver with which to do this. Me, I am
>
> >still looking for one that will work; the plastic ones I have are all too
> >flimsy. And the metal ones affect the frequency.
> >
> > >
> > > > Switch the mode switch to USB and adjust TC2 to 8831.5 KHZ within 10 hz.
> > >
> > > > Adjust T1 on the bottom board, CAR-1, to an output level of 0.3V or as high
>
> >as you can get it. It probably won't go much over 0.3V in any case.
> > >
> > > > Switch to transmit (SG Switch Off) and put the transmit switch in Send
> >position and adjust VR1 on the CAR-1 board so that the frequency for USB and
>LSB
>
> >transmit does not change between receive and transmit.
> > >
> > > > Switch to CW mode. With the transmit switch in Send adjust TC-1 on the
>CAR-1
>
> >board, the board on top, to 8830.7 khz and adjust coil T1 on the CAR-1 board
>to
>
> >get 0.3 V output.
> > >
> > > > The other two adjustments on the CAR 1 board, TC2 and TC3, are for
>adjusting
>
> >the FSK frequencies in case you are interested.
> > >
> > > > I hope this makes sense to you. Given the errors in the manual and
>omissions
>
> >in other sources it took me a while and some technical help from people like
> >Mike help to figure all of this out.
> > >
> > > > Robert
> > > > WB5WSV
> > >
>
>
>
>
>
>

>
> [Non-text portions of this message have been removed]
>

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30115. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 02:46:56 UTC
From: John Hennessy
Topic: 30069 Message: 30115

Hi Joe, thanks for getting across this. The 3 variable plates connected to the drive control I'm familiar with. My mention of using compressed air to clean was related to these. To date I have not ventured into the final cage area but am aware of the dangers and precautions with regards discharging. Deoxit I have.

With all that information in hand I'm confident that it will be fixed :-) It will probably take a day or to for me to get back to it but will report back my results then.

thanks again

John.
VK6LJH

On 8/03/2011 9:48 AM, Joseph Stiles wrote:
>
> John,
>
> The variable plates Mike is talking about, I think, are the ones in the
> "final cage" area..where the final amp tubes are. The are also 3 others
> connected to the "DRIVE" shaft. Get yourself some DEOXIT or similiar.
> UNPLUG
> rig, and let it sit. Remove top and bottom cover. There are...I think
> 6 screws
> that hold the cover on. Use an insulated screw driver to short to
> ground the
> plate choke...that's the thing with the two caps on it going to the
> tops of the
> finals..there is LETHAL VOLTAGE that can lurk in there. The load
> control is on
> the left...it has slider contacts..spray(sparingly) the plates and the
> contacts..work back and forth numerous times..blow off with "canned
> air." Do the
> same with the plate control....it.is in the middle. While your in
> there..remove
> the finals..and clean the large wafer switch..spray and rotate..blow dry.
> Inspect the band switch coupler...they crack where the hold-down
> screws are.
> And...have some more fun!....remove every connector...one at a
> time..use DEOXIT
> as above (remove and replace several times), also every switch, and/or
> pot. I
> have "fixed" problems..just by cleaning a rig that has sat
> around..collecting
> dust..etc.....good luck

>
> 73's joe wb7uqu
>
> _____
> From: John Hennessy <john@... <mailto:john%40hennessy.net.au>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, March 7, 2011 5:11:37 PM
> Subject: Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
>
> Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
> then peak the ALC and dip the plate as you've stated. The IP meter is
> jumping erractically while loading also as you've stated. Where exactly
> are the fixed and variable plates you are speaking of? The radio appears
> perfectly clean but has sat idle for many years. The rig has also been
> cleaned out gently with compressed air.
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> John.
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> On 6/03/11 11:30 PM, w5rkl wrote:
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> > Hello John and Adrian,
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> > I do not believe the final tubes, "A" verses "B", is the source of
> > your problem.
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> > amplifier is required.
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> > The final amplifier's neutralization adjustment does not drift or
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> > I am aware of and have read Glen Zook's "The 6146 Family of Tubes"
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> > > > Adrian - ZS1TTZ
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> > >
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> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

30116. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 03:23:07 UTC
From: w5rkl
Topic: 30069 Message: 30116

Hi John,

There are numerous types of variable capacitors.

There are compression type variable capacitors which has a fixed plate that does not move and a plate the moves by adjusting a screw. As the screw rotates CCW or CW the movable plate moves closer to or farther away from the fixed plate.

There are variable capacitors that have fixed plates mounted to a metal frame using insulating material with variable plates mounted to a shaft where the shaft rotates and the variable plates slide between the fixed plates.

There are vacuum variable capacitors where the fixed and movable plates are encased within a vacuum must like a vacuum tube.

When I speak of the fixed and variable plates shorting together in the LOAD variable capacitor, I'm talking about the variable plates, as they slide between the fixed plate, the fixed and variable plates short together.

Shorts can be caused by bent fixed and/or variable plates of the capacitor or dust/dirt/corrosion build up on either the fixed, variable, or both sets of plates.

If the LOAD capacitor is shorted between the fixed and variable plates, an ohm meter connected between the fixed and variable plates will indicate zero ohms.

You can search the Internet using your favorite search engine using the phrase "types of variable capacitors" then click on photos. I use Google and when I search for a component such as variable capacitors, I enter the above phrase and when the results come up, I click on Google's "Image" link on the upper left corner and pictures of variable capacitors will come up.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
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> > > >
> > > > Adrian - ZS1TTZ
> > >
> > >
>
>
> [Non-text portions of this message have been removed]
>

30117. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 03:33:07 UTC
From: w5rkl
Topic: 30069 Message: 30117

John,

Compressed air cannot always clean away corrosion. Corrosion "tips" can occur on the plates due to the environment the component is subjected to. Since the radio has sat for a long time, corrosion tips can occur on the fixed and/or variable plates which compressed air can't remove. To remove corrosion you need to use a stiff piece of paper wet with contact cleaner and slide the paper between the plates. This doesn't always work either. It depends on how big the corrosion tips are. If you listen closely in a quite room, while rotating the LOAD control, a shorted variable capacitors will sounds like the fixed and variable plates are scrapping against themselves. You have to listen closely to hear it. I have run into LOAD variable capacitors where a variable plate, only one, was shorting to the fixed plate when the capacitor shaft was rotated only half way. When this happens, all RF is shorted to ground resulting in zero RF output. Rotating the LOAD control CCW a bit caused the shorted plates to separate and RF output reappeared. It took me quite a while to find the plate that was bent but once I found it and bent it straight the LOAD capacitor worked fine. You have to really look closely to find bent plates. I use a high intensity light shown through the plates while rotating the shaft and looking through the other side.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
> then peak the ALC and dip the plate as you've stated. The IP meter is
> jumping erractically while loading also as you've stated. Where exactly
> are the fixed and variable plates you are speaking of? The radio appears
> perfectly clean but has sat idle for many years. The rig has also been
> cleaned out gently with compressed air.
>
> thanks
>
> John.
>
>
> On 6/03/11 11:30 PM, w5rkl wrote:
> >
> > Hello John and Adrian,
> >
> > I do not believe the final tubes, "A" verses "B", is the source of
> > your problem.
> >
> > When comparing inter-electrode capacitance differences between the
> > 6146A and 6146B, the only inter-electrode capacitance difference is
> > the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and

> > ".22pf" in the 6146B. All the other inter-electrode capacitance values
> > are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 -
> > .22 = .02) when operating the final amplifier in the HF spectrum is
> > not a "significant" difference that warrants using only 6146Bs in the
> > hybrids. If the final amplifier were to be operating in the VHF
> > spectrum then I would be concerned but that's not the case with the
> > hybrids. When using "A" verses "B" tubes, neutralizing the final
> > amplifier is required.
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> > The final amplifier's neutralization adjustment does not drift or
> > change due to tube age.
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> > I am aware of and have read Glen Zook's "The 6146 Family of Tubes"
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> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> > <john@> wrote:
> > >
> > > Hi Adrian, thanks for your reply. Can you please provide a little more
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> > > On 5/03/11 9:37 PM, Adrian Ellison wrote:
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> > > > the PA neutralization, the latter being the most likely cause.
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> > > > Also ensure that you have 6146Bs installed, not the A ...
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> > > > Regards
> > > >
> > > > Adrian - ZS1TTZ
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> >
>
>
> [Non-text portions of this message have been removed]
>

30118. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 04:28:55 UTC
From: Bob Macklin
Topic: 30069 Message: 30118

How about putting an ohm meter between the cap stator and ground. Then rotate the cap slowly and watch for a short.

Another problem can be arcing.

You need to know what you are looking for.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 07, 2011 7:33 PM
Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

John,

Compressed air cannot always clean away corrosion. Corrosion "tips" can occur on the plates due to the environment the component is subjected to. Since the radio has sat for a long time, corrosion tips can occur on the fixed and/or variable plates which compressed air can't remove. To remove corrosion you need to use a stiff piece of paper wet with contact cleaner and slide the paper between the plates. This doesn't always work either. It depends on how big the corrosion tips are. If you listen closely in a quite room, while rotating the LOAD control, a shorted variable capacitors will sounds like the fixed and variable plates are scrapping against themselves. You have to listen closely to hear it. I have run into LOAD variable capacitors where a variable plate, only one, was shorting to the fixed plate when the capacitor shaft was rotated only half way. When this happens, all RF is shorted to ground resulting in zero RF output. Rotating the LOAD control CCW a bit caused the shorted plates to separate and RF output reappeared. It took me quite a while to find the plate that was bent but once I found it and bent it straight the LOAD capacitor worked fine. You have to really look closely to find bent plates. I use a high intensity light shown through the plates while rotating the shaft and looking through the other side.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
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> perfectly clean but has sat idle for many years. The rig has also been
> cleaned out gently with compressed air.

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> John.
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> On 6/03/11 11:30 PM, w5rkl wrote:
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> > change due to tube age.
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> > ALC then dip the plate. Once you are at this point, advance the LOAD
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> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> > <john@> wrote:
> > >
> > > Hi Adrian, thanks for your reply. Can you please provide a little more
> > > detail as to how I check the grounding through the tuning rotation. I

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> > > > the PA neutralization, the latter being the most likely cause.
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> > > > Also ensure that you have 6146Bs installed, not the A ...
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> > > > Adrian - ZS1TTZ
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> > >
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30119. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 12:05:37 UTC
From: w5rkl
Topic: 30069 Message: 30119

I agree Bob, an ohm meter can determine whether the fixed and variable plates are shorted.

I also agree, arcing can occur, especially of the load presented to the output of the PI Network is signficantly beyond the limited impedance matching range of the hybrid's PI Network.

My experience with arcing LOAD variable capacitors produces a sound that sounds like "sizzling" rather than a "pop" sound. The IP meter will also display an instantaneous change when arcing occurs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> How about putting an ohm meter between the cap stator and ground. Then rotate the cap slowly and watch for a short.
>
> Another problem can be arcing.
>
> You need to know what you are looking for.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 07, 2011 7:33 PM
> Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
>
>
>
>
> John,
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> Compressed air cannot always clean away corrosion. Corrosion "tips" can occur on the plates due to the environment the component is subjected to. Since the radio has sat for a long time, corrosion tips can occur on the fixed and/or variable plates which compressed air can't remove. To remove corrosion you need to use a stiff piece of paper wet with contact cleaner and slide the paper between the plates. This doesn't always work either. It depends on how big the corrosion tips are. If you listen closely in a quite room, while rotating the LOAD control, a shorted variable capacitors will sounds like the fixed and variable plates are scrapping against themselves. You have to listen closely to hear it. I have run into LOAD variable capacitors where a variable plate, only one, was shorting to

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> Mike
> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@> wrote:
> >
> > Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
> > then peak the ALC and dip the plate as you've stated. The IP meter is
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> > On 6/03/11 11:30 PM, w5rkl wrote:
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> > >
> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

30120. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 14:40:39 UTC
From: Bob Macklin
Topic: 30069 Message: 30120

The other problem is the wiper on the shaft of the capacitor. Connect an ohm meter between the shaft and ground and rotate the shaft. Rotate the shaft. It should always read 0 ohms.

Any variable capacitor that has been arcing is very difficult to repair.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 08, 2011 4:05 AM
Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

I agree Bob, an ohm meter can determine whether the fixed and variable plates are shorted.

I also agree, arcing can occur, especially of the load presented to the output of the PI Network is signficantly beyond the limited impedance matching range of the hybrid's PI Network.

My experience with arcing LOAD variable capacitors produces a sound that sounds like "sizzling" rather than a "pop" sound. The IP meter will also display an instantaneous change when arcing occurs.

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--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
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> You need to know what you are looking for.
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> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 07, 2011 7:33 PM

> Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
>
>
>
> John,
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> Compressed air cannot always clean away corrosion. Corrosion "tips" can occur on the plates due to the environment the component is subjected to. Since the radio has sat for a long time, corrosion tips can occur on the fixed and/or variable plates which compressed air can't remove. To remove corrosion you need to use a stiff piece of paper wet with contact cleaner and slide the paper between the plates. This doesn't always work either. It depends on how big the corrosion tips are. If you listen closely in a quite room, while rotating the LOAD control, a shorted variable capacitors will sounds like the fixed and variable plates are scrapping against themselves. You have to listen closely to hear it. I have run into LOAD variable capacitors where a variable plate, only one, was shorting to the fixed plate when the capacitor shaft was rotated only half way. When this happens, all RF is shorted to ground resulting in zero RF output. Rotating the LOAD control CCW a bit caused the shorted plates to separate and RF output reappeared. It took me quite a while to find the plate that was bent but once I found it and bent it straight the LOAD capacitor worked fine. You have to really look closely to find bent plates. I use a high intensity light shown through the plates while rotating the shaft and looking through the other side.
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

30121. VFO Servicing

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 15:52:12 UTC
From: jsloss
Topic: 30121 Message: 30121

The vfo in my TS-520 is scratchy at the low and high end of its range. Is it necessary to remove the panel and VFO in order to to clean appropriate areas?

Thanks

joe k7mks

[Non-text portions of this message have been removed]

30122. Re: [TS-520_820_530_830] VFO Servicing

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 16:04:36 UTC
From: Mel Farrer
Topic: 30121 Message: 30122

Check the side of the VFO housing. If it has the inspection panel, you can get to the spring contacts through it.

Mel, K6KBE

--- On Tue, 3/8/11, jsloss <k7mks@...> wrote:

From: jsloss <k7mks@...>
Subject: [TS-520_820_530_830] VFO Servicing
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 8, 2011, 7:52 AM

The vfo in my TS-520 is scratchy at the low and high end of its range. Is it necessary to remove the panel and VFO in order to to clean appropriate areas?

Thanks

joe k7mks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30123. TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 09:15:46 UTC
From: corrinedewhurst
Topic: 30123 Message: 30123

Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right?? As im sure my old TS-520S did 150+ when maxxed out.

30124. Kenwood BS-8 needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 15:55:16 UTC
From: rfoutpwr
Topic: 30124 Message: 30124

Kenwood BS-8 needed

Looking for a reasonable deal on a good, working, Kenwood BS-8, for installation in my SM-220.

Email me at: rfout@...

Thank You

Jim

30125. need mc-30s mic

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 16:39:24 UTC
From: yash@aol.com
Topic: 30125 Message: 30125

Looking for a mc-30s hand mic.
thanks
dale wt4t

[Non-text portions of this message have been removed]

30126. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 17:16:54 UTC
From: w5rkl
Topic: 30123 Message: 30126

It appears that resistor(s) R5 and/or R6, both 56K 1/2 watt, on the HV Unit board have strayed out of tolerance. Check both resistors and replace if found to be out of tolerance.

You say the IP meter shows 240ma with an RF output of 135 watts in CW mode. To correct the excessive IP current simply rotate the CAR control CCW until the IP meter shows 220ma. You either have the CAR control set too high or the LOAD control improperly adjusted. Are you tuning the 520SE into a dummy load or an antenna?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@...> wrote:
>
> Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> As im sure my old TS-520S did 150+ when maxxed out.
>

30127. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 16:56:30 UTC
From: John Geyer
Topic: 30069 Message: 30127

One other way to find shorts in a variable capacitor is to connect the variable capacitor in series with a 120 volt light bulb and look for sparks as you rotate the shaft. Of course be careful with the 120 volts.

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 8, 2011 4:05:37 AM
Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

I agree Bob, an ohm meter can determine whether the fixed and variable plates are shorted.

I also agree, arcing can occur, especially of the load presented to the output of the PI Network is signficantly beyond the limited impedance matching range of the hybrid's PI Network.

My experience with arcing LOAD variable capacitors produces a sound that sounds like "sizzling" rather than a "pop" sound. The IP meter will also display an instantaneous change when arcing occurs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> How about putting an ohm meter between the cap stator and ground. Then rotate
>the cap slowly and watch for a short.
>
> Another problem can be arcing.
>
> You need to know what you are looking for.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 07, 2011 7:33 PM
> Subject: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
>
>
>

> John,
>
> Compressed air cannot always clean away corrosion. Corrosion "tips" can occur
>on the plates due to the environment the component is subjected to. Since the
>radio has sat for a long time, corrosion tips can occur on the fixed and/or
>variable plates which compressed air can't remove. To remove corrosion you need
>to use a stiff piece of paper wet with contact cleaner and slide the paper
>between the plates. This doesn't always work either. It depends on how big the
>corrosion tips are. If you listen closely in a quite room, while rotating the
>LOAD control, a shorted variable capacitors will sounds like the fixed and
>variable plates are scrapping against themselves. You have to listen closely to
>hear it. I have run into LOAD variable capacitors where a variable plate, only
>one, was shorting to the fixed plate when the capacitor shaft was rotated only
>half way. When this happens, all RF is shorted to ground resulting in zero RF
>output. Rotating the LOAD control CCW a bit caused the shorted plates to
>separate and RF output reappeared. It took me quite a while to find the plate
>that was bent but once I found it and bent it straight the LOAD capacitor worked
>fine. You have to really look closely to find bent plates. I use a high
>intensity light shown through the plates while rotating the shaft and looking
>through the other side.
>
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@> wrote:
> >
> > Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
> > then peak the ALC and dip the plate as you've stated. The IP meter is
> > jumping erractically while loading also as you've stated. Where exactly
> > are the fixed and variable plates you are speaking of? The radio appears
> > perfectly clean but has sat idle for many years. The rig has also been
> > cleaned out gently with compressed air.
> >
> > thanks
> >
> > John.
> >
> >
> > On 6/03/11 11:30 PM, w5rkl wrote:
> > >
> > > Hello John and Adrian,
> > >
> > > I do not believe the final tubes, "A" verses "B", is the source of
> > > your problem.
> > >
> > > When comparing inter-electrode capacitance differences between the
> > > 6146A and 6146B, the only inter-electrode capacitance difference is
> > > the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and

> > > ".22pf" in the 6146B. All the other inter-electrode capacitance values
> > > are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 -
> > > .22 = .02) when operating the final amplifier in the HF spectrum is
> > > not a "significant" difference that warrants using only 6146Bs in the
> > > hybrids. If the final amplifier were to be operating in the VHF
> > > spectrum then I would be concerned but that's not the case with the
> > > hybrids. When using "A" verses "B" tubes, neutralizing the final
> > > amplifier is required.
> > >
> > > The final amplifier's neutralization adjustment does not drift or
> > > change due to tube age.
> > >
> > > I am aware of and have read Glen Zook's "The 6146 Family of Tubes"
> > > document in the files section.
> > >
> > > John, what position do you set the LOAD control when you start your
> > > tune up procedure? I recommend setting the LOAD control fully CCW
> > > (knob points to 9 o'clock) then start your tune up procedures, peak
> > > ALC then dip the plate. Once you are at this point, advance the LOAD
> > > control CW for a peak RF output and watch the IP meter while adjusting
> > > the LOAD control. If the IP meter erratically jumps higher, not in a
> > > smooth fashion, the I suspect the fixed and variable plates are
> > > shorting due to corrosion, dirt, or the plates themselves are shorting.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> > > <john@> wrote:
> > > >
> > > > Hi Adrian, thanks for your reply. Can you please provide a little more
> > > > detail as to how I check the grounding through the tuning rotation. I
> > > > will read a little more to try and understand how I check the PA
> > > > neutralization, this is new to me. Next time I have the radio open I
> > > > will check the tubes. Having said that the radio is all original so
I'd
> > > > expect original valves.
> > > >
> > > > John.
> > > >
> > > > On 5/03/11 9:37 PM, Adrian Ellison wrote:
> > > > >
> > > > > Hi John,
> > > > >
> > > > > I would check the plate tuning capacitor, ensuring that the rotating
> > > > > vanes are
> > > > > indeed grounded throughout the entire rotation, and I would
> > > definitely

> > > > > check
> > > > > the PA neutralization, the latter being the most likely cause.
> > > > >
> > > > > Also ensure that you have 6146Bs installed, not the A ...
> > > > >
> > > > > Regards
> > > > >
> > > > > Adrian - ZS1TTZ
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30128. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-08 20:04:22 UTC
From: w5rkl
Topic: 30123 Message: 30128

I forgot to mention about the 150+ watts output from your TS-520S.

The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@...> wrote:
>
> Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> As im sure my old TS-520S did 150+ when maxxed out.
>

30130. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 00:07:48 UTC
From: corrinedewhurst
Topic: 30123 Message: 30130

Hi Mike,so you think me replacing R5 & R6 on the HV unit will sort the problem with the IP meter not working in the tune position??

I just spotted your post over on QRZ.com forum...

http://forums.qrz.com/showthread.php?241704-Small-Problem-tuning-TS-520S

Shame the guy did'nt let everyone know the outcome,cheers,Shaun.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I forgot to mention about the 150+ watts output from your TS-520S.
>
> The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> >
> > Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> > Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> > As im sure my old TS-520S did 150+ when maxxed out.
> >
>

30131. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 01:02:38 UTC
From: w5rkl
Topic: 30123 Message: 30131

Shaun,

Yes, R5 and R6 can affect the flow of electrons in the final tubes which results in less IP current displayed on the IP meter in TUNE mode if the resistor values become significantly out of tolerance.

Resistors R5 and R6 on the HV Unit board form a resistive voltage divider network that reduces the final tube screen voltage in TUNE mode.

Here's an example. Lets say the voltage applied to the HV Unit "210" terminal is "210VDC". The voltage flows through R5 and R6 to ground. The TUNE terminal is connected at the junction of R5 and R6.

We must first determine the current through the series string of resistors R5 and R6. To do this we must use ohms law. Therefore, the total resistance of R5 and R6y is;

56000 + 56000 = 112000 ohms

To determine the current through the series string of R5 and R6 series resistors, we use the following formula

I = E / R

210 / 112000 = .001875

The same amount of current flows through "both" resistors.

We now can determine the voltage drop across R6, the first resistor in the string. To do that we use ohms law formula;

E = I x R

.001875 x 56000 = 105 volts (voltage drop across R6)

The voltage drop across R5 uses the same formula

.001875 x 56000 = 105 volts

To determine if our calculation are correct, we add the 2 voltage drops together and the answer "must" equal the source voltage of 210VDC. Are we correct in our calculations?

105 + 105 = 210

Yes we are because the 2 voltage drops added together equals the source voltage of 210VDC.

The voltage used in the above example are not the actual voltages, they are only examples. To determine what the actual voltage drops across R5 and R6 you would have to measure the actual voltage applied to the HV Unit's "210" terminal then use the formulas in the above examples to determine the current and voltage drops accordingly.

End of example.

Based on your comments about the IP current, switching to CW mode brought the IP current display on the meter back to normal, therefore allowing you to tune the 520SE up in CW mode but not in TUNE mode.

When the Mode switch is set to CW, USB, or LSB mode, the final tube screen voltage no longer flows through R5 and R6 on the HV Unit board but rather flows through R7, 12K 1/2 watt resistor, on the HV Unit board resulting in the screen voltage returning to normal.

I hope this answers any questions why R5 and R6 could be the source of your lack of IP current in TUNE mode. Try using the formulas and steps I outlined above to see how close you come to the actual voltage drop across resistors R5 and R6. As I said, you only have to measure the actual voltage at the HV Unit's "210" terminal then use the steps and formulas provided above to find out what the actual voltage at the "TUNE" terminal will be. Isn't electronics fun???

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@...> wrote:
>
> Hi Mike,so you think me replacing R5 & R6 on the HV unit will sort the problem with the IP meter not working in the tune position??
>
> I just spotted your post over on QRZ.com forum...
>
> http://forums.qrz.com/showthread.php?241704-Small-Problem-tuning-TS-520S
>
> Shame the guy did'nt let everyone know the outcome,cheers,Shaun.
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > I forgot to mention about the 150+ watts output from your TS-520S.
> >
> > The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> > >
> > > Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't

understand why it is doing this??? :oS
> > > Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> > > As im sure my old TS-520S did 150+ when maxxed out.
> > >
> >
>

30132. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 01:06:04 UTC
From: corrinedewhurst
Topic: 30123 Message: 30132

Hi Mike,wow that was some response :O),yes i have ordered some 56kohm resistors,let you know how i get on,again a BIG thankyou for your time & knowledge,cheers,Shaun :O)
--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Shaun,
>
> Yes, R5 and R6 can affect the flow of electrons in the final tubes which results in less IP current displayed on the IP meter in TUNE mode if the resistor values become significantly out of tolerance.
>
> Resistors R5 and R6 on the HV Unit board form a resistive voltage divider network that reduces the final tube screen voltage in TUNE mode.
>
> Here's an example. Lets say the voltage applied to the HV Unit "210" terminal is "210VDC". The voltage flows through R5 and R6 to ground. The TUNE terminal is connected at the junction of R5 and R6.
>
> We must first determine the current through the series string of resistors R5 and R6. To do this we must use ohms law. Therefore, the total resistance of R5 and R6y is;
>
> 56000 + 56000 = 112000 ohms
>
> To determine the current through the series string of R5 and R6 series resistors, we use the following formula
>
> I = E / R
>
> 210 / 112000 = .001875
>
> The same amount of current flows through "both" resistors.
>
> We now can determine the voltage drop across R6, the first resistor in the string. To do that we use ohms law formula;
>
> E = I x R
>
> .001875 x 56000 = 105 volts (voltage drop across R6)
>
> The voltage drop across R5 uses the same formula
>
> .001875 x 56000 = 105 volts
>
> To determine if our calculation are correct, we add the 2 voltage drops together and the answer "must" equal the source voltage of 210VDC. Are we correct in our calculations?
>

> 105 + 105 = 210
>
> Yes we are because the 2 voltage drops added together equals the source voltage of 210VDC.
>
> The voltage used in the above example are not the actual voltages, they are only examples. To determine what the actual voltage drops across R5 and R6 you would have to measure the actual voltage applied to the HV Unit's "210" terminal then use the formulas in the above examples to determine the current and voltage drops accordingly.
>
> End of example.
>
>
> Based on your comments about the IP current, switching to CW mode brought the IP current display on the meter back to normal, therefore allowing you to tune the 520SE up in CW mode but not in TUNE mode.
>
> When the Mode switch is set to CW, USB, or LSB mode, the final tube screen voltage no longer flows through R5 and R6 on the HV Unit board but rather flows through R7, 12K 1/2 watt resistor, on the HV Unit board resulting in the screen voltage returning to normal.
>
> I hope this answers any questions why R5 and R6 could be the source of your lack of IP current in TUNE mode. Try using the formulas and steps I outlined above to see how close you come to the actual voltage drop across resistors R5 and R6. As I said, you only have to measure the actual voltage at the HV Unit's "210" terminal then use the steps and formulas provided above to find out what the actual voltage at the "TUNE" terminal will be. Isn't electronics fun???
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> >
> > Hi Mike,so you think me replacing R5 & R6 on the HV unit will sort the problem with the IP meter not working in the tune position??
> >
> > I just spotted your post over on QRZ.com forum...
> >
> > http://forums.qrz.com/showthread.php?241704-Small-Problem-tuning-TS-520S
> >
> > Shame the guy did'nt let everyone know the outcome,cheers,Shaun.
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > I forgot to mention about the 150+ watts output from your TS-520S.

> > >
> > > The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> > > >
> > > > Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> > > > Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> > > > As im sure my old TS-520S did 150+ when maxxed out.
> > > >
> > >
> >
>

30133. Re: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 03:47:41 UTC
From: John Davidson
Topic: 30123 Message: 30133

I always tune up My TS520 in the CW mode.
240 Ma is a bit too hard on the tubes and HV power supply for me. You should back off on the load control until the plate tuning Ip dip is 200-220 mA !

The difference between 100 W and 135 W is not noticable on the other end of a QSO and much easier on the tubes.
 I have had the same tubes in the rig for 20 years now Running 100 W or less..

_____
From: corrinedewhurst <corrinedewhurst@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 8, 2011 4:15:46 AM
Subject: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate

Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??

As im sure my old TS-520S did 150+ when maxxed out.

[Non-text portions of this message have been removed]

30134. Re: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 05:41:48 UTC
From: john lawson
Topic: 30123 Message: 30134

Hi, I'm with John. In looking in my insturction manual, it says to load the dip to 200 ma. in the CW position. If you work the math to come up with the difference in dB betweem 100 watts and 135 watts, you will discover that it will not make any difference at the receiving end. In addition, the life of your 6146's will be extended by not asking them to put our more power than they were designed to provide.
Hope this helps.....John K5IRK

--- On Tue, 3/8/11, John Davidson <k8jd@...> wrote:

From: John Davidson <k8jd@...>
Subject: Re: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 8, 2011, 10:47 PM

I always tune up My TS520 in the CW mode.
240 Ma is a bit too hard on the tubes and HV power supply for me. You should
back off on the load control until the plate tuning Ip dip is 200-220 mA !

The difference between 100 W and 135 W is not noticable on the other end of a
QSO and much easier on the tubes.
 I have had the same tubes in the rig for 20 years now Running 100 W or less..

From: corrinedewhurst <corrinedewhurst@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 8, 2011 4:15:46 AM
Subject: [TS-520_820_530_830] TS-520E IP meter position not working for dipping
plate

Hi people,when wanting to dip the plate i have to put the radio in the CW
position on the mode switch Also the power on 80 meters into a 50 ohms dummy
load with the plate idle current at 60ma when tuned for maximum output is 135
watts at 240ma on the IP meter,does this sound right??

As im sure my old TS-520S did 150+ when maxxed out.

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[Non-text portions of this message have been removed]

30135. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 10:03:19 UTC
From: corrinedewhurst
Topic: 30123 Message: 30135

Hi guys,i dont run it at full steam,i was just giving an example of the power output & readings on CW as i was having to use this position on the mode switch to get an IP reading,also i do not use cw only SSB which is going to be less strain on the tubes anyway,regards,Shaun.

--- In TS-520_820_530_830@yahoogroups.com, john lawson <jmlcs2000@...> wrote:
>
> Hi, I'm with John. In looking in myÂ insturction manual, it says to load the dip to 200 ma. in the CW position.Â If you work the math to come up with the difference in dB betweem 100 watts and 135 watts, youÂ will discover thatÂ it will not make any difference at the receiving end.Â In addition, the life of your 6146's will be extended by not asking them to put our more power than they were designed to provide.
> Hope this helps.....John K5IRK
>
> --- On Tue, 3/8/11, John Davidson <k8jd@...> wrote:
>
>
> From: John Davidson <k8jd@...>
> Subject: Re: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, March 8, 2011, 10:47 PM
>
>
> Â
>
>
>
> I always tune up My TS520Â in the CW mode.
> 240 Ma is a bit too hard on the tubes and HV power supply for me. You should
> back off on the load control until the plate tuningÂ Ip dip is 200-220 mA !
>
> The difference between 100 WÂ and 135 W is not noticable on the other end of a
> QSO and much easier on the tubes.
> Â I have hadÂ the same tubes in the rig for 20 years now Running 100 W or less..
>
> _____
> From: corrinedewhurst <corrinedewhurst@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, March 8, 2011 4:15:46 AM
> Subject: [TS-520_820_530_830] TS-520E IP meter position not working for dipping
> plate
>
> Â
> Hi people,when wanting to dip the plate i have to put the radio in the CW
> position on the mode switch Also the power on 80 meters into a 50 ohms dummy

> load with the plate idle current at 60ma when tuned for maximum output is 135
> watts at 240ma on the IP meter,does this sound right??
>
> As im sure my old TS-520S did 150+ when maxxed out.
>
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> [Non-text portions of this message have been removed]
>

30136. drop output on TS520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 12:08:33 UTC
From: jeffrey lord
Topic: 30136 Message: 30136

Hi Guys,

I need to lower the output power to 10watts on my Ts520S for LIC requirements.

if I tune the set as per normal , then drop the drive back ,will I acheive this safetly with out harming the set???

I have the MODS DK circuit built , but am reluctant to use as it is not very convenient.

Jeff

VK4FNRS

30137. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 12:09:05 UTC
From: wrench101
Topic: 30098 Message: 30137

What voltages should I be reading at the different test points? I'm going to try and open her up today. Thanks de AI4NV

30138. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 15:32:48 UTC
From: w5rkl
Topic: 30098 Message: 30138

Hello Steven,

Do you have the TS-530 service manual? If not you will need it to troubleshoot the problem.

Voltage levels on the AF Unit board are as follows:

TP-4 = 12VDC
TP-6 = 9VDC
Plug 11 pin 3 = 9VDC

If you do not have the TS-530 service manual, you can download it at Gordon's website

www.n6wk.com/kenwood/

Scroll down the page and click on the 530 service manual link.

The above voltages, and others, are listed on the 530 schematics in the 530 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> What voltages should I be reading at the different test points? I'm going to try and open her up today. Thanks de AI4NV
>

30139. Re: drop output on TS520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 15:44:47 UTC
From: w5rkl
Topic: 30136 Message: 30139

Hi Jeff,

If you are referring to the CAR control set for lower power output in sideband (USB and LSB) then the answer is no. The CAR control has no control over RF output in sideband (USB and LSB) modes. The CAR control only controls RF output in CW and TUNE mode. You can't "preset" the CAR control during tune up for a lower power output in sideband. The MIC gain setting along with any ALC produced, controls the power output in sideband mode.

You can build a simple circuit using a 9VDC batter and a pot connected to the rear panel's 8 pin octal socket's external ALC connection to control RF output in sideband. I have never used this method on sideband.

Do not adjust the LOAD control only to reduce power output. Doing so will cause the transmitter's PI Network output impedance to be significantly different than the antenna impedance load presented to the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Hi Guys,
>
> I need to lower the output power to 10watts on my Ts520S for LIC requirements.
>
> if I tune the set as per normal , then drop the drive back ,will I acheive this
> safetly with out harming the set???
>
> I have the MODS DK circuit built , but am reluctant to use as it is not very
> convenient.
>
> Jeff
>
> VK4FNRS
>

30140. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 16:17:18 UTC
From: w5rkl
Topic: 30098 Message: 30140

I have a question.

You say the 530 has no receive and no transmit. I will assume that pressing the PTT microphone button and/or flipping the SEND switch places the 530 in transmit.

Does the digital display work? If not then the PLL Unit has become unlocked for what ever reason which will cause complete loss of both transmit and receive and the digital display will be dark, nothing showing except maybe the decimal points.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> What voltages should I be reading at the different test points? I'm going to try and open her up today. Thanks de AI4NV
>

30141. Re: [TS-520_820_530_830] Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 17:50:57 UTC
From: john lawson
Topic: 30123 Message: 30141

Hi Shaun...you will still get the same results on SSB by tuning your rig up to 200 ma and then switching to SSB compared to running it the way you have explained that you do...the extra watts won't make any difference on the receiving end by tuning it up in CW position to 135 watts out and then switching to SSB.... ..and your tubes will last a lot longer.....John

--- On Wed, 3/9/11, corrinedewhurst <corrinedewhurst@...> wrote:

From: corrinedewhurst <corrinedewhurst@...>
Subject: [TS-520_820_530_830] Re: TS-520E IP meter position not working for dipping plate
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, March 9, 2011, 5:03 AM

Hi guys,i dont run it at full steam,i was just giving an example of the power output & readings on CW as i was having to use this position on the mode switch to get an IP reading,also i do not use cw only SSB which is going to be less strain on the tubes anyway,regards,Shaun.

--- In TS-520_820_530_830@yahoogroups.com, john lawson <jmlcs2000@...> wrote:
>
> Hi, I'm with John. In looking in myÂ insturction manual, it says to load the dip to 200 ma. in the CW position.Â If you work the math to come up with the difference in dB betweem 100 watts and 135 watts, youÂ will discover thatÂ it will not make any difference at the receiving end.Â In addition, the life of your 6146's will be extended by not asking them to put our more power than they were designed to provide.
> Hope this helps.....John K5IRK
>
> --- On Tue, 3/8/11, John Davidson <k8jd@...> wrote:
>
>
> From: John Davidson <k8jd@...>
> Subject: Re: [TS-520_820_530_830] TS-520E IP meter position not working for dipping plate
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, March 8, 2011, 10:47 PM
>
>
> Â
>
>
>
> I always tune up My TS520Â in the CW mode.
> 240 Ma is a bit too hard on the tubes and HV power supply for me. You should
> back off on the load control until the plate tuningÂ Ip dip is 200-220 mA !
>
> The difference between 100 WÂ and 135 W is not noticable on the other end of a

> QSO and much easier on the tubes.
> Â I have hadÂ the same tubes in the rig for 20 years now Running 100 W or less..
>
> _____
> From: corrinedewhurst <corrinedewhurst@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, March 8, 2011 4:15:46 AM
> Subject: [TS-520_820_530_830] TS-520E IP meter position not working for dipping
> plate
>
> Â
> Hi people,when wanting to dip the plate i have to put the radio in the CW
> position on the mode switch Also the power on 80 meters into a 50 ohms dummy
> load with the plate idle current at 60ma when tuned for maximum output is 135
> watts at 240ma on the IP meter,does this sound right??
>
> As im sure my old TS-520S did 150+ when maxxed out.
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[Non-text portions of this message have been removed]

30142. ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 18:11:27 UTC
From: w9aba@aim.com
Topic: 6293 Message: 30142

hi name he is Ed i have a ts-830s just yesterday night i was on 40meters and i made contact with a
station and the person told me that my voice sounded garble i was on freq but he sayed he could hear me
ok but my voice sounded garble now its this something in side the radio that needs replaceing have no clue
need help

Ed w9aba

[Non-text portions of this message have been removed]

30143. Re: [TS-520_820_530_830] ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 18:41:01 UTC
From: Bob Macklin
Topic: 6293 Message: 30143

Don't touch you radio until you have the same report from THREE people!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w9aba@...
To: ts-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 09, 2011 10:11 AM
Subject: [TS-520_820_530_830] ts-830s

hi name he is Ed i have a ts-830s just yesterday night i was on 40meters and i made contact with a
station and the person told me that my voice sounded garble i was on freq but he sayed he could hear me
ok but my voice sounded garble now its this something in side the radio that needs replaceing have no clue
need help

Ed w9aba

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[Non-text portions of this message have been removed]

30144. Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 18:53:01 UTC
From: w5rkl
Topic: 6293 Message: 30144

You can listen to your transmit audio by pressing the Monitor button. The Monitor push button is to the left and directly below the "FIX" push button on the front panel.

If you have stereo headphones, plug them into the front panel PHONEs socket while transmitting in sideband into a dummy load. Speak normally as you would if you were talking to a distant station. You can tell a lot about your transmit audio by simply listening to it using the TS-830S Monitor feature.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
>
>
> hi name he is Ed i have a ts-830s just yesterday night i was on 40meters and i made contact with a
> station and the person told me that my voice sounded garble i was on freq but he sayed he could hear me
> ok but my voice sounded garble now its this something in side the radio that needs replaceing have no clue
> need help
>
>
>
> Ed w9aba
>
>
>
>
> [Non-text portions of this message have been removed]
>

30145. Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-09 20:02:52 UTC
From: w5rkl
Topic: 6293 Message: 30145

The Monitor push button is just "left" of the "VFO" and directly below the "FIX" push button. I left out the word "VFO" in my earlier response.

If your audio sound clean then the transmit signal will be clean.

Another way to monitor your transmit signal is to monitor the ALC meter. A good clean signal will be transmitted if the MIC gain is set so the ALC meter just starts to flicker, on voice peaks, above zero when speaking into the microphone at a normal voice level. If the ALC meter constantly rides up to the middle and top of the ALC scale then your MIC gain is set too high. There are a lot of stations that turn the MIC gain up too high so the meters flap up and down. If you listen closely at their audio you can hear the distortion.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> You can listen to your transmit audio by pressing the Monitor button. The Monitor push button is to the left and directly below the "FIX" push button on the front panel.
>
> If you have stereo headphones, plug them into the front panel PHONEs socket while transmitting in sideband into a dummy load. Speak normally as you would if you were talking to a distant station. You can tell a lot about your transmit audio by simply listening to it using the TS-830S Monitor feature.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, w9aba@ wrote:
> >
> >
> >
> >
> > hi name he is Ed i have a ts-830s just yesterday night i was on 40meters and i made contact with a
> > station and the person told me that my voice sounded garble i was on freq but he sayed he could hear me
> > ok but my voice sounded garble now its this something in side the radio that needs replaceing have no clue
> > need help
> >
> >
> >

> > Ed w9aba
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30146. Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 05:21:37 UTC
From: sv0xbq
Topic: 30146 Message: 30146

Hi Everyone,

I've just picked up an SM-220 off Ebay. It looks in good condition and powers up to give nice clean trace. I'm not familiar with the monitor at all but after going through the manual I've cabled it up and tried it on my 830. It seems to work ok apart from the int sync. The trace doesn't sync at all. I've just taken the covers off and there is a little rust on the inside of the bottom cover but cct boards and plugs and socket seem pretty clean. I'll clean it all up today including the sync switch. Does anyone know if there's a trigger adjustment anywhere?

The good news is.... I bought it advertised without the BS-8 fitted but when I opened it up. There it was! (I have to keep checking to see if it's just an empty BS-8 box. hi hi)

Chris SV0XBQ/9

30147. Re: Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 09:39:09 UTC
From: sv0xbq
Topic: 30146 Message: 30147

Update..........

It all seems to be working OK apart from monitoring transmission. The internal sync must be working as the BS-8 works. (It was a pain to set up though as the manual could be better). When monitoring transmission the display doesn't seem to be triggered at all and wanders all over the screen. Is this normal?

Chris SV0XBQ/9

30148. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 11:30:52 UTC
From: wrench101
Topic: 30098 Message: 30148

Yes, the relay does change from receive to send and the display is working. I hope to work on her a bit today and check the voltages. I have downloaded the service manual. Thanks for the info, I'll let you know what I come up with. 73 de AI4NV

30149. Re: [TS-520_820_530_830] Re: Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 14:56:48 UTC
From: Bob Macklin
Topic: 30146 Message: 30149

Monitors of this type do not have triggered sweep. If you use the 2 tone input to your TX you can synchronize the sweep. But that's the best you can do.

It's possible to set some of these up to use the trapezoid pattern with out a linear amplifier. That is a more useful display for SSB.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: sv0xbq
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 10, 2011 1:39 AM
Subject: [TS-520_820_530_830] Re: Help needed for an SM-220

Update...........

It all seems to be working OK apart from monitoring transmission. The internal sync must be working as the BS-8 works. (It was a pain to set up though as the manual could be better). When monitoring transmission the display doesn't seem to be triggered at all and wanders all over the screen. Is this normal?

Chris SV0XBQ/9

[Non-text portions of this message have been removed]

30150. Re: [TS-520_820_530_830] Re: Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 15:25:12 UTC
From: Chris and Alex
Topic: 30146 Message: 30150

Thanks Bob. It seems it's all working fine then. I've found that the two tone input works well for finding the optimum level and comp settings but watching the display during an actual ssb transmission doesn't seem to show a lot. It should be good for monitoring CW though. When using the compressor the displayed two tone waveform shows ripples around the peaks. Is this showing a problem? I've got good audio reports this afternoon so I don't think I've got much of a problem, if any. The SM-220 user manual and service manual leave a lot to be desired.

Chris SV0XBQ/9

On 10 March 2011 16:56, Bob Macklin <macklinbob@...> wrote:

>
>
> Monitors of this type do not have triggered sweep. If you use the 2 tone
> input to your TX you can synchronize the sweep. But that's the best you can
> do.
>
> It's possible to set some of these up to use the trapezoid pattern with out
> a linear amplifier. That is a more useful display for SSB.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: sv0xbq
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 10, 2011 1:39 AM
> Subject: [TS-520_820_530_830] Re: Help needed for an SM-220
>
> Update...........
>
> It all seems to be working OK apart from monitoring transmission. The
> internal sync must be working as the BS-8 works. (It was a pain to set up
> though as the manual could be better). When monitoring transmission the
> display doesn't seem to be triggered at all and wanders all over the screen.
> Is this normal?
>
> Chris SV0XBQ/9
>
> [Non-text portions of this message have been removed]
>
>

>

[Non-text portions of this message have been removed]

30151. Re: [TS-520_820_530_830] Re: Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 15:37:09 UTC
From: Bob Macklin
Topic: 30146 Message: 30151

Yes watching the speech pattern while transmitting is difficult. If you set the vertical while in CW then you can watch the speech peaks in SSB.

I don't have a SM-220 but I do have 2 Heath monitors. The Heath monitors can be used with trapezoid mode by bringing out the speech amp from the transmitter. That's a much better way to monitor modulation.

I have no clue about the speech clipper.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Chris and Alex" <alexandchrisp@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, March 10, 2011 7:25 AM
Subject: Re: [TS-520_820_530_830] Re: Help needed for an SM-220

> Thanks Bob. It seems it's all working fine then. I've found that the two
> tone input works well for finding the optimum level and comp settings but
> watching the display during an actual ssb transmission doesn't seem to
> show
> a lot. It should be good for monitoring CW though. When using the
> compressor
> the displayed two tone waveform shows ripples around the peaks. Is this
> showing a problem? I've got good audio reports this afternoon so I don't
> think I've got much of a problem, if any. The SM-220 user manual and
> service
> manual leave a lot to be desired.
>
> Chris SV0XBQ/9
>
> On 10 March 2011 16:56, Bob Macklin <macklinbob@...> wrote:
>
>>
>>
>> Monitors of this type do not have triggered sweep. If you use the 2 tone
>> input to your TX you can synchronize the sweep. But that's the best you
>> can
>> do.
>>
>> It's possible to set some of these up to use the trapezoid pattern with
>> out
>> a linear amplifier. That is a more useful display for SSB.
>>

>> Bob Macklin
>> K5MYJ
>> Seattle, Wa.
>> "Real Radios Glow In The Dark"
>>
>> ----- Original Message -----
>> From: sv0xbq
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Thursday, March 10, 2011 1:39 AM
>> Subject: [TS-520_820_530_830] Re: Help needed for an SM-220
>>
>> Update...........
>>
>> It all seems to be working OK apart from monitoring transmission. The
>> internal sync must be working as the BS-8 works. (It was a pain to set up
>> though as the manual could be better). When monitoring transmission the
>> display doesn't seem to be triggered at all and wanders all over the
>> screen.
>> Is this normal?
>>
>> Chris SV0XBQ/9
>>
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> Yahoo! Groups Links
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30152. Re: [TS-520_820_530_830] Re: Help needed for an SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 16:02:17 UTC
From: Mel Farrer
Topic: 30146 Message: 30152

I use the trap for SSB with or without the amp. I use the external input with a RF tank circuit pickup on the AM transmitter to watch % of modulation. Both modes work great.

Mel, K6KBE

--- On Thu, 3/10/11, Chris and Alex <alexandchrisp@...> wrote:

From: Chris and Alex <alexandchrisp@gmail.com>
Subject: Re: [TS-520_820_530_830] Re: Help needed for an SM-220
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, March 10, 2011, 7:25 AM

Thanks Bob. It seems it's all working fine then. I've found that the two tone input works well for finding the optimum level and comp settings but watching the display during an actual ssb transmission doesn't seem to show a lot. It should be good for monitoring CW though. When using the compressor the displayed two tone waveform shows ripples around the peaks. Is this showing a problem? I've got good audio reports this afternoon so I don't think I've got much of a problem, if any. The SM-220 user manual and service manual leave a lot to be desired.

Chris SV0XBQ/9

On 10 March 2011 16:56, Bob Macklin <macklinbob@...> wrote:

>
>
> Monitors of this type do not have triggered sweep. If you use the 2 tone
> input to your TX you can synchronize the sweep. But that's the best you can
> do.
>
> It's possible to set some of these up to use the trapezoid pattern with out
> a linear amplifier. That is a more useful display for SSB.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
> From: sv0xbq
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 10, 2011 1:39 AM
> Subject: [TS-520_820_530_830] Re: Help needed for an SM-220
>
> Update...........
>

> It all seems to be working OK apart from monitoring transmission. The
> internal sync must be working as the BS-8 works. (It was a pain to set up
> though as the manual could be better). When monitoring transmission the
> display doesn't seem to be triggered at all and wanders all over the screen.
> Is this normal?
>
> Chris SV0XBQ/9
>
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>
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>

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Yahoo! Groups Links

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30153. DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 16:42:00 UTC
From: Al N6TEZ
Topic: 20533 Message: 30153

Quick question. Are cables with RCA connectors on both ends the only required cables to connect a DG-5 to a TS-520SE ? I don't have access to the stated equipment at this time and place.
TNX, Al N6TEZ

30154. intermittent rit/xit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 10:46:08 UTC
From: dek7nrt
Topic: 30154 Message: 30154

I have a TS 530s that performs excellent but I have just noticed a problem with the RIT/XIT only works occasionally. I haven't noticed this problem until just this evening. Anyone have any suggestions?

Thank you...

30155. sell 830 station

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 16:37:24 UTC
From: yash@aol.com
Topic: 30155 Message: 30155

please get back off line.
Have a beautiful complete TS-830 station for sale. The entire station is a easy 9/10 cosmetics.In 3 years have found no operating issues with any part of the station. Consists of the following:
1. TS-830s transceiver,ssb filter/no cw filter ,full output.box
2. VF0-230 all cables and manual,factory box.
3. SP-230 filtered speaker,manual,cable.
4. SM-220 station monitor scope, manual and all cables.
5. SHURE 522 desk mic.
6. kenwood MC-35s hand mic.
Would like to sell or trade the entire station as a complete package.
asking 1195.00 will split shipping: fedex insured
Trades considered flex SDR., late hf/6 rig,746 pro or ??: +/- $$$
If seperate sale: ts-830s-450.00,sp-230-130.00,vfo230-260.00,SM-220-275.00 shure mic-75.00,hand mic 35.00--split shipping on all.
pay pal +3% or usps MO.
thanks
dale wt4t

[Non-text portions of this message have been removed]

30156. Re: [TS-520_820_530_830] DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 17:06:47 UTC
From: John Boardman
Topic: 20533 Message: 30156

No. Three cables with RCA connectors at each end are required for signals PLUS a 13.8 vdc power supply. The dc source may be taken from the connection on the back of a TS-520, but a proprietary connector is required at the DG-5 end.

John KD5ZGX

--- On Thu, 3/10/11, Al N6TEZ <n6tez@yahoo.com> wrote:

From: Al N6TEZ <n6tez@...>
Subject: [TS-520_820_530_830] DG-5
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, March 10, 2011, 10:42 AM

Quick question. Are cables with RCA connectors on both ends the only required cables to connect a DG-5 to a TS-520SE ? I don't have access to the stated equipment at this time and place.

TNX, Al N6TEZ

[Non-text portions of this message have been removed]

30157. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 17:24:50 UTC
From: corrinedewhurst
Topic: 30123 Message: 30157

Hi Mike,just to let you know you were 100% corect Mike,
R5 & R6 were shot at,one was reading something like 96 kohms & the other was not reading anything on my multimeter.
The new 56 kohm resistors arrived today so I installed them and my IP meter now works again in the Tune position,so yipee!!! :O)
Thanks so much for your help on this Mike,this group is a valuable asset & without it i may not of found the cure for my problem,so a great result.
Perhaps this info should be distributed online for other people with the same problem.
Regards,Shaun :O)
--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Shaun,
>
> Yes, R5 and R6 can affect the flow of electrons in the final tubes which results in less IP current displayed on the IP meter in TUNE mode if the resistor values become significantly out of tolerance.
>
> Resistors R5 and R6 on the HV Unit board form a resistive voltage divider network that reduces the final tube screen voltage in TUNE mode.
>
> Here's an example. Lets say the voltage applied to the HV Unit "210" terminal is "210VDC". The voltage flows through R5 and R6 to ground. The TUNE terminal is connected at the junction of R5 and R6.
>
> We must first determine the current through the series string of resistors R5 and R6. To do this we must use ohms law. Therefore, the total resistance of R5 and R6y is;
>
> 56000 + 56000 = 112000 ohms
>
> To determine the current through the series string of R5 and R6 series resistors, we use the following formula
>
> I = E / R
>
> 210 / 112000 = .001875
>
> The same amount of current flows through "both" resistors.
>
> We now can determine the voltage drop across R6, the first resistor in the string. To do that we use ohms law formula;
>
> E = I x R
>
> .001875 x 56000 = 105 volts (voltage drop across R6)
>

> The voltage drop across R5 uses the same formula
>
> .001875 x 56000 = 105 volts
>
> To determine if our calculation are correct, we add the 2 voltage drops together and the answer "must" equal the source voltage of 210VDC. Are we correct in our calculations?
>
> 105 + 105 = 210
>
> Yes we are because the 2 voltage drops added together equals the source voltage of 210VDC.
>
> The voltage used in the above example are not the actual voltages, they are only examples. To determine what the actual voltage drops across R5 and R6 you would have to measure the actual voltage applied to the HV Unit's "210" terminal then use the formulas in the above examples to determine the current and voltage drops accordingly.
>
> End of example.
>
>
> Based on your comments about the IP current, switching to CW mode brought the IP current display on the meter back to normal, therefore allowing you to tune the 520SE up in CW mode but not in TUNE mode.
>
> When the Mode switch is set to CW, USB, or LSB mode, the final tube screen voltage no longer flows through R5 and R6 on the HV Unit board but rather flows through R7, 12K 1/2 watt resistor, on the HV Unit board resulting in the screen voltage returning to normal.
>
> I hope this answers any questions why R5 and R6 could be the source of your lack of IP current in TUNE mode. Try using the formulas and steps I outlined above to see how close you come to the actual voltage drop across resistors R5 and R6. As I said, you only have to measure the actual voltage at the HV Unit's "210" terminal then use the steps and formulas provided above to find out what the actual voltage at the "TUNE" terminal will be. Isn't electronics fun???
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> >
> > Hi Mike,so you think me replacing R5 & R6 on the HV unit will sort the problem with the IP meter not working in the tune position??
> >
> > I just spotted your post over on QRZ.com forum...
> >
> > http://forums.qrz.com/showthread.php?241704-Small-Problem-tuning-TS-520S

> >
> > Shame the guy did'nt let everyone know the outcome,cheers,Shaun.
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > I forgot to mention about the 150+ watts output from your TS-520S.
> > >
> > > The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> > > >
> > > > Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> > > > Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> > > > As im sure my old TS-520S did 150+ when maxxed out.
> > > >
> > >
> >
>

30158. Re: intermittent rit/xit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 19:36:58 UTC
From: w5rkl
Topic: 30154 Message: 30158

I first recommend cleaning all the plugs on the IF Unit board with contact cleaner. Use a cotton swab wet with cleaner and rub the swab on the pins then while the pins are still wet with cleaner insert the plug a few times. Follow the cleaning with generous use of canned air to remove any/all cleaner residue.

Clean one plug at a time.

Look at the RIT and XIT push buttons. Over time the buttons can collect "gunk" and "dirt" around the sides of the buttons and can prevent the buttons from sliding freely through the front panel. Clean the buttons with canned air. The RIT and XIT switches behind the push buttons are sealed so they can't be cleaned with contact cleaner.

Once completed, test for proper operation.

Perform all the cleaning with ALL power turned OFF and the primary power plug removed from the wall outlet.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "dek7nrt" <dek7nrt@...> wrote:
>
> I have a TS 530s that performs excellent but I have just noticed a problem with the RIT/XIT only works occasionally. I haven't noticed this problem until just this evening. Anyone have any suggestions?
>
> Thank you...
>

30159. Re: TS-520E IP meter position not working for dipping plate

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-10 19:54:29 UTC
From: w5rkl
Topic: 30123 Message: 30159

Hi Shaun,

I'm glad to hear your 520 is back in full operation.

The response I gave you with all the resistor, math and voltages information was to show you why I felt R5 and/or R6 were the source of your problem.

If you want to see first hand what happens when a resistor changes value in a series circuit such as R5 and R6 on the HV Unit, you can build the same circuit but use a 9 volt battery as the source voltage.

Use the formulas I gave you. Once you build the simple series resistor network, do not measure the actual voltage at the junction of the 2 resistors but rather do the math (ohms law) calculations first. Once you have finished with your ohms law calculation then measure the voltage at the junction of the 2 resistor to see if your math is correct. Don't worry if you are off by half of a volt or if the voltage drops, added together, are something like 8.999VDC. That's fine. The key is to understand how the circuit works and what happens if something changes in the circuit and what to expect for a voltage reading.

Next, change one of the resistors to say 100K and repeat the process and you should see a "different" voltage at the junction of the 2 resistors which is exactly what happened in your 520, only your test jig with 9 volt batter is much safer and easier to mess around with.

This may seem trivial and possibility unnecessary but it is one of the foundations of understanding how current and voltages flow through series resistors and how if one resistor changes value how it affects the overall circuits connected to the resistor(s). It also teaches you about using simple ohms law math.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@...> wrote:
>
> Hi Mike,just to let you know you were 100% corect Mike,
> R5 & R6 were shot at,one was reading something like 96 kohms & the other was not reading anything on my multimeter.
> The new 56 kohm resistors arrived today so I installed them and my IP meter now works again in the Tune position,so yipee!!! :O)
> Thanks so much for your help on this Mike,this group is a valuable asset & without it i may not of found the cure for my problem,so a great result.
> Perhaps this info should be distributed online for other people with the same problem.
> Regards,Shaun :O)
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Shaun,

> >
> > Yes, R5 and R6 can affect the flow of electrons in the final tubes which results in less IP current displayed on the IP meter in TUNE mode if the resistor values become significantly out of tolerance.
> >
> > Resistors R5 and R6 on the HV Unit board form a resistive voltage divider network that reduces the final tube screen voltage in TUNE mode.
> >
> > Here's an example. Lets say the voltage applied to the HV Unit "210" terminal is "210VDC". The voltage flows through R5 and R6 to ground. The TUNE terminal is connected at the junction of R5 and R6.
> >
> > We must first determine the current through the series string of resistors R5 and R6. To do this we must use ohms law. Therefore, the total resistance of R5 and R6y is;
> >
> > 56000 + 56000 = 112000 ohms
> >
> > To determine the current through the series string of R5 and R6 series resistors, we use the following formula
> >
> > I = E / R
> >
> > 210 / 112000 = .001875
> >
> > The same amount of current flows through "both" resistors.
> >
> > We now can determine the voltage drop across R6, the first resistor in the string. To do that we use ohms law formula;
> >
> > E = I x R
> >
> > .001875 x 56000 = 105 volts (voltage drop across R6)
> >
> > The voltage drop across R5 uses the same formula
> >
> > .001875 x 56000 = 105 volts
> >
> > To determine if our calculation are correct, we add the 2 voltage drops together and the answer "must" equal the source voltage of 210VDC. Are we correct in our calculations?
> >
> > 105 + 105 = 210
> >
> > Yes we are because the 2 voltage drops added together equals the source voltage of 210VDC.
> >
> > The voltage used in the above example are not the actual voltages, they are only examples. To determine what the actual voltage drops across R5 and R6 you would have to measure the actual voltage applied to the HV Unit's "210" terminal then use the formulas in the above examples to determine the current and voltage drops accordingly.
> >

> > End of example.
> >
> >
> > Based on your comments about the IP current, switching to CW mode brought the IP current display on the meter back to normal, therefore allowing you to tune the 520SE up in CW mode but not in TUNE mode.
> >
> > When the Mode switch is set to CW, USB, or LSB mode, the final tube screen voltage no longer flows through R5 and R6 on the HV Unit board but rather flows through R7, 12K 1/2 watt resistor, on the HV Unit board resulting in the screen voltage returning to normal.
> >
> > I hope this answers any questions why R5 and R6 could be the source of your lack of IP current in TUNE mode. Try using the formulas and steps I outlined above to see how close you come to the actual voltage drop across resistors R5 and R6. As I said, you only have to measure the actual voltage at the HV Unit's "210" terminal then use the steps and formulas provided above to find out what the actual voltage at the "TUNE" terminal will be. Isn't electronics fun???
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> > >
> > > Hi Mike,so you think me replacing R5 & R6 on the HV unit will sort the problem with the IP meter not working in the tune position??
> > >
> > > I just spotted your post over on QRZ.com forum...
> > >
> > > http://forums.qrz.com/showthread.php?241704-Small-Problem-tuning-TS-520S
> > >
> > > Shame the guy did'nt let everyone know the outcome,cheers,Shaun.
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > I forgot to mention about the 150+ watts output from your TS-520S.
> > > >
> > > > The TS-520S is not designed to produce 150 watts output. If your watt meter is showing 150 watts output then the PI Network is not adjusted properly and you are putting undue stress on the final amplifier and the 520's power supplies. Any reactance in the antenna system can cause false increase in power output.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >

> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "corrinedewhurst" <corrinedewhurst@> wrote:
> > > > >
> > > > > Hi people,when wanting to dip the plate i have to put the radio in the CW position on the mode switch as the meter does not register in the Tune position on the IP meter as it should,and i have done all of the tune up procedure correct up until this point yet can't understand why it is doing this??? :oS
> > > > > Also the power on 80 meters into a 50 ohms dummy load with the plate idle current at 60ma when tuned for maximum output is 135 watts at 240ma on the IP meter,does this sound right??
> > > > > As im sure my old TS-520S did 150+ when maxxed out.
> > > > > >
> > > > >
> > > >
> > >
>

30160. Serial number_age of rig !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-11 21:49:41 UTC
From: Will
Topic: 30160 Message: 30160

hi everyone,
My TS830s has a serial number of 6050031
Is there a listing or register or any means of determining its approximate date of birth
regards
Will

30161. Re: [TS-520_820_530_830] Serial number_age of rig !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 00:42:31 UTC
From: AI4WM Bill
Topic: 30160 Message: 30161

Will,
I am not sure the database on the group can help or not. I found the date of mine by taking the top cover off and looking at the IC date codes. There is a method of getting close to the date, but I did not keep the email or I can't find it. Check K4EAA's site also.

73,

Bill

AI4WM

--- On Fri, 3/11/11, Will <gm0hks@...> wrote:

From: Will <gm0hks@...>
Subject: [TS-520_820_530_830] Serial number_age of rig !!
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, March 11, 2011, 4:49 PM

hi everyone,

My TS830s has a serial number of 6050031

Is there a listing or register or any means of determining its approximate date of birth

regards

Will

[Non-text portions of this message have been removed]

30162. TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 15:13:52 UTC
From: WL
Topic: 30162 Message: 30162

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

30163. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 16:08:39 UTC
From: wrench101
Topic: 30098 Message: 30163

Ok, I opened her up this morning and this is what I've found:

Rectifier board:

800 = 895
210B = 245
210A = 243
300B = 320
-C = -111
12 = -110
14A = 17.9

Final Sockets:

Pin 1 = 0
Pin 3 = 121
Pin 5 = -91

AF Unit:

12 = 11.5
TP4 = 9.8
TP6 = 9.0
Plug 11, Pin 5 = 3.2

Voltage at the top of the RF choke is at 895

The display is working properly, the relay clicks when switching from receive to transmit, no audio is present whatsoever. When the meter is in ALC mode and the unit is placed into transmit, the meter bounces slightly and returns home. Again, thanks to all for your input.
73 de AI4NV

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Measure the DC voltages on the AF Unit board at the following terminals and plug pin;
>
> 12
> TP-4
> TP-6
> Plug 11 pin 5
>
> The voltages present at the above terminals/plug pins are 12VDC or less. The voltages are measured in receive.
>
> 73s
> Mike
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Steve,
> >
> > Check and make ensure the rear panel "SG" switch is set to "ON".
> >
> > Next, measure the voltages on the following Rectifier Unit terminals. The voltages on these terminals is "DC" and your volt meter must be set to measure "DC". Your DC volt meter must be capable of measuring at least 1,000VDC. Do not attempt to measure these voltages using a cheap "hardware store" $10 volt meter.
> >
> > 1. 800
> > 2. 300B
> > 3. 210A
> > 4. 210A
> > 5. -C
> > 6. 12
> >
> > Next, measure the DC voltages at the following final tube socket terminals in receive.
> >
> > Pin 1
> > Pin 3
> > Pin 5
> >
> > Last, measure the voltage at the top of RF choke "L2". RF Choke "L2" is inside the final amplifier's metal enclosure and is between the 2 final tubes. The top of RF Choke L2 connects to each of the final tube plates through the parasitic suppressors (each parasitic suppressor has a coil wrapped around a resistor and connected between RF Choke L2 and the top plate connector of each tube). The top cover of the final amplifier must be removed to make this measurement. RF Choke "L2" is the tall white cylinder with wire wrapped around it. Measure the voltage at the top of the RF Choke. The voltage at the top of RF Choke L2 should be the same as the voltage measured at the Rectifier Unit's "800" terminal.
> >
> > Use "extreme caution" when measuring these voltages. There are voltages inside the 530 that can kill you. All voltages are measure between the terminals indicated above and chassis ground. That measure the Red meter lead is connected to each terminal and the Black meter lead is connected to the 530's chassis.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > Hello all, been a while since I've been on. In the meantime, I've acquired a 530 on fleebay that's seen better days. I have no transmit and no receive. Rig powers up, meter lights up (now that I've changed the bulb!), no ALC, no IP, no RF, HV is around 450 to 500. Some idiot in the past decided to wrap the 6A fuse with aluminum foil when it blew which

you can imagine what the rig looks like. I've changed the HV caps, there are burn marks on the rectifier board which I've changed many diodes and resistors, the final board was burned, so I replaced the screen and cathode resistors, I performed the final cage repair that is noted on Ken's (k4eaa) website. So I've done some work, but my troubleshooting ability is poor. I noticed after working on the rectifier board that I lost some HV. I had about 900 before, but was worried about all the fried parts on the board. There was one bad diode, D10 if I remember correctly, and several resistors that were well out of tolerance. I'm not sure where to go next, any help would be greatly appreciated. 73 de AI4NV - Steve
> > >
> >
>

30164. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 17:59:23 UTC
From: Joseph Stiles
Topic: 30162 Message: 30164

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it does..then a mechanical issue is not likely. Look in the operators or service manual, it tells how to adjust the "S" meter. When the rig is first turned the meters needle will go full scale and will fall back to "0" If it does not..adjustment is indicated.

73's joe wb7uqu

From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

[Non-text portions of this message have been removed]

30165. Time Change

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 19:46:29 UTC
From: Allan C
Topic: 30165 Message: 30165

Time Change it will be time to change you Clocks and Watches at 2:00
A.M. Sunday Morning March 13, 2011 Do Not Forget!

[Non-text portions of this message have been removed]

30166. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 20:08:38 UTC
From: W LEWIS
Topic: 30162 Message: 30166

Thanks for responding, Joe. Yes, when the radio is off the indicator returns to "0".

--- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, March 12, 2011, 11:59 AM

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it
does..then a mechanical issue is not likely. Look in the operators or service
manual, it tells how to adjust the "S" meter. When the rig is first turned the
meters needle will go full scale and will fall back to "0" If it does
not..adjustment is indicated.

73's joe wb7uqu

_____
From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine
bought a complete 830 rig and I am attempting to check it out for him. I
corrected a dirty band switch problem but during tune-up I have to reduce the
carrier to about the 9:00 position to the keep the meter at 225 ma which
produces about 50 watts output. The thing I'm concerned with right now is that
when the unit is initially powered up the meter goes to about 90ma then slowly
(5 seconds) descends to and remains at 40ma. It seems that something is causing
the meter to read incorrectly which affects everything including setting the
bias. Can anyone give me an idea of what might be causing this and where I
should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30167. ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-12 17:06:39 UTC
From: w9aba@aim.com
Topic: 6293 Message: 30167

hello i was on 20meters this morning trying to make a contact with no luck about a hour later i get this email from a ham
saying he heard me on 20meters and my audio input to my xmtr modulated by AC or serous AC on my audio
can anyone help me with this what do i need to do

73's Ed w9aba

[Non-text portions of this message have been removed]

30168. Re: [TS-520_820_530_830] ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 01:51:30 UTC
From: Ken Johnson
Topic: 6293 Message: 30168

What kind of HF Radio

On Mar 12, 2011, at 12:06 PM, w9aba@... wrote:

>
>
>
> hello i was on 20meters this morning trying to make a contact with no luck about a hour later i get this email from a ham
> saying he heard me on 20meters and my audio input to my xmtr modulated by AC or serous AC on my audio
> can anyone help me with this what do i need to do
>
> 73's Ed w9aba
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

30169. SM-220 drifting

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 09:11:58 UTC
From: sv0xbq
Topic: 30169 Message: 30169

Has anyone looked at the problem of the sm-220 drifting? From trawling the internet it seems that this is a common problem. Just wondered if anyone else had been there before I open it up (again!)

Having said that I'm really enjoying this monitor. I'm finding it really useful.

Chris SV0XBQ/9

30170. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 10:45:54 UTC
From: John Hennessy
Topic: 30069 Message: 30170

ok, I've attempted the suggestions made here and unfortunately am not fixed yet. I opened the final cage area, discharged, removed the 6146B valve, cleaned sockets, wafer switches and all plates with deoxit followed by a blow out with compressed air. No cracks on the bandswitch coupler, it's as new with no signs of discoloring. Have not cleaned every connector as yet but can reveal the following behavior:

After adjusting the load control a little each time to arrive at 225ma I can get to that IP reading no problem but only have 50W of output power. If I wait up to 5 or more seconds while still in send the IP jumps to 350mA and the output power jumps at the same time to 100W. If I return to recv then straight back to send the problem remains. If I wait 4 or more seconds in between then I'm back to 225mA then a few seconds later it jumps back up to 350mA again. It's as if a component is breaking down full power.

Thanks for all the assistance so far. I'm sure its something simple but just haven't found it yet.

John.

On 8/03/2011 9:48 AM, Joseph Stiles wrote:
>
> John,
>
> The variable plates Mike is talking about, I think, are the ones in the
> "final cage" area..where the final amp tubes are. The are also 3 others
> connected to the "DRIVE" shaft. Get yourself some DEOXIT or similiar.
> UNPLUG
> rig, and let it sit. Remove top and bottom cover. There are...I think
> 6 screws
> that hold the cover on. Use an insulated screw driver to short to
> ground the
> plate choke...that's the thing with the two caps on it going to the
> tops of the
> finals..there is LETHAL VOLTAGE that can lurk in there. The load
> control is on
> the left...it has slider contacts..spray(sparingly) the plates and the
> contacts..work back and forth numerous times..blow off with "canned
> air." Do the
> same with the plate control....it.is in the middle. While your in
> there..remove
> the finals..and clean the large wafer switch..spray and rotate..blow dry.
> Inspect the band switch coupler...they crack where the hold-down
> screws are.
> And...have some more fun!....remove every connector...one at a

> time..use DEOXIT
> as above (remove and replace several times), also every switch, and/or
> pot. I
> have "fixed" problems..just by cleaning a rig that has sat
> around..collecting
> dust..etc.....good luck
>
> 73's joe wb7uqu
>
> _____
> From: John Hennessy <john@... <mailto:john%40hennessy.net.au>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, March 7, 2011 5:11:37 PM
> Subject: Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
>
> Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
> then peak the ALC and dip the plate as you've stated. The IP meter is
> jumping erractically while loading also as you've stated. Where exactly
> are the fixed and variable plates you are speaking of? The radio appears
> perfectly clean but has sat idle for many years. The rig has also been
> cleaned out gently with compressed air.
>
> thanks
>
> John.
>
> On 6/03/11 11:30 PM, w5rkl wrote:
> >
> > Hello John and Adrian,
> >
> > I do not believe the final tubes, "A" verses "B", is the source of
> > your problem.
> >
> > When comparing inter-electrode capacitance differences between the
> > 6146A and 6146B, the only inter-electrode capacitance difference is
> > the Grid #1 to Plate capacitance which is ".24pf" in the 6146A and
> > ".22pf" in the 6146B. All the other inter-electrode capacitance values
> > are the same in the 6146A and 6146B. A difference of ".02pfd" (.24 -
> > .22 = .02) when operating the final amplifier in the HF spectrum is
> > not a "significant" difference that warrants using only 6146Bs in the
> > hybrids. If the final amplifier were to be operating in the VHF
> > spectrum then I would be concerned but that's not the case with the
> > hybrids. When using "A" verses "B" tubes, neutralizing the final
> > amplifier is required.
> >
> > The final amplifier's neutralization adjustment does not drift or
> > change due to tube age.
> >
> > I am aware of and have read Glen Zook's "The 6146 Family of Tubes"

> > document in the files section.
> >
> > John, what position do you set the LOAD control when you start your
> > tune up procedure? I recommend setting the LOAD control fully CCW
> > (knob points to 9 o'clock) then start your tune up procedures, peak
> > ALC then dip the plate. Once you are at this point, advance the LOAD
> > control CW for a peak RF output and watch the IP meter while adjusting
> > the LOAD control. If the IP meter erratically jumps higher, not in a
> > smooth fashion, the I suspect the fixed and variable plates are
> > shorting due to corrosion, dirt, or the plates themselves are shorting.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > <john@...> wrote:
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> > > neutralization, this is new to me. Next time I have the radio open I
> > > will check the tubes. Having said that the radio is all original
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> > > expect original valves.
> > >
> > > John.
> > >
> > > On 5/03/11 9:37 PM, Adrian Ellison wrote:
> > > >
> > > > Hi John,
> > > >
> > > > I would check the plate tuning capacitor, ensuring that the rotating
> > > > vanes are
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> > > > check
> > > > the PA neutralization, the latter being the most likely cause.
> > > >
> > > > Also ensure that you have 6146Bs installed, not the A ...
> > > >
> > > > Regards
> > > >
> > > > Adrian - ZS1TTZ
> > >
> > >
> >
> [Non-text portions of this message have been removed]

>
> [Non-text portions of this message have been removed]
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>

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30171. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 13:34:29 UTC
From: sv0xbq
Topic: 30069 Message: 30171

Hi John,

A couple of things. Have you checked the TX/RCV relay contacts are clean. Also, loosen all of the pcb mount screws you can see, just half a turn and then tighten them up again. They ground various circuits to chassis and all sorts of weird and wonderful things can happen if one's getting a bad contact. Lastly, there's a solder joint right next to the finals valve caps. It gets mechanical stress every time the valves are removed. Resolder it in case it's dry. Just curious but what's the HT voltage level and what's it doing when the Ip varies?

Chris SV0XBQ/9

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> ok, I've attempted the suggestions made here and unfortunately am not
> fixed yet. I opened the final cage area, discharged, removed the 6146B
> valve, cleaned sockets, wafer switches and all plates with deoxit
> followed by a blow out with compressed air. No cracks on the bandswitch
> coupler, it's as new with no signs of discoloring. Have not cleaned
> every connector as yet but can reveal the following behavior:
>
> After adjusting the load control a little each time to arrive at 225ma I
> can get to that IP reading no problem but only have 50W of output power.
> If I wait up to 5 or more seconds while still in send the IP jumps to
> 350mA and the output power jumps at the same time to 100W. If I return
> to recv then straight back to send the problem remains. If I wait 4 or
> more seconds in between then I'm back to 225mA then a few seconds later
> it jumps back up to 350mA again. It's as if a component is breaking down
> full power.
>
> Thanks for all the assistance so far. I'm sure its something simple but
> just haven't found it yet.
>
> John.
>
>
> On 8/03/2011 9:48 AM, Joseph Stiles wrote:
> >
> > John,
> >
> > The variable plates Mike is talking about, I think, are the ones in the
> > "final cage" area..where the final amp tubes are. The are also 3 others
> > connected to the "DRIVE" shaft. Get yourself some DEOXIT or similiar.
> > UNPLUG
> > rig, and let it sit. Remove top and bottom cover. There are...I think
> > 6 screws

> > that hold the cover on. Use an insulated screw driver to short to
> > ground the
> > plate choke...that's the thing with the two caps on it going to the
> > tops of the
> > finals..there is LETHAL VOLTAGE that can lurk in there. The load
> > control is on
> > the left...it has slider contacts..spray(sparingly) the plates and the
> > contacts..work back and forth numerous times..blow off with "canned
> > air." Do the
> > same with the plate control....it.is in the middle. While your in
> > there..remove
> > the finals..and clean the large wafer switch..spray and rotate..blow dry.
> > Inspect the band switch coupler...they crack where the hold-down
> > screws are.
> > And...have some more fun!....remove every connector...one at a
> > time..use DEOXIT
> > as above (remove and replace several times), also every switch, and/or
> > pot. I
> > have "fixed" problems..just by cleaning a rig that has sat
> > around..collecting
> > dust..etc.....good luck
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: John Hennessy <john@... <mailto:john%40hennessy.net.au>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, March 7, 2011 5:11:37 PM
> > Subject: Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
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> > Hi Mike, LOAD control starts at its lowest CCW setting (9 o'clock). I
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> > are the fixed and variable plates you are speaking of? The radio appears
> > perfectly clean but has sat idle for many years. The rig has also been
> > cleaned out gently with compressed air.
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> > John.
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> > > your problem.
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> > > ALC then dip the plate. Once you are at this point, advance the LOAD
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> > > smooth fashion, the I suspect the fixed and variable plates are
> > > shorting due to corrosion, dirt, or the plates themselves are shorting.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy
> > > <john@> wrote:
> > > >
> > > > Hi Adrian, thanks for your reply. Can you please provide a little more
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> > > > John.
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> > > > > > Also ensure that you have 6146Bs installed, not the A ...
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> > > > > > Regards
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> > > > > > Adrian - ZS1TTZ
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> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
> >

30172. SM-230 on UK Ebay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 13:49:25 UTC
From: sv0xbq
Topic: 30172 Message: 30172

I've not seen one of these for sale for a long time.

http://cgi.ebay.co.uk/Kenwood-SM-230-Monitor-Scope-BOXED-z805-/190510132553?pt=UK_Consumer Electronics_SpecialistRadioEquipment_SM&hash=item2c5b49ed49#ht_1070wt_905

30173. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 16:40:41 UTC
From: w5rkl
Topic: 30069 Message: 30173

John,

I will assume the 530 is connected to a dummy load with a watt meter.

Set the LOAD control fully CCW.

Set meter to ALC

Tune the DRIVE control for maximum ALC indication.

Switch meter to IP.

While watching the IP meter AND the watt meter, adjust the PLATE control for maximum reduction in IP meter indication.

Note the watt meter's indication. The peak watt meter indication should occur at the same point of maximum IP meter indication when adjusting the PLATE control.

Once maximum IP current reduction (IP dip) occurs, adjust the PLATE control CW or CCW, and note of the watt meter peak RF indication rises or falls. If the watt meter rises more than 10 to 15 watts then the final amplifier is not neutralized.

Before you place any component, make any adjustments, etc, perform the above test first.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
>
> ok, I've attempted the suggestions made here and unfortunately am not
> fixed yet. I opened the final cage area, discharged, removed the 6146B
> valve, cleaned sockets, wafer switches and all plates with deoxit
> followed by a blow out with compressed air. No cracks on the bandswitch
> coupler, it's as new with no signs of discoloring. Have not cleaned
> every connector as yet but can reveal the following behavior:
>
> After adjusting the load control a little each time to arrive at 225ma I
> can get to that IP reading no problem but only have 50W of output power.
> If I wait up to 5 or more seconds while still in send the IP jumps to
> 350mA and the output power jumps at the same time to 100W. If I return
> to recv then straight back to send the problem remains. If I wait 4 or
> more seconds in between then I'm back to 225mA then a few seconds later
> it jumps back up to 350mA again. It's as if a component is breaking down
> full power.
>
> Thanks for all the assistance so far. I'm sure its something simple but
> just haven't found it yet.

>
> John.

30174. Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 16:43:17 UTC
From: w5rkl
Topic: 30069 Message: 30174

John,

Another possibility is the relay on the IF Unit may be getting flaky. However, before focusing on the relay, lets make sure the final amplifier is not causing the problem, i.e., making sure the final amplifier is neutralized.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> John,
>
> I will assume the 530 is connected to a dummy load with a watt meter.
>
> Set the LOAD control fully CCW.
>
> Set meter to ALC
>
> Tune the DRIVE control for maximum ALC indication.
>
> Switch meter to IP.
>
> While watching the IP meter AND the watt meter, adjust the PLATE control for maximum reduction in IP meter indication.
>
> Note the watt meter's indication. The peak watt meter indication should occur at the same point of maximum IP meter indication when adjusting the PLATE control.
>
> Once maximum IP current reduction (IP dip) occurs, adjust the PLATE control CW or CCW, and note of the watt meter peak RF indication rises or falls. If the watt meter rises more than 10 to 15 watts then the final amplifier is not neutralized.
>
> Before you place any component, make any adjustments, etc, perform the above test first.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@> wrote:
> >
> > ok, I've attempted the suggestions made here and unfortunately am not
> > fixed yet. I opened the final cage area, discharged, removed the 6146B

> > valve, cleaned sockets, wafer switches and all plates with deoxit
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> > just haven't found it yet.
> >
> > John.
>

30175. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 16:44:52 UTC
From: Joseph Stiles
Topic: 30162 Message: 30175

Butch,

Also, forgot to mention that you can cheat a bit on the "S" meter adjustment. If you do not have a signal generator, you can use the "calibrator signal." It will not be as accuate but, will give you and idea if the meter is working properly. Dial up frequency to about 14.175MHz with the "cal" signal "ON" adjust the drive control and vfo frequency for max "S" meter reading.The "cal" signal should be strong. You should see about S-8/9..you can adjust the pot as indicated. If the IF/RF boards are way out of alignment this adjustment will not be effective, and will only be fooling you even more. Check the basic alignment steps in the operator manual. Remember this is cheating...but will give you and idea..

73's joe wb7uqu

From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 12:08:38 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Thanks for responding, Joe. Yes, when the radio is off the indicator returns to "0".

--- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@yahoo.com> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, March 12, 2011, 11:59 AM

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it does..then a mechanical issue is not likely. Look in the operators or service manual, it tells how to adjust the "S" meter. When the rig is first turned the meters needle will go full scale and will fall back to "0" If it does not..adjustment is indicated.

73's joe wb7uqu

From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

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[Non-text portions of this message have been removed]

30176. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 17:34:40 UTC
From: Charles Coffee
Topic: 30069 Message: 30176

Mike and John:

Should the following statement:

"Note the watt meter's indication. The peak watt meter indication should
occur at the same point of maximum IP meter indication when adjusting the
PLATE control."

be changed to read *minimum* IP meter indication when adjusting the PLATE
control (maximum RF Out on
watt meter) ?

Regards

Chuck, KJ4GU

On Sun, Mar 13, 2011 at 12:40 PM, w5rkl <w5rkl@...> wrote:

> John,
>
> I will assume the 530 is connected to a dummy load with a watt meter.
>
> Set the LOAD control fully CCW.
>
> Set meter to ALC
>
> Tune the DRIVE control for maximum ALC indication.
>
> Switch meter to IP.
>
> While watching the IP meter AND the watt meter, adjust the PLATE control
> for maximum reduction in IP meter indication.
>
> Note the watt meter's indication. The peak watt meter indication should
> occur at the same point of maximum IP meter indication when adjusting the
> PLATE control.
>
> Once maximum IP current reduction (IP dip) occurs, adjust the PLATE control
> CW or CCW, and note of the watt meter peak RF indication rises or falls. If
> the watt meter rises more than 10 to 15 watts then the final amplifier is
> not neutralized.
>
> Before you place any component, make any adjustments, etc, perform the
> above test first.
>
> 73s
> Mike

> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:
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> > John.
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>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
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30177. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 17:45:07 UTC
From: W5RKL
Topic: 30069 Message: 30177

Yes. I meant to type "minimum" but typed "maximum".

Sorry.

73s
Mike
W5RKL

--- On Sun, 3/13/11, Charles Coffee <chascoffee@...> wrote:

From: Charles Coffee <chascoffee@...>
Subject: Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S
To: TS-520_820_530_830@yahoogroups.com
Cc: "w5rkl" <w5rkl@...>
Date: Sunday, March 13, 2011, 12:34 PM

Mike and John:

Should the following statement:

"Note the watt meter's indication. The peak watt meter indication should
occur at the same point of maximum IP meter indication when adjusting
the PLATE control."

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watt meter) ?

Regards

Chuck, KJ4GU

On Sun, Mar 13, 2011 at 12:40 PM, w5rkl <w5rkl@...> wrote:

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Before you place any component, make any adjustments, etc, perform the above test first.

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Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Hennessy <john@...> wrote:

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> John.

Yahoo! Groups Links

http://groups.yahoo.com/group/TS-520_820_530_830/

Individual Email | Traditional

http://groups.yahoo.com/group/TS-520_820_530_830/join

(Yahoo! ID required)

TS-520_820_530_830-digest@yahoogroups.com

TS-520_820_530_830-fullfeatured@yahoogroups.com

TS-520_820_530_830-unsubscribe@yahoogroups.com

http://docs.yahoo.com/info/terms/

[Non-text portions of this message have been removed]

30178. Re: [TS-520_820_530_830] ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 05:02:52 UTC
From: w9aba@aim.com
Topic: 6293 Message: 30178

ITS A KENWOOD TS-830S

-----Original Message-----
From: Ken Johnson <nz4q@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Cc: ts-520_820_530_830 <ts-520_820_530_830@yahoogroups.com>
Sent: Sat, Mar 12, 2011 7:51 pm
Subject: Re: [TS-520_820_530_830] ts-830s

What kind of HF Radio

On Mar 12, 2011, at 12:06 PM, w9aba@... wrote:

>
>
>
> hello i was on 20meters this morning trying to make a contact with no luck about a hour later i get this email from a ham
> saying he heard me on 20meters and my audio input to my xmtr modulated by AC or serous AC on my audio
> can anyone help me with this what do i need to do
>
> 73's Ed w9aba
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30179. Re: 530, No transmit, no receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 19:51:47 UTC
From: wrench101
Topic: 30098 Message: 30179

I've also found on the foil side of the IF board a few traces that have been purposely cut. Does anyone know if any traces should be cut at all? The cut traces are "near" L13 and also near connector 1. Thanks. 73 de Steve, AI4NV

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Ok, I opened her up this morning and this is what I've found:
>
> Rectifier board:
>
> 800 = 895
> 210B = 245
> 210A = 243
> 300B = 320
> -C = -111
> 12 = -110
> 14A = 17.9
>
> Final Sockets:
>
> Pin 1 = 0
> Pin 3 = 121
> Pin 5 = -91
>
> AF Unit:
>
> 12 = 11.5
> TP4 = 9.8
> TP6 = 9.0
> Plug 11, Pin 5 = 3.2
>
> Voltage at the top of the RF choke is at 895
>
>
> The display is working properly, the relay clicks when switching from receive to transmit, no audio is present whatsoever. When the meter is in ALC mode and the unit is placed into transmit, the meter bounces slightly and returns home. Again, thanks to all for your input. 73 de AI4NV
>
>
>
> --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> >
> > Measure the DC voltages on the AF Unit board at the following terminals and plug pin;
> >

> > 12
> > TP-4
> > TP-6
> > Plug 11 pin 5
> >
> > The voltages present at the above terminals/plug pins are 12VDC or less. The voltages are measured in receive.
> >
> > 73s
> > Mike
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Steve,
> > >
> > > Check and make ensure the rear panel "SG" switch is set to "ON".
> > >
> > > Next, measure the voltages on the following Rectifier Unit terminals. The voltages on these terminals is "DC" and your volt meter must be set to measure "DC". Your DC volt meter must be capable of measuring at least 1,000VDC. Do not attempt to measure these voltages using a cheap "hardware store" $10 volt meter.
> > >
> > > 1. 800
> > > 2. 300B
> > > 3. 210A
> > > 4. 210A
> > > 5. -C
> > > 6. 12
> > >
> > > Next, measure the DC voltages at the following final tube socket terminals in receive.
> > >
> > > Pin 1
> > > Pin 3
> > > Pin 5
> > >
> > > Last, measure the voltage at the top of RF choke "L2". RF Choke "L2" is inside the final amplifier's metal enclosure and is between the 2 final tubes. The top of RF Choke L2 connects to each of the final tube plates through the parasitic suppressors (each parasitic suppressor has a coil wrapped around a resistor and connected between RF Choke L2 and the top plate connector of each tube). The top cover of the final amplifier must be removed to make this measurement. RF Choke "L2" is the tall white cylinder with wire wrapped around it. Measure the voltage at the top of the RF Choke. The voltage at the top of RF Choke L2 should be the same as the voltage measured at the Rectifier Unit's "800" terminal.
> > >
> > > Use "extreme caution" when measuring these voltages. There are voltages inside the 530 that can kill you. All voltages are measure between the terminals indicated above and chassis ground. That measure the Red meter lead is connected to each terminal and the Black meter lead is connected to the 530's chassis.

> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > Hello all, been a while since I've been on. In the meantime, I've acquired a 530 on fleebay that's seen better days. I have no transmit and no receive. Rig powers up, meter lights up (now that I've changed the bulb!), no ALC, no IP, no RF, HV is around 450 to 500. Some idiot in the past decided to wrap the 6A fuse with aluminum foil when it blew which you can imagine what the rig looks like. I've changed the HV caps, there are burn marks on the rectifier board which I've changed many diodes and resistors, the final board was burned, so I replaced the screen and cathode resistors, I performed the final cage repair that is noted on Ken's (k4eaa) website. So I've done some work, but my troubleshooting ability is poor. I noticed after working on the rectifier board that I lost some HV. I had about 900 before, but was worried about all the fried parts on the board. There was one bad diode, D10 if I remember correctly, and several resistors that were well out of tolerance. I'm not sure where to go next, any help would be greatly appreciated. 73 de AI4NV - Steve
> > > >
> > >
> >
>

30180. Knwd AT-230 FS

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 19:57:30 UTC
From: jsloss
Topic: 30180 Message: 30180

Little use - like new. Can send photos. Pls reply direct.

Thanks

Joe k7mks

[Non-text portions of this message have been removed]

30181. TS-820 FREQUENCY COUNTER PROBLEM

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 20:36:23 UTC
From: kd5utc
Topic: 30181 Message: 30181

MY FREQ COUNTER ONLY SHOWS 7 AND 6 ON IT DOES NOT ANY ACTUAL FREQUENCY IT DOES TX AND REC ALL BANDS BUT CANT TELL WHAT FREQUENCY IM ON ANY HELP TO TELL ME HOW TO FIX THIS ISSUE BOUGHT IT AND REALLY WANT IT TO WORK LIKE IT SHOULD. THANK RICK KD5UTC

30182. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 22:24:43 UTC
From: W LEWIS
Topic: 30162 Message: 30182

Hi Joe,

Thanks for the help. I've had my 830 for over a year and have referred to both the owner's and service manual dozens, if not hundreds of times and apparently overlooked this every time. The meter is not an issue with my radio so maybe that's why I missed it. Anyway, the 14.175 marker was dead on and the meter adjustment was easy. S meter reads a solid S8 with the marker and zero with no signal. I noticed that on power-up the initial needle deflection is only to 50ma before it settles down to "0". There are other issues with my friends radio during tune-up and as a relative newby I'm working on a description that is both accurate and can be clearly understood. Bottom line is that after the tuning process I must reduce the carrier to about 9:00 to be at 225ma during key-up on CW showing about 50 watts out on the watt meter in my 949E. The carrier control is VERY sensitive. Moving the carrier from 9:00 to between 11:00and
12:00 results in movement from 225ma to full deflection. This radio is exceptionally clean both inside and out and I think is suffering mostly from non use. If anything I've described so far points in any particular direction please let me know. Again, thanks for the help with the meter adjustment. After reading your email it took about 9 seconds to find it in the owner's manual. Duh.
Best 73s,
Butch Lewis
KØPSA

--- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 13, 2011, 11:44 AM

Butch,

Also, forgot to mention that you can cheat a bit on the "S" meter adjustment. If you do not have a signal generator, you can use the "calibrator signal." It will not be as accuate but, will give you and idea if the meter is working properly. Dial up frequency to about 14.175MHz with the "cal" signal "ON" adjust the drive control and vfo frequency for max "S" meter reading.The "cal" signal should be strong. You should see about S-8/9..you can adjust the pot as indicated. If the IF/RF boards are way out of alignment this adjustment will not be effective, and will only be fooling you even more. Check the basic alignment steps in the operator manual. Remember this is cheating...but will give you and idea..

73's joe wb7uqu

_____
From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com

Sent: Sat, March 12, 2011 12:08:38 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Thanks for responding, Joe. Yes, when the radio is off the indicator returns to "0".

--- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@yahoo.com>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, March 12, 2011, 11:59 AM

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it does..then a mechanical issue is not likely. Look in the operators or service manual, it tells how to adjust the "S" meter. When the rig is first turned the meters needle will go full scale and will fall back to "0" If it does not..adjustment is indicated.

73's joe wb7uqu

_____
From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30183. Re: [TS-520_820_530_830] TS-820 FREQUENCY COUNTER PROBLEM

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 22:27:52 UTC
From: Joseph Stiles
Topic: 30181 Message: 30183

Rick,

Does the "6" & "7" show up no matter what band? The 820S's are known for problems with frequency readouts. First..get yourself some DEOXIT..or similar. Turn OFF rig..and unplug. The DG-1 is on the left side of the VFO as you look at the rig, it has a multi-pin connector that goes to the frequency readout tube. Unplug that and use DEOXIT with a Q-tip on the pins..put connector back on and off several times. Blow off with "canned air." Do the same with the connector on the bottom of the DG-1 unit..you have to take off the bottom cover of the rig. Make sure all connectors are plugged back in. Plug back in...and check for operation. You MAY have to remove the DG-1 unit and remove the boards..one-by-one, and clean the pins/connectors on the inside, with procedure outlined above as above. If that does not work...then more is wrong. There are message threads here all about the problems with the 820S DG-1 diaplay.....good luck

73's joe wb7uqu

From: kd5utc <kd5utc@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 13, 2011 1:36:23 PM
Subject: [TS-520_820_530_830] TS-820 FREQUENCY COUNTER PROBLEM

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[Non-text portions of this message have been removed]

30184. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 22:41:26 UTC
From: Joseph Stiles
Topic: 30162 Message: 30184

Butch,

If the rig has been "mis-tuned," "over-driven," or taking an overly long time to tune up..over a period of possibly years..there are some components in the final cage area that can be damaged by excessive heat and or current. Also, check the value of the 4 (four) 20 ohm resistors on the final board. They should read about 5.0 ohms (plus/minus tolerance) to ground. Find an X-ray view of the final board...it does not have to be removed to check the resistors. The closer to 5 ohms the better. If these resistors are too far out of value, you will get and erroneous plate current reading/versus power out. Mike(w5rkl) may also add to this. Good luck.....

73's joe wb7uqu

From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 13, 2011 3:24:43 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Hi Joe,

Thanks for the help. I've had my 830 for over a year and have referred to both the owner's and service manual dozens, if not hundreds of times and apparently overlooked this every time. The meter is not an issue with my radio so maybe that's why I missed it. Anyway, the 14.175 marker was dead on and the meter adjustment was easy. S meter reads a solid S8 with the marker and zero with no signal. I noticed that on power-up the initial needle deflection is only to 50ma before it settles down to "0". There are other issues with my friends radio during tune-up and as a relative newby I'm working on a description that is both accurate and can be clearly understood. Bottom line is that after the tuning process I must reduce the carrier to about 9:00 to be at 225ma during key-up on CW showing about 50 watts out on the watt meter in my 949E. The carrier control is VERY sensitive. Moving the carrier from 9:00 to between 11:00and
12:00 results in movement from 225ma to full deflection. This radio is exceptionally clean both inside and out and I think is suffering mostly from non use. If anything I've described so far points in any particular direction please let me know. Again, thanks for the help with the meter adjustment. After reading your email it took about 9 seconds to find it in the owner's manual. Duh.
Best 73s,
Butch Lewis
KØPSA

--- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 13, 2011, 11:44 AM

Butch,

Also, forgot to mention that you can cheat a bit on the "S" meter adjustment. If you do not have a signal generator, you can use the "calibrator signal." It will not be as accuate but, will give you and idea if the meter is working properly. Dial up frequency to about 14.175MHz with the "cal" signal "ON" adjust the drive control and vfo frequency for max "S" meter reading.The "cal" signal should be strong. You should see about S-8/9..you can adjust the pot as indicated. If the IF/RF boards are way out of alignment this adjustment will not be effective, and will only be fooling you even more. Check the basic alignment steps in the operator manual. Remember this is cheating...but will give you and idea..

73's joewb7uqu

From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 12:08:38 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Thanks for responding, Joe. Yes, when the radio is off the indicator returns to "0".

--- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, March 12, 2011, 11:59 AM

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it does..then a mechanical issue is not likely. Look in the operators or service manual, it tells how to adjust the "S" meter. When the rig is first turned the meters needle will go full scale and will fall back to "0" If it does not..adjustment is indicated.

73's joewb7uqu

From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

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[Non-text portions of this message have been removed]

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30185. TS-520 RF TX Gain Problem.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-13 22:37:42 UTC
From: rfoutpwr
Topic: 30185 Message: 30185

OK Folks my beloved TS-520 has a problem.

I have owned it brand spanking new since 1974.

As I was tuning up into a dummy load today.

My transmit RF gain control stopped having any effect in controlling the output..

The meter reads full scale on receive and shows like I am using full RF TX gain all the time in the tune position.

Any thoughts or ideas as to the cause before I delve into my beautiful TS-520.

Any help appreciated !!!!!!!):):

Jim

30186. T599 needs some TLC (and parts)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 01:27:26 UTC
From: Bill
Topic: 30186 Message: 30186

Hi Everybody,

I'm working on my 40 year old transmitter and I see quite a bit of dust in deep corners. I have seen references on this and some other lists about "canned compressed air". I don't do industrial work any more so I have no access to an air compressor. Where can I get "canned compressed air"?

I have to replace the "carrier" control on mine as the old one is intermittent. I disassembled it and the resistance material in the pot is worn through. I have only to wait for the new one to arrive. I put new finals in it about a year and half ago and now it also needs a new driver tube (40 years old!). I just happen to already have a couple of those and that transmitter is the reason I got them <g>. I can't find any 'measurable' output at the transverter terminal when I have that on (finals off). That is coupled from the driver tube.

I'm going to check/tweak the alignment too but that seems to be pretty close and is probably okay. It wants to work...just can't quite.

73,

Bill KU8H

30187. Re: [TS-520_820_530_830] T599 needs some TLC (and parts)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 01:38:01 UTC
From: Bob Macklin
Topic: 30186 Message: 30187

Try B&H Photo for the canned air if you don't find it elsewhere.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Bill
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 13, 2011 6:27 PM
Subject: [TS-520_820_530_830] T599 needs some TLC (and parts)

Hi Everybody,

I'm working on my 40 year old transmitter and I see quite a bit of dust in deep corners. I have seen references on this and some other lists about "canned compressed air". I don't do industrial work any more so I have no access to an air compressor. Where can I get "canned compressed air"?

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I'm going to check/tweak the alignment too but that seems to be pretty close and is probably okay. It wants to work...just can't quite.

73,

Bill KU8H

[Non-text portions of this message have been removed]

30188. Re: [TS-520_820_530_830] ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 03:20:38 UTC
From: Ken Johnson
Topic: 6293 Message: 30188

Use headphones, press your mon under the fix button speak into the same mic if you here it try a different mic and try again. Let me know'

On Mar 13, 2011, at 12:02 AM, w9aba@... wrote:

>
> ITS A KENWOOD TS-830S
>
> -----Original Message-----
> From: Ken Johnson <nz4q@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Cc: ts-520_820_530_830 <ts-520_820_530_830@yahoogroups.com>
> Sent: Sat, Mar 12, 2011 7:51 pm
> Subject: Re: [TS-520_820_530_830] ts-830s
>
> What kind of HF Radio
>
> On Mar 12, 2011, at 12:06 PM, w9aba@... wrote:
>
> >
> >
> >
> > hello i was on 20meters this morning trying to make a contact with no luck about a hour later i get this email from a ham
> > saying he heard me on 20meters and my audio input to my xmtr modulated by AC or serous AC on my audio
> > can anyone help me with this what do i need to do
> >
> > 73's Ed w9aba
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

30189. Re: [TS-520_820_530_830] T599 needs some TLC (and parts)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 03:22:13 UTC
From: Joseph Stiles
Topic: 30186 Message: 30189

Bill,

You can find "canned air" at Wal-Mart, and some other stores that have a computer section. I go to Costco (warehouse big box store) and buy in a 6 pack as I use it often. Your other problem...off the top of the head...I don't know.....several others in this group can probably help you.....

73's joe wb7uqu

From: Bill <w_r_cromwell@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 13, 2011 6:27:26 PM
Subject: [TS-520_820_530_830] T599 needs some TLC (and parts)

Hi Everybody,

I'm working on my 40 year old transmitter and I see quite a bit of dust in deep corners. I have seen references on this and some other lists about "canned compressed air". I don't do industrial work any more so I have no access to an air compressor. Where can I get "canned compressed air"?

I have to replace the "carrier" control on mine as the old one is intermittent. I disassembled it and the resistance material in the pot is worn through. I have only to wait for the new one to arrive. I put new finals in it about a year and half ago and now it also needs a new driver tube (40 years old!). I just happen to already have a couple of those and that transmitter is the reason I got them <g>. I can't find any 'measurable' output at the transverter terminal when I have that on (finals off). That is coupled from the driver tube.

I'm going to check/tweak the alignment too but that seems to be pretty close and is probably okay. It wants to work...just can't quite.

73,

Bill KU8H

[Non-text portions of this message have been removed]

30190. TS-830s Final unit value R1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 06:37:14 UTC
From: Chris Parnell
Topic: 30190 Message: 30190

Hi there,

Can anyone tell me what the value of R1 in the final unit board should be on the 830s please?
I cannot see it on the 830s Parts list☐ It lists R2 R5 then R7 and R8 only.

Thanks
Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

30191. Re: TS-830s Final unit value R1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 13:01:23 UTC
From: w5rkl
Topic: 30190 Message: 30191

Hello Chris,

R1 is 100 ohms.

Have a great day.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi there,
>
> Can anyone tell me what the value of R1 in the final unit board should be on
> the 830s please?
> I cannot see it on the 830s Parts list☐ It lists R2 R5 then R7 and R8
> only.
>
>
> Thanks
> Chris Parnell, ZL1CDP
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30192. Re: TS-830s Final unit value R1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 13:06:37 UTC
From: w5rkl
Topic: 30190 Message: 30192

Chris,

R1 is shown on the 830 final unit schematic in the service manual. R1 is in series with L1 at the "FG" terminal that lead to pin 5 of the final tube socket pins 5.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi there,
>
> Can anyone tell me what the value of R1 in the final unit board should be on
> the 830s please?
> I cannot see it on the 830s Parts list☐ It lists R2 R5 then R7 and R8
> only.
>
>
> Thanks
> Chris Parnell, ZL1CDP
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30193. Transistors Q1, Q2, Q3, and Q7 on TS-820 AF-AVR Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 15:49:08 UTC
From: ae5uu
Topic: 30193 Message: 30193

Does anyone have a source for transistors Q1, Q2, Q3, and Q7 found on the AF-AVR Unit of the TS-820? The original numbers are:

Q1 and Q2 2SC1000(GR)
Q3 TA7201P
Q7 2SA496Y

Thanks to a posting from W5RKL, I have located a new number and a source for Q4-6, NTE-85 (originally 2SC372.)

Again thanks to Mike, I now have a new part number and a source for D5, 1N5234B (originally WZ-061)

I found these parts at www.mouser.com

73,

Russell
AE5UU

30194. Re: [TS-520_820_530_830] TS-830s Final unit value R1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 16:05:10 UTC
From: n6wk@n6wk.com
Topic: 30190 Message: 30194

100 Ohms

Gordon

On 3/13/2011 11:37 PM, Chris Parnell wrote:
>
> Hi there,
>
> Can anyone tell me what the value of R1 in the final unit board should
> be on
> the 830s please?
> I cannot see it on the 830s Parts list? It lists R2 ? R5 then R7 and R8
> only.
>
> Thanks
> Chris Parnell, ZL1CDP
>
> [Non-text portions of this message have been removed]
>
>

30195. Re: [TS-520_820_530_830] Transistors Q1, Q2, Q3, and Q7 on TS-820 AF-AVR Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 16:14:32 UTC
From: n6wk@n6wk.com
Topic: 30193 Message: 30195

The 2SC1000 (GR) is a NTE199
the 2SA496Y is a NTE374 but if it is a 2SA496-Y it is a NTE185
I have no cross for theTA7201P shown

Gordon

On 3/14/2011 8:49 AM, ae5uu wrote:
>
> Does anyone have a source for transistors Q1, Q2, Q3, and Q7 found on
> the AF-AVR Unit of the TS-820? The original numbers are:
>
> Q1 and Q2 2SC1000(GR)
> Q3 TA7201P
> Q7 2SA496Y
>
> Thanks to a posting from W5RKL, I have located a new number and a
> source for Q4-6, NTE-85 (originally 2SC372.)
>
> Again thanks to Mike, I now have a new part number and a source for
> D5, 1N5234B (originally WZ-061)
>
> I found these parts at www.mouser.com
>
> 73,
>
> Russell
> AE5UU
>
>

30196. ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 15:56:45 UTC
From: kd5utc
Topic: 29281 Message: 30196

my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
thanks Rick

30197. Re: T599 needs some TLC (and parts)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 16:07:09 UTC
From: Bill
Topic: 30186 Message: 30197

Thanks Everybody,

...for the info about the canned air. We have a Wal Mart about five miles from home so I'll look for it there.

I already have a replacement for the worn out control on the way (and a spare T/R relay, too). Replacing the driver tube should restore the low level transverter output so I'm all set for now.

73,

Bill KU8H

30198. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 16:48:41 UTC
From: w5rkl
Topic: 29281 Message: 30198

Hello Rick,

I assume you have a watt meter and more than likely it is an "average" power watt meter not a peak power watt meter.

When speaking in a normal voice level with the MIC gain set between 9 and 10 o'clock, the power output on any average power watt meter will be between 25 and 30 watts which is "normal".

If you set the meter switch to ALC and speak in a normal voice level into the microphone with the MIC gain set between 9 and 10 o'clock, the ALC meter should just start to flicker above zero. That's the point of maximum gain and peak power output even though your average watt meter only displays 20 to 30 watts.

Tune the 820 up in TUNE and CW mode for full output, approximately 100 to 110 watts. Switch to sideband and set the meter switch to ALC. While speaking in a normal voice level into the microphone, adjust the MIC gain so the ALC meter just starts to flicker above zero. This is the point of maximum gain and peak RF output even though your average watt meter only shows between 20 and 30 watts peak output.

Do not fall into the trap many others have by adjusting the MIC gain so the average watt meter shows upwards of 80 to 100 watts output. This will create loads of splatter, distortion in the audio at the distant receiving end, and over drive the final amplifier into non-linear operation.

There doesn't appear to be anything wrong with your TS-820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@...> wrote:
>
> my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
> thanks Rick
>

30199. More on TS-820 AF-AVR Unit transistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 16:58:26 UTC
From: ae5uu
Topic: 30199 Message: 30199

Thank you for your reply Gordon.

The exact Kenwood lettering for Q7 is 2SA496 (Y) on the AF-AVR (X49-1080-00) board. In the TS-820 Service Manual the part is listed as 2SA496. So I am at a loss as to which equivalent to pick, the NTE-374 (2SA496Y) or the NTE-185 (2SA496-Y).

If you have any further thoughts, I would enjoy hearing them.

For now I am going to hope that Q3 on this board is OK. But if anyone has a reference number for the TA7201P (11 input terminals), hovever, I would appreciate hearing about it.

Thanks. 73,

Russell
AE5UU

30200. Re: [TS-520_820_530_830] Re: T599 needs some TLC (and parts)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:01:22 UTC
From: W LEWIS
Topic: 30186 Message: 30200

Bill,

I haven't read all the replies but the product you are looking for is called "Dust Off". You might call the store to make sure they have it before you make the trip.

Butch Lewis
KØPSA

--- On Mon, 3/14/11, Bill <w_r_cromwell@...> wrote:

From: Bill <w_r_cromwell@...>
Subject: [TS-520_820_530_830] Re: T599 needs some TLC (and parts)
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 14, 2011, 11:07 AM

Thanks Everybody,

...for the info about the canned air. We have a Wal Mart about five miles from home so I'll look for it there.

I already have a replacement for the worn out control on the way (and a spare T/R relay, too). Replacing the driver tube should restore the low level transverter output so I'm all set for now.

73,

Bill KU8H

[Non-text portions of this message have been removed]

30201. Re: [TS-520_820_530_830] ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:12:34 UTC
From: Jim S
Topic: 29281 Message: 30201

Perfectly normal! It all has to do with the ratio between a human voice's peak and average power. Average power of a voice is about 30 % of the peak. The meters on your 820 respond to AVERAGE power. Don't try to get any more out of the radio, or you will have distortion, clipping and all kinds of nasty stuff !

This question is asked about once a week on the QRZ forum !

Jim AG3Y

----- Original Message -----
From: kd5utc
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 14, 2011 11:56 AM
Subject: [TS-520_820_530_830] ts820 output

my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
thanks Rick

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17100)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17100)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

30202. 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:37:03 UTC
From: wrench101
Topic: 30202 Message: 30202

Well, I've done all I know to do. My 530 still won't receive or transmit. I have the following voltages:

Rectifier board:

800 = 895
210B = 245
210A = 243
300B = 320
-C = -111
12 = -110
14A = 17.9

Final Sockets:

Pin 1 = 0
Pin 3 = 243
Pin 5 = -91

AF Unit:

12 = 11.5
TP4 = 9.8
TP6 = 9.0
Plug 11, Pin 5 = 3.2

Voltage at the top of the RF choke is at 895

The display is working properly, the relay clicks when switching from receive to transmit, no audio is present whatsoever. When the meter is in ALC mode and the unit is placed into transmit, the meter bounces slightly and returns home. I am getting no idling current. I've cleaned connectors, replaced HV caps, cleaned bandswitch, cleaned pots, replaced screen and cathode resistors, took the cap off of RL1 and sprayed and worked the contacts, I've also found on the foil side of the IF board a few traces that have been purposely cut. Does anyone know if any traces should be cut at all? The cut traces are "near" L13 and also near connector 1. Seems like it should be something simple to me. The digital display follows the vfo when tuning. Previous owner sure messed things up a bit. On the rectifier board, R11 was jumpered, the 6A fuse was wrapped with foil. Most of the parts in the rectifier board have been replaced. I'm at a loss as what to do next. Again, all help is greatly appreciated. 73, Steve

30203. Re: [TS-520_820_530_830] 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:50:06 UTC
From: Bob Macklin
Topic: 30202 Message: 30203

First concentrate on fixing the receiver. You will probably find it is a common problem.

Do you know how to check the oscillators?

What kind of test equipment do you have?

----- Original Message -----
From: wrench101
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 14, 2011 10:37 AM
Subject: [TS-520_820_530_830] 530 No Transmit, No Receive

Well, I've done all I know to do. My 530 still won't receive or transmit. I have the following voltages:

Rectifier board:

800 = 895
210B = 245
210A = 243
300B = 320
-C = -111
12 = -110
14A = 17.9

Final Sockets:

Pin 1 = 0
Pin 3 = 243
Pin 5 = -91

AF Unit:

12 = 11.5
TP4 = 9.8
TP6 = 9.0
Plug 11, Pin 5 = 3.2

Voltage at the top of the RF choke is at 895

The display is working properly, the relay clicks when switching from receive to transmit, no audio is present whatsoever. When the meter is in ALC mode and the unit is placed into transmit, the meter bounces slightly and returns home. I am getting no idling current. I've cleaned connectors, replaced HV caps, cleaned bandswitch, cleaned pots, replaced screen and cathode resistors, took the cap off of RL1 and sprayed and worked the contacts, I've also found on the foil side of the IF board a few traces that have been purposely cut. Does anyone know if any traces should be cut at all? The cut traces are "near" L13 and also near connector 1. Seems like it should be something simple to me. The

digital display follows the vfo when tuning. Previous owner sure messed things up a bit. On the rectifier board, R11 was jumpered, the 6A fuse was wrapped with foil. Most of the parts in the rectifier board have been replaced. I'm at a loss as what to do next. Again, all help is greatly appreciated. 73, Steve

[Non-text portions of this message have been removed]

30204. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:56:59 UTC
From: wrench101
Topic: 30202 Message: 30204

I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.

30205. Re: [TS-520_820_530_830] Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 18:03:02 UTC
From: Bob Macklin
Topic: 30202 Message: 30205

Without test equipment and knowledge the chances of fixing it are pretty slim.

You would probably be better off selling it on eBay.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: wrench101
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 14, 2011 10:56 AM
Subject: [TS-520_820_530_830] Re: 530 No Transmit, No Receive

I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.

[Non-text portions of this message have been removed]

30206. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 18:32:09 UTC
From: w5rkl
Topic: 30202 Message: 30206

Put the 530 on 40 meters (7 on the band switch), push the Marker button to the right of the meter, and tune the VFO to a 25Khz dial interval, such as 7.025, 7.050, 7.075, etc. You should heat a beat note, a tone, and that beat note should vary in frequency up or down, depending on which direction you rotate the VFO at the 25Khz dial setting. When you hear the beat note, adjust the DRIVE control for a peak S meter reading. On 40 meters the S meter should display at least S9 or more when adjusting the DRIVE control for a peak S meter reading.

Do not key the transmitter when doing this test. This tests the receiver's front end and all stages up to and including the audio amplifier.

Do this same test on all bands. The S meter should peak at least S9 on all bands but 12 and 10 meters which is most likely will be S7 or slightly less.

Lets us know how this simple receive test goes. Again, do not key the transmitter, this is a receive test.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.
>

30207. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 18:45:22 UTC
From: wrench101
Topic: 30202 Message: 30207

I get no response at all on the meter and get no marker signal from the speaker. Absolutely nothing from the speaker. Thanks for the suggestion. 73

30208. Re: [TS-520_820_530_830] More on TS-820 AF-AVR Unit transistors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 19:23:38 UTC
From: n6wk@n6wk.com
Topic: 30199 Message: 30208

Go with the NTE185 You'll be fine

73,
Gordon

On 3/14/2011 9:58 AM, ae5uu wrote:
>
> Thank you for your reply Gordon.
>
> The exact Kenwood lettering for Q7 is 2SA496 (Y) on the AF-AVR
> (X49-1080-00) board. In the TS-820 Service Manual the part is listed
> as 2SA496. So I am at a loss as to which equivalent to pick, the
> NTE-374 (2SA496Y) or the NTE-185 (2SA496-Y).
>
> If you have any further thoughts, I would enjoy hearing them.
>
> For now I am going to hope that Q3 on this board is OK. But if anyone
> has a reference number for the TA7201P (11 input terminals), hovever,
> I would appreciate hearing about it.
>
> Thanks. 73,
>
> Russell
> AE5UU
>
>

30209. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 17:27:16 UTC
From: kd5utc
Topic: 29281 Message: 30209

no on the mic gain has to be turned all the way up in order to get output of 40-50 watts ,i tried turning the mic gain to 9-10 position and nothing at all . the only way any audio is achieved is wide open so there is the problem i know it should do fine at 9 or 10 but it dont at all any ideas what to check for?
thanks Rick

--- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@...> wrote:
>
> Perfectly normal! It all has to do with the ratio between a human voice's peak and average power. Average power of a voice is about 30 % of the peak. The meters on your 820 respond to AVERAGE power. Don't try to get any more out of the radio, or you will have distortion, clipping and all kinds of nasty stuff !
>
> This question is asked about once a week on the QRZ forum !
>
> Jim AG3Y
>
>
> ----- Original Message -----
> From: kd5utc
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 14, 2011 11:56 AM
> Subject: [TS-520_820_530_830] ts820 output
>
>
>
> my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
> thanks Rick
>
>
>
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>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17100)
> http://www.pctools.com
> =======
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>

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> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>

30210. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 19:27:05 UTC
From: w5rkl
Topic: 30202 Message: 30210

Have you checked the rear panel SG slide switch to ensure it is in the "ON" Position? If the SG switch is not in the ON position and the Heater switch is not turned ON you will not see any USB and LSB idling current. Makes sure the SG switch is set to ON and the Heater switch is ON.

Since the display is displaying the ham band frequencies and changes, up and down, in frequency when you rotate the VFO, that tells me the VFO and PLL Unit are at least working. Having said that, just because those circuits are working doesn't mean the receiver will work.

Since you don't have any receive, no Marker (CAL) signal is heard at 25Khz intervals, that indicates a failure in the RF Unit board receive signal path either by a failure in transformer L41 (1.5Mhz) or receiver's RF amplifier Q1.

Please don't take this question the wrong way. What electronic troubleshooting and repair experience do you have? Attempting to troubleshoot and repair a 530 with very little, if any, electronic troubleshooting and repair experience is very difficult to say the least. Is there a ham club near you that you can ask for help from club members?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Well, I've done all I know to do. My 530 still won't receive or transmit. I have the following voltages:
>
> Rectifier board:
>
> 800 = 895
> 210B = 245
> 210A = 243
> 300B = 320
> -C = -111
> 12 = -110
> 14A = 17.9
>
> Final Sockets:
>
> Pin 1 = 0
> Pin 3 = 243
> Pin 5 = -91
>
> AF Unit:
>

> 12 = 11.5
> TP4 = 9.8
> TP6 = 9.0
> Plug 11, Pin 5 = 3.2
>
> Voltage at the top of the RF choke is at 895
>
>
> The display is working properly, the relay clicks when switching from receive to
> transmit, no audio is present whatsoever. When the meter is in ALC mode and the
> unit is placed into transmit, the meter bounces slightly and returns home. I am getting no idling current. I've cleaned connectors, replaced HV caps, cleaned bandswitch, cleaned pots, replaced screen and cathode resistors, took the cap off of RL1 and sprayed and worked the contacts, I've also found on the foil side of the IF board a few traces that have been purposely cut. Does anyone know if any traces should be cut at all? The cut traces are "near" L13 and also near connector 1. Seems like it should be something simple to me. The digital display follows the vfo when tuning. Previous owner sure messed things up a bit. On the rectifier board, R11 was jumpered, the 6A fuse was wrapped with foil. Most of the parts in the rectifier board have been replaced. I'm at a loss as what to do next. Again, all help is greatly appreciated. 73, Steve
>

30211. Re: [TS-520_820_530_830] Re: TS-830s Final unit value R1

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 21:19:20 UTC
From: Chris Parnell
Topic: 30190 Message: 30211

Thanks Guys

From: w5rkl <w5rkl@...>
Reply-To: <TS-520_820_530_830@yahoogroups.com>
Date: Mon, 14 Mar 2011 13:06:37 +0000
To: <TS-520_820_530_830@yahoogroups.com>
Subject: [TS-520_820_530_830] Re: TS-830s Final unit value R1

Chris,

R1 is shown on the 830 final unit schematic in the service manual. R1 is in
series with L1 at the "FG" terminal that lead to pin 5 of the final tube
socket pins 5.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , Chris Parnell
<cparnell1001@...> wrote:
>
> Hi there,
>
> Can anyone tell me what the value of R1 in the final unit board should be on
> the 830s please?
> I cannot see it on the 830s Parts list? It lists R2 R5 then R7 and R8
> only.
>
>
> Thanks
> Chris Parnell, ZL1CDP
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30212. Re: [TS-520_820_530_830] ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 23:20:26 UTC
From: John Davidson
Topic: 29281 Message: 30212

100 W PEP usually shows about 25 Watts on an average wattmeter with normal speech. Nothing is wrong !

From: kd5utc <kd5utc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 14, 2011 11:56:45 AM
Subject: [TS-520_820_530_830] ts820 output

my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
thanks Rick

[Non-text portions of this message have been removed]

30213. Re: [TS-520_820_530_830] ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 23:30:15 UTC
From: John Davidson
Topic: 29281 Message: 30213

50 W is TOO MUCH output for speech !!!
Watch the ALC meter, if you can advance the mic gain until the ALC meter is kicking up into the "normal" range on sylables, the mic audio is working ok !
 You should see peaks of around 25 watts on a wattmeter when you talk .
50 Watts is TOO MUCH output on SSB.
You can see 100 W ONLY on a peak holding wattmeter or calibrated oscilloscope !

From: kd5utc <kd5utc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 14, 2011 11:56:45 AM
Subject: [TS-520_820_530_830] ts820 output

my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
thanks Rick

[Non-text portions of this message have been removed]

30214. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 23:46:02 UTC
From: roberteleazer@rocketmail.com
Topic: 29281 Message: 30214

Rick:

The normal way you check SSB power output versus mike gain is to inject a 1000 Hz signal into the mike input and see what that gives you on USB and LSB in terms of power output versus mike gain, then inject a 2500 HZ signal and see what it gives you and then inject a 350 Hz signal and see what you get.

You will get less power on the 350 HZ and 2500 Hz inputs than you will at 1000 hz for a given mike setting because of the passband of the SSB filter.

You can then adjust the carrier module USB and LSB frequencies to better match the passband of the SSB filter if you wish in order to make the signal balanced on each side. I did this a couple of times on my TS-820S after installing a new filter and finally decided that there was not enough difference to risk screwing up my careful alignment of the carrier freqs.

So, you can't just talk into the mike and see what it gives you.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@...> wrote:
>
> no on the mic gain has to be turned all the way up in order to get output of 40-50 watts ,i tried turning the mic gain to 9-10 position and nothing at all . the only way any audio is achieved is wide open so there is the problem i know it should do fine at 9 or 10 but it dont at all any ideas what to check for?
> thanks Rick
>
> --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@> wrote:
> >
> > Perfectly normal! It all has to do with the ratio between a human voice's peak and average power. Average power of a voice is about 30 % of the peak. The meters on your 820 respond to AVERAGE power. Don't try to get any more out of the radio, or you will have distortion, clipping and all kinds of nasty stuff !
> >
> > This question is asked about once a week on the QRZ forum !
> >
> > Jim AG3Y
> >
> >
> > ----- Original Message -----
> > From: kd5utc
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Monday, March 14, 2011 11:56 AM
> > Subject: [TS-520_820_530_830] ts820 output

> >
> >
> >
> > my ts-820 loads up to 130 watts but when i go two ssb i only see 50watts if i whistle into mic it go to 100+. any ideas i have used 3 different mics and the same results .
> > thanks Rick
> >
> >
> >
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> >
> > =======
> > Email scanned by PC Tools - No viruses or spyware found.
> > (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17100)
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> > =======
> >
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> > =======
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30215. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 23:53:29 UTC
From: wrench101
Topic: 30202 Message: 30215

Yes, SG is on. My circuit knowledge is somewhat limited, but I'm handy as a parts replacer. I've changed out the ones I could were visibly fried/bad. I was hoping that since I had no ALC, no bias current, no audio, that it would be one particular area that was preventing all from working properly. Thanks again. 73, Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Have you checked the rear panel SG slide switch to ensure it is in the "ON" Position? If the SG switch is not in the ON position and the Heater switch is not turned ON you will not see any USB and LSB idling current. Makes sure the SG switch is set to ON and the Heater switch is ON.
>
> Since the display is displaying the ham band frequencies and changes, up and down, in frequency when you rotate the VFO, that tells me the VFO and PLL Unit are at least working. Having said that, just because those circuits are working doesn't mean the receiver will work.
>
> Since you don't have any receive, no Marker (CAL) signal is heard at 25Khz intervals, that indicates a failure in the RF Unit board receive signal path either by a failure in transformer L41 (1.5Mhz) or receiver's RF amplifier Q1.
>
> Please don't take this question the wrong way. What electronic troubleshooting and repair experience do you have? Attempting to troubleshoot and repair a 530 with very little, if any, electronic troubleshooting and repair experience is very difficult to say the least. Is there a ham club near you that you can ask for help from club members?
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Well, I've done all I know to do. My 530 still won't receive or transmit. I have the following voltages:
> >
> > Rectifier board:
> >
> > 800 = 895
> > 210B = 245
> > 210A = 243
> > 300B = 320
> > -C = -111
> > 12 = -110
> > 14A = 17.9

> >
> > Final Sockets:
> >
> > Pin 1 = 0
> > Pin 3 = 243
> > Pin 5 = -91
> >
> > AF Unit:
> >
> > 12 = 11.5
> > TP4 = 9.8
> > TP6 = 9.0
> > Plug 11, Pin 5 = 3.2
> >
> > Voltage at the top of the RF choke is at 895
> >
> >
> > The display is working properly, the relay clicks when switching from receive to
> > transmit, no audio is present whatsoever. When the meter is in ALC mode and the
> > unit is placed into transmit, the meter bounces slightly and returns home. I am getting no idling current. I've cleaned connectors, replaced HV caps, cleaned bandswitch, cleaned pots, replaced screen and cathode resistors, took the cap off of RL1 and sprayed and worked the contacts, I've also found on the foil side of the IF board a few traces that have been purposely cut. Does anyone know if any traces should be cut at all? The cut traces are "near" L13 and also near connector 1. Seems like it should be something simple to me. The digital display follows the vfo when tuning. Previous owner sure messed things up a bit. On the rectifier board, R11 was jumpered, the 6A fuse was wrapped with foil. Most of the parts in the rectifier board have been replaced. I'm at a loss as what to do next. Again, all help is greatly appreciated. 73, Steve
> >
>

30216. Re: ts820 output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-14 23:57:28 UTC
From: kd5utc
Topic: 29281 Message: 30216

THE ALC METER DONT START MOVING UNTIL THE MIC GAIN IS PAST THE 12 O CLOCK POSTISTION THEN IT A LITTLE .THEN I ADVANCE TO 1 O CLOCK THEN I GET ABOUT 1/2 ALC METER AND ABOUT 30 WATTS . CRANK UP FULL AND SEE 50 WATTS.

RICK

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Rick:
>
> The normal way you check SSB power output versus mike gain is to inject a 1000 Hz signal into the mike input and see what that gives you on USB and LSB in terms of power output versus mike gain, then inject a 2500 HZ signal and see what it gives you and then inject a 350 Hz signal and see what you get.
>
> You will get less power on the 350 HZ and 2500 Hz inputs than you will at 1000 hz for a given mike setting because of the passband of the SSB filter.
>
> You can then adjust the carrier module USB and LSB frequencies to better match the passband of the SSB filter if you wish in order to make the signal balanced on each side. I did this a couple of times on my TS-820S after installing a new filter and finally decided that there was not enough difference to risk screwing up my careful alignment of the carrier freqs.
>
> So, you can't just talk into the mike and see what it gives you.
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@> wrote:
> >
> > no on the mic gain has to be turned all the way up in order to get output of 40-50 watts ,i tried turning the mic gain to 9-10 position and nothing at all . the only way any audio is achieved is wide open so there is the problem i know it should do fine at 9 or 10 but it dont at all any ideas what to check for?
> > thanks Rick
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Jim S" <jimstan@> wrote:
> > >
> > > Perfectly normal! It all has to do with the ratio between a human voice's peak and average power. Average power of a voice is about 30 % of the peak. The meters on your 820 respond to AVERAGE power. Don't try to get any more out of the radio, or you will have distortion, clipping and all kinds of nasty stuff !
> > >
> > > This question is asked about once a week on the QRZ forum !

> > >
> > > Jim AG3Y
> > >
> > >
> > > ----- Original Message -----
> > > From: kd5utc
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Monday, March 14, 2011 11:56 AM
> > > Subject: [TS-520_820_530_830] ts820 output
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> > >
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> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

30217. Re: [TS-520_820_530_830] Re: Tune up issues with old TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 02:33:22 UTC
From: John Hennessy
Topic: 30069 Message: 30217

Yes, the 530 is connected to a dummy load via the AT-230 watt meter. I've even tried the dummy load direct on the back of the radio, same result. All is as you've noted below. My 50W output t 225ma starts to creep ever so slowly in time with the plate current rising then all of a sudden the jump to 100W with corresponds with 350ma of current. I quickly return to recv. I am aware that I should tune up quickly but during the process of testing of course identified that this runaway if I can call it that occurs within 6-8 seconds of transmit. I do no see the same problem in tune mode due to the lower power output I expect.

From your description and my symptoms it appears that I need to neutralize. I will get to this in a few days. While I'm here...Do radios normally ship neutralized from factory or is this a first required step for new owners?

Thanks Mike and group for the ongoing support.

John.

On 14/03/2011 12:43 AM, w5rkl wrote:
>
> John,
>
> Another possibility is the relay on the IF Unit may be getting flaky.
> However, before focusing on the relay, lets make sure the final
> amplifier is not causing the problem, i.e., making sure the final
> amplifier is neutralized.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@...> wrote:
> >
> > John,
> >
> > I will assume the 530 is connected to a dummy load with a watt meter.
> >
> > Set the LOAD control fully CCW.
> >
> > Set meter to ALC
> >
> > Tune the DRIVE control for maximum ALC indication.
> >
> > Switch meter to IP.

> >
> > While watching the IP meter AND the watt meter, adjust the PLATE
> control for maximum reduction in IP meter indication.
> >
> > Note the watt meter's indication. The peak watt meter indication
> should occur at the same point of maximum IP meter indication when
> adjusting the PLATE control.
> >
> > Once maximum IP current reduction (IP dip) occurs, adjust the PLATE
> control CW or CCW, and note of the watt meter peak RF indication rises
> or falls. If the watt meter rises more than 10 to 15 watts then the
> final amplifier is not neutralized.
> >
> > Before you place any component, make any adjustments, etc, perform
> the above test first.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Hennessy <john@>
> wrote:
> > >
> > > ok, I've attempted the suggestions made here and unfortunately am not
> > > fixed yet. I opened the final cage area, discharged, removed the
> 6146B
> > > valve, cleaned sockets, wafer switches and all plates with deoxit
> > > followed by a blow out with compressed air. No cracks on the
> bandswitch
> > > coupler, it's as new with no signs of discoloring. Have not cleaned
> > > every connector as yet but can reveal the following behavior:
> > >
> > > After adjusting the load control a little each time to arrive at
> 225ma I
> > > can get to that IP reading no problem but only have 50W of output
> power.
> > > If I wait up to 5 or more seconds while still in send the IP jumps to
> > > 350mA and the output power jumps at the same time to 100W. If I
> return
> > > to recv then straight back to send the problem remains. If I wait
> 4 or
> > > more seconds in between then I'm back to 225mA then a few seconds
> later
> > > it jumps back up to 350mA again. It's as if a component is
> breaking down
> > > full power.
> > >

> > > Thanks for all the assistance so far. I'm sure its something
> simple but
> > > just haven't found it yet.
> > >
> > > John.
> >
>
>

[Non-text portions of this message have been removed]

30218. For Sale: TS-830S AF Unit Q30 and Q34 Transisitors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 04:32:20 UTC
From: k4zot
Topic: 30218 Message: 30218

I have available 6 TS-830S AF Unit Q30 and Q34 Transistors - 2SA473(Y). If interested contact me at packardg@....

Thanks,

Glenn - K4ZOT

30219. Re: [TS-520_820_530_830] TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 05:37:13 UTC
From: W LEWIS
Topic: 30162 Message: 30219

Hi Joe,

I tested the four 20 ohm resisters and got 13 ohms on all four. Possible? I tested several resisters with my trusty old Heathkit IT-28 which turned out to be very accurate. What do you think?
Regards,
Butch Lewis
KØPSA

--- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@yahoo.com>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 13, 2011, 5:41 PM

Butch,

If the rig has been "mis-tuned," "over-driven," or taking an overly long time to tune up..over a period of possibly years..there are some components in the final cage area that can be damaged by excessive heat and or current. Also, check the value of the 4 (four) 20 ohm resistors on the final board. They should read about 5.0 ohms (plus/minus tolerance) to ground. Find an X-ray view of the final board...it does not have to be removed to check the resistors. The closer to 5 ohms the better. If these resistors are too far out of value, you will get and erroneous plate current reading/versus power out. Mike(w5rkl) may also add to this. Good luck.....

73's joe wb7uqu

_____
From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 13, 2011 3:24:43 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Hi Joe,

Thanks for the help. I've had my 830 for over a year and have referred to both the owner's and service manual dozens, if not hundreds of times and apparently overlooked this every time. The meter is not an issue with my radio so maybe that's why I missed it. Anyway, the 14.175 marker was dead on and the meter adjustment was easy. S meter reads a solid S8 with the marker and zero with no signal. I noticed that on power-up the initial needle deflection is only to 50ma before it settles down to "0". There are other issues with my friends radio during tune-up and as a relative newby I'm working on a description that is both accurate and can be clearly understood. Bottom line is

that after the tuning process I must reduce the carrier to about 9:00 to be at 225ma during key-up on CW showing about 50 watts out on the watt meter in my 949E. The carrier control is VERY sensitive. Moving the carrier from 9:00 to between 11:00and
12:00 results in movement from 225ma to full deflection. This radio is exceptionally clean both inside and out and I think is suffering mostly from non use. If anything I've described so far points in any particular direction please let me know. Again, thanks for the help with the meter adjustment. After reading your email it took about 9 seconds to find it in the owner's manual. Duh.
Best 73s,
Butch Lewis
KØPSA

--- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@yahoo.com>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, March 13, 2011, 11:44 AM

Butch,

Also, forgot to mention that you can cheat a bit on the "S" meter adjustment. If you do not have a signal generator, you can use the "calibrator signal." It will not be as accuate but, will give you and idea if the meter is working properly. Dial up frequency to about 14.175MHz with the "cal" signal "ON" adjust the drive control and vfo frequency for max "S" meter reading.The "cal" signal should be strong. You should see about S-8/9..you can adjust the pot as indicated. If the IF/RF boards are way out of alignment this adjustment will not be effective, and will only be fooling you even more. Check the basic alignment steps in the operator manual. Remember this is cheating...but will give you and idea..

73's joewb7uqu

_____
From: W LEWIS <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 12:08:38 PM
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment

Thanks for responding, Joe. Yes, when the radio is off the indicator returns to "0".

--- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, March 12, 2011, 11:59 AM

Butch,

When the rig is off...does the meter return to the far left..or "0"? If it does..then a mechanical issue is not likely. Look in the operators or service manual, it tells how to adjust the "S" meter. When the rig is first turned the meters needle will go full scale and will fall back to "0" If it does not..adjustment is indicated.

73's joewb7uqu

From: WL <nscb56a@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 12, 2011 7:13:52 AM
Subject: [TS-520_820_530_830] TS-830S meter adjustment

Gentlemen,

I am a retired airline pilot fairly new to hamdom (18 months). A friend of mine bought a complete 830 rig and I am attempting to check it out for him. I corrected a dirty band switch problem but during tune-up I have to reduce the carrier to about the 9:00 position to the keep the meter at 225 ma which produces about 50 watts output. The thing I'm concerned with right now is that when the unit is initially powered up the meter goes to about 90ma then slowly (5 seconds) descends to and remains at 40ma. It seems that something is causing the meter to read incorrectly which affects everything including setting the bias. Can anyone give me an idea of what might be causing this and where I should start to correct the problem? Any help will be greatly appreciated.
73's
Butch Lewis
KØPSA

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30220. 520 RF mod G3 mosfet removal

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 10:16:59 UTC
From: tejohnsonphd
Topic: 30220 Message: 30220

This mosfet (3SK35) sits on a socket. It seems stuck. I want to put a NTE222 in its place and run the mosfet wide open. Anyone have any experience removing this transistor?
Regards,
Thomas

30221. Re: 520 RF mod G3 mosfet removal

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 11:05:26 UTC
From: Steve Bontempo
Topic: 30220 Message: 30221

Hello Thomas,

All of mine pulled out quite easily. Are they all hard to move in the sockets? If you look down where the leads are inserted into the socket does it look like someone soldered the leads into the socket? The MOSFETs should come right out with very little effort.

Steve KU4BY

30222. Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 14:07:24 UTC
From: w5rkl
Topic: 30162 Message: 30222

The 4 original cathode resistors had a tolerance rating of 5% which means each cathode resistor, if out of tolerance by 5%, would have a resistance of "21 ohms" (20 + 5% = 21).

Butch, if the total cathode resistance is "13" ohms then one or more of the cathode resistors is out of tolerance. I agree with Joe and based on your total cathode resistance value of 13 ohms, replace all four of the 20 ohm 1/2 watt resistors. While you may find one or two of them close to 20 ohms, it's better to replace all 4 of them. Resistors are cheap and easy to find.

Mouser sells 1% metal film 20 ohm 1/2 watt resistors:

Mouser P/N:
71-CMF6020R000BHEB
Price:
45 cents each

They also sell Metal Oxide 20 ohm 1/2 watt 5% resistors:

Mouser P/N:
660-MOS1/2CT52R200J
Price:
8 cents each

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
>
> Hi Joe,
> Â
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> the meter to read incorrectly which affects everything including setting the
> bias. Can anyone give me an idea of what might be causing this and where I
> should start to correct the problem? Any help will be greatly appreciated.
> 73's
> Butch Lewis
> KÃ□PSA
>
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30223. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 16:12:34 UTC
From: wrench101
Topic: 30202 Message: 30223

Hooray! I found a cold solder joint on the IF board and now I have a marker signal! It's weak, but it's there. I completed the test you explained below and got close to S9 on all bands. I adjusted the coils per the owners manual for maximum meter deflection. So at least now I know she CAN hear. Now to find out why I have to output. The screen and cathode resistors have been replace. Until next time...73, Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> Put the 530 on 40 meters (7 on the band switch), push the Marker button to the right of the meter, and tune the VFO to a 25Khz dial interval, such as 7.025, 7.050, 7.075, etc. You should heat a beat note, a tone, and that beat note should vary in frequency up or down, depending on which direction you rotate the VFO at the 25Khz dial setting. When you hear the beat note, adjust the DRIVE control for a peak S meter reading. On 40 meters the S meter should display at least S9 or more when adjusting the DRIVE control for a peak S meter reading.
>
> Do not key the transmitter when doing this test. This tests the receiver's front end and all stages up to and including the audio amplifier.
>
> Do this same test on all bands. The S meter should peak at least S9 on all bands but 12 and 10 meters which is most likely will be S7 or slightly less.
>
> Lets us know how this simple receive test goes. Again, do not key the transmitter, this is a receive test.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.
> >
>

30224. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 17:20:40 UTC
From: w5rkl
Topic: 30202 Message: 30224

Hi Steve,

That's great. Glad you found an open in the receive signal path.

The voltage readings you provide indicate there's no voltage problem.

You said the 530 has no idling current. This could be caused by relay RL1 on the IF Unit.

Relay RL1 on the IF Unit have 3 terminals that connect through the wiring harness to the AF Unit board. These 3 terminals control the AF Unit's driver and final tube biasing voltage levels between receive and transmit. What these 3 terminal do is turn ON and OFF 2 transistors on the AF unit. When the transistors are turned ON, the relay on the IF Unit is energized, the bias voltage level applied to the driver and both final tubes becomes "less negative", turning the driver and both final tubes ON. When the final tubes are turned ON, you see idling current in CW, USB, and LSB modes in transmit. When the relay on the IF Unit is not energized, receive mode, the AF Unit bias voltage level becomes "more negative" turning the driver tube and both final tubes OFF.

Now if the 3 RL1 relay terminals mentioned above are bad then the driver and both final tubes will remain "OFF" even in transmit and that's is why you do not see any idling current in CW, USB, and LSB modes. This, of course, is assuming the cathode resistors have not burnt open resulting in no current flow in the final tubes in transmit. Open cathode resistors will produce an "open" in the current flow path in the final tube which will result in no idling current in any mode.

The key is to watch the final tube voltages. In receive the voltages applied to the grid (negative voltage), the screen and plate (positive voltage) will be high in receive but become less in transmit when current is flowing in the tubes. If the voltages change only slightly, a few volts or so then I would look at RL1 on the IF Unit as a suspect, especially if the bias voltage doesn't change to a much less negative voltage on the grids of the final tubes.

If RL1 on the IF Unit is found to be bad, you can purchase an exact replacement through Ken, K4EAA, (www.k4eaa.com) or Mouser Electronics (www.mouser.com).

Mouser relay RL1 Part number:
769-NR4EB-12V

Mouser's Price:
$12.46 each

It's your choice who you purchase the relay from.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Hooray! I found a cold solder joint on the IF board and now I have a marker signal! It's weak, but it's there. I completed the test you explained below and got close to S9 on all bands. I adjusted the coils per the owners manual for maximum meter deflection. So at least now I know she CAN hear. Now to find out why I have to output. The screen and cathode resistors have been replace. Until next time...73, Steve
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> > Put the 530 on 40 meters (7 on the band switch), push the Marker button to the right of the meter, and tune the VFO to a 25Khz dial interval, such as 7.025, 7.050, 7.075, etc. You should heat a beat note, a tone, and that beat note should vary in frequency up or down, depending on which direction you rotate the VFO at the 25Khz dial setting. When you hear the beat note, adjust the DRIVE control for a peak S meter reading. On 40 meters the S meter should display at least S9 or more when adjusting the DRIVE control for a peak S meter reading.
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> > Do not key the transmitter when doing this test. This tests the receiver's front end and all stages up to and including the audio amplifier.
> >
> > Do this same test on all bands. The S meter should peak at least S9 on all bands but 12 and 10 meters which is most likely will be S7 or slightly less.
> >
> > Lets us know how this simple receive test goes. Again, do not key the transmitter, this is a receive test.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.
> > >
> >
>

30225. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 17:42:27 UTC
From: w5rkl
Topic: 30202 Message: 30225

Steve,

I also recommend you checking the final tube cathode resistors as Joe suggested. The original cathode resistors are 5% carbon resistors and over time they can increase in value as I discussed in a recent response. As Joe said, you do not have to remove the 4 resistors. However, if the resistance of the cathode resistors is not 5 ohms or within 5% of 5 ohms I would replace all 4 cathode resistors, as I also mentioned.

I'm working on a 530 at the moment. I removed all 4 of the original cathode resistors. One measured "33 ohms". Now if you consider 5% tolerance rating of the original resistor then 33 ohms is "65%" above the original value. That 65% above the tolerance rating plus any additional increase above 5% tolerance with the other 3 resistors will result in a significant change in IP meter readings.

When the final tubes are conducting, a voltage drop occurs across the cathode resistors. This voltage at the final tube cathodes also appears across IP metering resistors R6 and R10. The voltage drop that occurs across R6 is applied to the meter switch IP terminal. When the 530 is in transmit and current is flowing through the final tubes, the voltage that appears at the junction of R6 and R10 is applied through the IP switch terminal to the meter in transmit and with the meter switch set to IP, you see the IP current displayed on the top scale of the meter. If no current is flowing in the final tubes, for what ever reason, there will be no voltage drop occurring across the cathode resistors and no voltage appearing across R6 and R10 which results in no IP meter indication in transmit.

I hope this helps you understanding how the IP meter works and what has to happen in order for the IP meter to display IP current in transmit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Steve,
>
> That's great. Glad you found an open in the receive signal path.
>
> The voltage readings you provide indicate there's no voltage problem.
>
> You said the 530 has no idling current. This could be caused by relay RL1 on the IF Unit.
>
> Relay RL1 on the IF Unit have 3 terminals that connect through the wiring harness to the AF Unit board. These 3 terminals control the AF Unit's driver and final tube biasing voltage levels between receive and transmit. What these 3 terminal do is turn ON and OFF 2 transistors on the AF unit. When the transistors are turned ON, the relay on the IF Unit is energized, the bias voltage level applied to the driver and both final tubes becomes "less

negative", turning the driver and both final tubes ON. When the final tubes are turned ON, you see idling current in CW, USB, and LSB modes in transmit. When the relay on the IF Unit is not energized, receive mode, the AF Unit bias voltage level becomes "more negative" turning the driver tube and both final tubes OFF.
>
> Now if the 3 RL1 relay terminals mentioned above are bad then the driver and both final tubes will remain "OFF" even in transmit and that's is why you do not see any idling current in CW, USB, and LSB modes. This, of course, is assuming the cathode resistors have not burnt open resulting in no current flow in the final tubes in transmit. Open cathode resistors will produce an "open" in the current flow path in the final tube which will result in no idling current in any mode.
>
> The key is to watch the final tube voltages. In receive the voltages applied to the grid (negative voltage), the screen and plate (positive voltage) will be high in receive but become less in transmit when current is flowing in the tubes. If the voltages change only slightly, a few volts or so then I would look at RL1 on the IF Unit as a suspect, especially if the bias voltage doesn't change to a much less negative voltage on the grids of the final tubes.
>
> If RL1 on the IF Unit is found to be bad, you can purchase an exact replacement through Ken, K4EAA, (www.k4eaa.com) or Mouser Electronics (www.mouser.com).
>
> Mouser relay RL1 Part number:
> 769-NR4EB-12V
>
> Mouser's Price:
> $12.46 each
>
> It's your choice who you purchase the relay from.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Hooray! I found a cold solder joint on the IF board and now I have a marker signal! It's weak, but it's there. I completed the test you explained below and got close to S9 on all bands. I adjusted the coils per the owners manual for maximum meter deflection. So at least now I know she CAN hear. Now to find out why I have to output. The screen and cathode resistors have been replace. Until next time...73, Steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > >
> > > Put the 530 on 40 meters (7 on the band switch), push the Marker button to the right of the meter, and tune the VFO to a 25Khz dial interval, such as 7.025, 7.050, 7.075, etc. You should heat a beat note, a tone, and that beat note should vary in frequency up or down, depending on which direction you rotate the VFO at the 25Khz dial setting. When you

hear the beat note, adjust the DRIVE control for a peak S meter reading. On 40 meters the S meter should display at least S9 or more when adjusting the DRIVE control for a peak S meter reading.
> > >
> > > Do not key the transmitter when doing this test. This tests the receiver's front end and all stages up to and including the audio amplifier.
> > >
> > > Do this same test on all bands. The S meter should peak at least S9 on all bands but 12 and 10 meters which is most likely will be S7 or slightly less.
> > >
> > > Lets us know how this simple receive test goes. Again, do not key the transmitter, this is a receive test.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.
> > > >
> > >
> > >
> >

30226. Re: [TS-520_820_530_830] Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 17:52:50 UTC
From: pmarkavage@juno.com
Topic: 30162 Message: 30226

Even though Mouser's page for these resistors says 5% tolerance, it
really means + or - 5%. Generally, resistors are specified with a +/- %
tolerance. So a 20 ohm resistor with a +/- tolerance of 5% still could be
at the limit of in spec at either 21 ohms or 19 ohms. If resistance in
spec tolerance is highly important in the design, the +/- 1% resistors
are what should be used.

Pete, wa2cwa

On Tue, 15 Mar 2011 14:07:24 -0000 "w5rkl" <w5rkl@...> writes:
> The 4 original cathode resistors had a tolerance rating of 5% which
> means each cathode resistor, if out of tolerance by 5%, would have a
> resistance of "21 ohms" (20 + 5% = 21).
>
> Butch, if the total cathode resistance is "13" ohms then one or more
> of the cathode resistors is out of tolerance. I agree with Joe and
> based on your total cathode resistance value of 13 ohms, replace all
> four of the 20 ohm 1/2 watt resistors. While you may find one or two
> of them close to 20 ohms, it's better to replace all 4 of them.
> Resistors are cheap and easy to find.
>
> Mouser sells 1% metal film 20 ohm 1/2 watt resistors:
>
> Mouser P/N:
> 71-CMF6020R000BHEB
> Price:
> 45 cents each
>
> They also sell Metal Oxide 20 ohm 1/2 watt 5% resistors:
>
> Mouser P/N:
> 660-MOS1/2CT52R200J
> Price:
> 8 cents each
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...>
> wrote:
> >
> > Hi Joe,
> > ?

> > I? tested the four 20 ohm resisters and got 13 ohms on all
> four.? Possible?? I? tested several resisters with my trusty old
> Heathkit IT-28 which turned out to be very accurate.? What do you
> think?
> > Regards,
> > Butch Lewis
> > KØPSA
> >
> > --- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:
> >
> >
> > From: Joseph Stiles <stilesjoseph@...>
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Sunday, March 13, 2011, 5:41 PM
> >
> >
> > ?
> >
> >
> >
> > Butch,
> >
> > If the rig has been "mis-tuned," "over-driven," or taking an
> overly long
> > time to tune up..over a period of possibly years..there are some
> components in
> > the final cage area that can be damaged by excessive heat and or
> current. Also,
> > check the value of the 4 (four) 20 ohm resistors on the final
> board. They should
> > read about 5.0 ohms (plus/minus tolerance) to ground. Find an
> X-ray view of the
> > final board...it does not have to be removed to check the
> resistors. The closer
> > to 5 ohms the better. If these resistors are too far out of value,
> you will get
> > and erroneous plate current reading/versus power out. Mike(w5rkl)
> may also add
> > to this. Good luck.....
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: W LEWIS <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, March 13, 2011 3:24:43 PM
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> >
> > Hi Joe,

> >
> > Thanks for the help. I've had my 830 for over a year and have
> referred to both
> > the owner's and service manual dozens, if not hundreds of times
> and apparently
> > overlooked this every time. The meter is not an issue with my
> radio so maybe
> > that's why I missed it. Anyway, the 14.175 marker was dead on and
> the
> > meter adjustment was easy. S meter reads a solid S8 with the
> marker and zero
> > with no signal. I noticed that on power-up the initial needle
> deflection is
> > only to 50ma before it settles down to "0". There are other issues
> with my
> > friends radio during tune-up and as a relative newby I'm working
> on a
> > description that is both accurate and can be clearly understood.
> Bottom line is
> > that after the tuning process I must reduce the carrier to about
> 9:00 to be at
> > 225ma during key-up on CW showing about 50 watts out on the watt
> meter in my
> > 949E. The carrier control is VERY sensitive. Moving the carrier
> from 9:00 to
> > between 11:00and
> > 12:00 results in movement from 225ma to full deflection. This
> radio is
> > exceptionally clean both inside and out and I think is suffering
> mostly from
> > non use. If anything I've described so far points in any
> particular direction
> > please let me know. Again, thanks for the help with the meter
> adjustment.
> > After reading your email it took about 9 seconds to find it in the
> owner's
> > manual. Duh.
> > Best 73s,
> > Butch Lewis
> > KØPSA
> >
> > --- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:
> >
> > From: Joseph Stiles <stilesjoseph@...>
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Sunday, March 13, 2011, 11:44 AM
> >
> > Butch,
> >

> > Also, forgot to mention that you can cheat a bit on the "S" meter
>
> > adjustment. If you do not have a signal generator, you can use the
> "calibrator
> > signal." It will not be as accuate but, will give you and idea if
> the meter is
> > working properly. Dial up frequency to about 14.175MHz with the
> "cal" signal
> > "ON" adjust the drive control and vfo frequency for max "S" meter
> reading.The
> > "cal" signal should be strong. You should see about S-8/9..you can
> adjust the
> > pot as indicated. If the IF/RF boards are way out of alignment
> this adjustment
> > will not be effective, and will only be fooling you even more.
> Check the basic
> > alignment steps in the operator manual. Remember this is
> cheating...but will
> > give you and idea..
> >
> > 73's joewb7uqu
> >
> > _____
> > From: W LEWIS <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, March 12, 2011 12:08:38 PM
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> >
> > Thanks for responding, Joe. Yes, when the radio is off the
> indicator returns to
> > "0".
> >
> > --- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@...> wrote:
> >
> > From: Joseph Stiles <stilesjoseph@...>
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Saturday, March 12, 2011, 11:59 AM
> >
> > Butch,
> >
> > When the rig is off...does the meter return to the far left..or
> "0"? If it
> > does..then a mechanical issue is not likely. Look in the operators
> or service
> > manual, it tells how to adjust the "S" meter. When the rig is
> first turned the
> > meters needle will go full scale and will fall back to "0" If it
> does
> > not..adjustment is indicated.

> >
> > 73's joewb7uqu
> >
> > _____
> > From: WL <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, March 12, 2011 7:13:52 AM
> > Subject: [TS-520_820_530_830] TS-830S meter adjustment
> >
> > Gentlemen,
> >
> > I am a retired airline pilot fairly new to hamdom (18 months). A
> friend of mine
> > bought a complete 830 rig and I am attempting to check it out for
> him. I
> > corrected a dirty band switch problem but during tune-up I have to
> reduce the
> > carrier to about the 9:00 position to the keep the meter at 225 ma
> which
> > produces about 50 watts output. The thing I'm concerned with right
> now is that
> > when the unit is initially powered up the meter goes to about 90ma
> then slowly
> > (5 seconds) descends to and remains at 40ma. It seems that
> something is causing
> > the meter to read incorrectly which affects everything including
> setting the
> > bias. Can anyone give me an idea of what might be causing this and
> where I
> > should start to correct the problem? Any help will be greatly
> appreciated.
> > 73's
> > Butch Lewis
> > KØPSA
> >
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30227. Re: [TS-520_820_530_830] Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 18:09:53 UTC
From: W LEWIS
Topic: 30162 Message: 30227

Thanks! You just answered the question I had in mind regarding which one to buy.
Thanks again
73s,
Butch Lewis
KØPSA

--- On Tue, 3/15/11, pmarkavage@... <pmarkavage@...> wrote:

From: pmarkavage@juno.com <pmarkavage@...>
Subject: Re: [TS-520_820_530_830] Re: TS-830S meter adjustment
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 15, 2011, 12:52 PM

Even though Mouser's page for these resistors says 5% tolerance, it
really means + or - 5%. Generally, resistors are specified with a +/- %
tolerance. So a 20 ohm resistor with a +/- tolerance of 5% still could be
at the limit of in spec at either 21 ohms or 19 ohms. If resistance in
spec tolerance is highly important in the design, the +/- 1% resistors
are what should be used.

Pete, wa2cwa

On Tue, 15 Mar 2011 14:07:24 -0000 "w5rkl" <w5rkl@...> writes:
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> resistance of "21 ohms" (20 + 5% = 21).
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> Butch, if the total cathode resistance is "13" ohms then one or more
> of the cathode resistors is out of tolerance. I agree with Joe and
> based on your total cathode resistance value of 13 ohms, replace all
> four of the 20 ohm 1/2 watt resistors. While you may find one or two
> of them close to 20 ohms, it's better to replace all 4 of them.
> Resistors are cheap and easy to find.
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> Mouser sells 1% metal film 20 ohm 1/2 watt resistors:
>
> Mouser P/N:
> 71-CMF6020R000BHEB
> Price:
> 45 cents each
>
> They also sell Metal Oxide 20 ohm 1/2 watt 5% resistors:
>
> Mouser P/N:
> 660-MOS1/2CT52R200J
> Price:

> 8 cents each
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...>
> wrote:
> >
> > Hi Joe,
> > Â
> > IÂ tested the four 20 ohm resisters and got 13 ohms on all
> four.Â Possible?Â IÂ tested several resisters with my trusty old
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> > --- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@...> wrote:
> >
> >
> > From: Joseph Stiles <stilesjoseph@...>
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Sunday, March 13, 2011, 5:41 PM
> >
> >
> > Â
> >
> >
> >
> > Butch,
> >
> > If the rig has been "mis-tuned," "over-driven," or taking an
> overly long
> > time to tune up..over a period of possibly years..there are some
> components in
> > the final cage area that can be damaged by excessive heat and or
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> > check the value of the 4 (four) 20 ohm resistors on the final
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> X-ray view of the
> > final board...it does not have to be removed to check the
> resistors. The closer
> > to 5 ohms the better. If these resistors are too far out of value,
> you will get
> > and erroneous plate current reading/versus power out. Mike(w5rkl)

> may also add
> > to this. Good luck.....
> >
> > 73's joe wb7uqu
> >
> > _____
> > From: W LEWIS <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, March 13, 2011 3:24:43 PM
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> >
> > Hi Joe,
> >
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> > the owner's and service manual dozens, if not hundreds of times
> and apparently
> > overlooked this every time. The meter is not an issue with my
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> > that's why I missed it. Anyway, the 14.175 marker was dead on and
> the
> > meter adjustment was easy. S meter reads a solid S8 with the
> marker and zero
> > with no signal. I noticed that on power-up the initial needle
> deflection is
> > only to 50ma before it settles down to "0". There are other issues
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> > description that is both accurate and can be clearly understood.
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> > that after the tuning process I must reduce the carrier to about
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> > 225ma during key-up on CW showing about 50 watts out on the watt
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> > After reading your email it took about 9 seconds to find it in the
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> > From: Joseph Stiles <stilesjoseph@...>
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Sunday, March 13, 2011, 11:44 AM
> >
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> >
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> > adjustment. If you do not have a signal generator, you can use the
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> > "ON" adjust the drive control and vfo frequency for max "S" meter
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> >
> > _____
> > From: W LEWIS <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, March 12, 2011 12:08:38 PM
> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
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> > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Saturday, March 12, 2011, 11:59 AM

> >
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> > When the rig is off...does the meter return to the far left..or
> "0"? If it
> > does..then a mechanical issue is not likely. Look in the operators
> or service
> > manual, it tells how to adjust the "S" meter. When the rig is
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> > meters needle will go full scale and will fall back to "0" If it
> does
> > not..adjustment is indicated.
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> > _____
> > From: WL <nscb56a@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, March 12, 2011 7:13:52 AM
> > Subject: [TS-520_820_530_830] TS-830S meter adjustment
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> > Gentlemen,
> >
> > I am a retired airline pilot fairly new to hamdom (18 months). A
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> > carrier to about the 9:00 position to the keep the meter at 225 ma
> which
> > produces about 50 watts output. The thing I'm concerned with right
> now is that
> > when the unit is initially powered up the meter goes to about 90ma
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> > (5 seconds) descends to and remains at 40ma. It seems that
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30228. Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 18:31:42 UTC
From: w5rkl
Topic: 30162 Message: 30228

This circuit is not NASA Rocket Science where exact values within 1% must be adhered to. The radio will perform equally well with new 5% resistors just as it will with new 1% resistors. My response simply gave you 2 options to choose from. Whether you select 1% or 5% tolerance resistors is entirely up to you.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@...> wrote:
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> Thanks!Â You just answered the question IÂ had in mind regarding which one to buy.
> Thanks again
> 73s,
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> KÃ□PSA
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> --- On Tue, 3/15/11, pmarkavage@... <pmarkavage@...> wrote:
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> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, March 15, 2011, 12:52 PM
>
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> Even though Mouser's page for these resistors says 5% tolerance, it
> really means + or - 5%. Generally, resistors are specified with a +/- %
> tolerance. So a 20 ohm resistor with a +/- tolerance of 5% still could be
> at the limit of in spec at either 21 ohms or 19 ohms. If resistance in
> spec tolerance is highly important in the design, the +/- 1% resistors
> are what should be used.
>
> Pete, wa2cwa
>
> On Tue, 15 Mar 2011 14:07:24 -0000 "w5rkl" <w5rkl@...> writes:
> > The 4 original cathode resistors had a tolerance rating of 5% which
> > means each cathode resistor, if out of tolerance by 5%, would have a
> > resistance of "21 ohms" (20 + 5% = 21).
> >
> > Butch, if the total cathode resistance is "13" ohms then one or more

> > of the cathode resistors is out of tolerance. I agree with Joe and
> > based on your total cathode resistance value of 13 ohms, replace all
> > four of the 20 ohm 1/2 watt resistors. While you may find one or two
> > of them close to 20 ohms, it's better to replace all 4 of them.
> > Resistors are cheap and easy to find.
> >
> > Mouser sells 1% metal film 20 ohm 1/2 watt resistors:
> >
> > Mouser P/N:
> > 71-CMF6020R000BHEB
> > Price:
> > 45 cents each
> >
> > They also sell Metal Oxide 20 ohm 1/2 watt 5% resistors:
> >
> > Mouser P/N:
> > 660-MOS1/2CT52R200J
> > Price:
> > 8 cents each
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
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> > wrote:
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> > > Hi Joe,
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> > > IÃ☐ tested the four 20 ohm resisters and got 13 ohms on all
> > four.Ã☐ Possible?Ã☐ IÃ☐ tested several resisters with my trusty old
> > Heathkit IT-28 which turned out to be very accurate.Ã☐ What do you
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> > > From: W LEWIS <nscb56a@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sun, March 13, 2011 3:24:43 PM
> > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
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> > > Hi Joe,
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> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Saturday, March 12, 2011, 11:59 AM
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30229. Re: [TS-520_820_530_830] Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 20:07:57 UTC
From: Joseph Stiles
Topic: 30162 Message: 30229

Butch & Mike,

Mike, thanks for answering Butch....I've been under the WX the past few.
Butch, stick with Mike's recommendation. Use the specified values...especially
the wattage! Good luck.....

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 15, 2011 11:31:42 AM
Subject: [TS-520_820_530_830] Re: TS-830S meter adjustment

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> > > Date: Saturday, March 12, 2011, 11:59 AM
> > >
> > > Butch,
> > >
> > > When the rig is off...does the meter return to the far left..or
> > "0"? If it
> > > does..then a mechanical issue is not likely. Look in the operators
> > or service
> > > manual, it tells how to adjust the "S" meter. When the rig is
> > first turned the
> > > meters needle will go full scale and will fall back to "0" If it
> > does
> > > not..adjustment is indicated.
> > >
> > > 73's joewb7uqu
> > >
> > > _____
> > > From: WL <nscb56a@>
> > > To: TS-520_820_530_830@yahoogroups.com

> > > Sent: Sat, March 12, 2011 7:13:52 AM
> > > Subject: [TS-520_820_530_830] TS-830S meter adjustment
> > >
> > > Gentlemen,
> > >
> > > I am a retired airline pilot fairly new to hamdom (18 months). A
> > friend of mine
> > > bought a complete 830 rig and I am attempting to check it out for
> > him. I
> > > corrected a dirty band switch problem but during tune-up I have to
> > reduce the
> > > carrier to about the 9:00 position to the keep the meter at 225 ma
> > which
> > > produces about 50 watts output. The thing I'm concerned with right
> > now is that
> > > when the unit is initially powered up the meter goes to about 90ma
> > then slowly
> > > (5 seconds) descends to and remains at 40ma. It seems that
> > something is causing
> > > the meter to read incorrectly which affects everything including
> > setting the
> > > bias. Can anyone give me an idea of what might be causing this and
> > where I
> > > should start to correct the problem? Any help will be greatly
> > appreciated.
> > > 73's
> > > Butch Lewis
> > > KÃƒËœPSA
> > >
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30230. TS-520 HELP

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 21:09:38 UTC
From: jsloss
Topic: 30230 Message: 30230

My -520 has an Ip and PO "glitch". When in LSB or USB and switching to SEND there is a momentary Ip increase to 100-150 ma with appropriate power out. Does it with RCA or GE finals. Replacing Driver tube does not seem to increase or decrease problem.

Neutralization is set correctly and I'm beginning to think the carrier null is not. Renulling carrier in LSB improves thje situation but does not help USB. For some reason cannot get a good null on USB and LSB at same control setting.

Any trhoughts?

JKoe k7mks

[Non-text portions of this message have been removed]

30231. Re: [TS-520_820_530_830] TS-520 HELP

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 21:12:52 UTC
From: n6wk@n6wk.com
Topic: 30230 Message: 30231

Joe, is the VOX off?

On 3/15/2011 2:09 PM, jsloss wrote:
>
> My -520 has an Ip and PO "glitch". When in LSB or USB and switching to
> SEND there is a momentary Ip increase to 100-150 ma with appropriate
> power out. Does it with RCA or GE finals. Replacing Driver tube does
> not seem to increase or decrease problem.
>
> Neutralization is set correctly and I'm beginning to think the carrier
> null is not. Renulling carrier in LSB improves thje situation but does
> not help USB. For some reason cannot get a good null on USB and LSB at
> same control setting.
>
> Any trhoughts?
>
> JKoe k7mks
>
> [Non-text portions of this message have been removed]
>
>

30232. Re: TS-830S meter adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 21:19:06 UTC
From: w5rkl
Topic: 30162 Message: 30232

Joe,

Sorry to hear you are under the weather. Hope you feel better soon.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Butch & Mike,
>
> Mike, thanks for answering Butch....I've been under the WX the past few.
> Butch, stick with Mike's recommendation. Use the specified values...especially
> the wattage! Good luck.....
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, March 15, 2011 11:31:42 AM
> Subject: [TS-520_820_530_830] Re: TS-830S meter adjustment
>
>
> This circuit is not NASA Rocket Science where exact values within 1% must be
> adhered to. The radio will perform equally well with new 5% resistors just as it
> will with new 1% resistors. My response simply gave you 2 options to choose
> from. Whether you select 1% or 5% tolerance resistors is entirely up to you.
>
>
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@> wrote:
> >
> > Thanks!Ã☐ You just answered the question IÃ☐ had in mind regarding which one to
> >buy.
> > Thanks again

> > 73s,
> > Butch Lewis
> > KÃ□Ë□PSA
> >
> > --- On Tue, 3/15/11, pmarkavage@ <pmarkavage@> wrote:
> >
> >
> > From: pmarkavage@ <pmarkavage@>
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S meter adjustment
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Tuesday, March 15, 2011, 12:52 PM
> >
> >
> > Ã□
> >
> >
> >
> > Even though Mouser's page for these resistors says 5% tolerance, it
> > really means + or - 5%. Generally, resistors are specified with a +/- %
> > tolerance. So a 20 ohm resistor with a +/- tolerance of 5% still could be
> > at the limit of in spec at either 21 ohms or 19 ohms. If resistance in
> > spec tolerance is highly important in the design, the +/- 1% resistors
> > are what should be used.
> >
> > Pete, wa2cwa
> >
> > On Tue, 15 Mar 2011 14:07:24 -0000 "w5rkl" <w5rkl@> writes:
> > > The 4 original cathode resistors had a tolerance rating of 5% which
> > > means each cathode resistor, if out of tolerance by 5%, would have a
> > > resistance of "21 ohms" (20 + 5% = 21).
> > >
> > > Butch, if the total cathode resistance is "13" ohms then one or more
> > > of the cathode resistors is out of tolerance. I agree with Joe and
> > > based on your total cathode resistance value of 13 ohms, replace all
> > > four of the 20 ohm 1/2 watt resistors. While you may find one or two
> > > of them close to 20 ohms, it's better to replace all 4 of them.
> > > Resistors are cheap and easy to find.
> > >
> > > Mouser sells 1% metal film 20 ohm 1/2 watt resistors:
> > >
> > > Mouser P/N:
> > > 71-CMF6020R000BHEB
> > > Price:
> > > 45 cents each
> > >
> > > They also sell Metal Oxide 20 ohm 1/2 watt 5% resistors:
> > >
> > > Mouser P/N:
> > > 660-MOS1/2CT52R200J

> > > Price:
> > > 8 cents each
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, W LEWIS <nscb56a@>
> > > wrote:
> > > >
> > > > Hi Joe,
> > > > Ã□â□□
> > > > IÃ□â□□ tested the four 20 ohm resisters and got 13 ohms on all
> > > four.Ã□â□□ Possible?Ã□â□□ IÃ□â□□ tested several resisters with my trusty old
> > > Heathkit IT-28 which turned out to be very accurate.Ã□â□□ What do you
> > > think?
> > > > Regards,
> > > > Butch Lewis
> > > > KÃ□Æ'Ã□Å"PSA
> > > >
> > > > --- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@> wrote:
> > > >
> > > >
> > > > From: Joseph Stiles <stilesjoseph@>
> > > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Date: Sunday, March 13, 2011, 5:41 PM
> > > >
> > > >
> > > > Ã□â□□
> > > >
> > > >
> > > >
> > > > Butch,
> > > >
> > > > If the rig has been "mis-tuned," "over-driven," or taking an
> > > overly long
> > > > time to tune up..over a period of possibly years..there are some
> > > components in
> > > > the final cage area that can be damaged by excessive heat and or
> > > current. Also,
> > > > check the value of the 4 (four) 20 ohm resistors on the final
> > > board. They should
> > > > read about 5.0 ohms (plus/minus tolerance) to ground. Find an
> > > X-ray view of the
> > > > final board...it does not have to be removed to check the
> > > resistors. The closer
> > > > to 5 ohms the better. If these resistors are too far out of value,

> > > you will get
> > > > and erroneous plate current reading/versus power out. Mike(w5rkl)
> > > may also add
> > > > to this. Good luck.....
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > > _____
> > > > From: W LEWIS <nscb56a@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Sun, March 13, 2011 3:24:43 PM
> > > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > > >
> > > > Hi Joe,
> > > >
> > > > Thanks for the help. I've had my 830 for over a year and have
> > > referred to both
> > > > the owner's and service manual dozens, if not hundreds of times
> > > and apparently
> > > > overlooked this every time. The meter is not an issue with my
> > > radio so maybe
> > > > that's why I missed it. Anyway, the 14.175 marker was dead on and
> > > the
> > > > meter adjustment was easy. S meter reads a solid S8 with the
> > > marker and zero
> > > > with no signal. I noticed that on power-up the initial needle
> > > deflection is
> > > > only to 50ma before it settles down to "0". There are other issues
> > > with my
> > > > friends radio during tune-up and as a relative newby I'm working
> > > on a
> > > > description that is both accurate and can be clearly understood.
> > > Bottom line is
> > > > that after the tuning process I must reduce the carrier to about
> > > 9:00 to be at
> > > > 225ma during key-up on CW showing about 50 watts out on the watt
> > > meter in my
> > > > 949E. The carrier control is VERY sensitive. Moving the carrier
> > > from 9:00 to
> > > > between 11:00and
> > > > 12:00 results in movement from 225ma to full deflection. This
> > > radio is
> > > > exceptionally clean both inside and out and I think is suffering
> > > mostly from
> > > > non use. If anything I've described so far points in any
> > > particular direction
> > > > please let me know. Again, thanks for the help with the meter
> > > adjustment.
> > > > After reading your email it took about 9 seconds to find it in the

> > > owner's
> > > > manual. Duh.
> > > > Best 73s,
> > > > Butch Lewis
> > > > KÃ□Æ'Ã□Å"PSA
> > > >
> > > > --- On Sun, 3/13/11, Joseph Stiles <stilesjoseph@> wrote:
> > > >
> > > > From: Joseph Stiles <stilesjoseph@>
> > > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Date: Sunday, March 13, 2011, 11:44 AM
> > > >
> > > > Butch,
> > > >
> > > > Also, forgot to mention that you can cheat a bit on the "S" meter
> > >
> > > > adjustment. If you do not have a signal generator, you can use the
> > > "calibrator
> > > > signal." It will not be as accuate but, will give you and idea if
> > > the meter is
> > > > working properly. Dial up frequency to about 14.175MHz with the
> > > "cal" signal
> > > > "ON" adjust the drive control and vfo frequency for max "S" meter
> > > reading.The
> > > > "cal" signal should be strong. You should see about S-8/9..you can
> > > adjust the
> > > > pot as indicated. If the IF/RF boards are way out of alignment
> > > this adjustment
> > > > will not be effective, and will only be fooling you even more.
> > > Check the basic
> > > > alignment steps in the operator manual. Remember this is
> > > cheating...but will
> > > > give you and idea..
> > > >
> > > > 73's joewb7uqu
> > > >
> > > > _____
> > > > From: W LEWIS <nscb56a@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Sat, March 12, 2011 12:08:38 PM
> > > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > > >
> > > > Thanks for responding, Joe. Yes, when the radio is off the
> > > indicator returns to
> > > > "0".
> > > >
> > > > --- On Sat, 3/12/11, Joseph Stiles <stilesjoseph@> wrote:
> > > >

> > > > From: Joseph Stiles <stilesjoseph@>
> > > > Subject: Re: [TS-520_820_530_830] TS-830S meter adjustment
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Date: Saturday, March 12, 2011, 11:59 AM
> > > >
> > > > Butch,
> > > >
> > > > When the rig is off...does the meter return to the far left..or
> > > "0"? If it
> > > > does..then a mechanical issue is not likely. Look in the operators
> > > or service
> > > > manual, it tells how to adjust the "S" meter. When the rig is
> > > first turned the
> > > > meters needle will go full scale and will fall back to "0" If it
> > > does
> > > > not..adjustment is indicated.
> > > >
> > > > 73's joewb7uqu
> > > >
> > > > _____
> > > > From: WL <nscb56a@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Sat, March 12, 2011 7:13:52 AM
> > > > Subject: [TS-520_820_530_830] TS-830S meter adjustment
> > > >
> > > > Gentlemen,
> > > >
> > > > I am a retired airline pilot fairly new to hamdom (18 months). A
> > > friend of mine
> > > > bought a complete 830 rig and I am attempting to check it out for
> > > him. I
> > > > corrected a dirty band switch problem but during tune-up I have to
> > > reduce the
> > > > carrier to about the 9:00 position to the keep the meter at 225 ma
> > > which
> > > > produces about 50 watts output. The thing I'm concerned with right
> > > now is that
> > > > when the unit is initially powered up the meter goes to about 90ma
> > > then slowly
> > > > (5 seconds) descends to and remains at 40ma. It seems that
> > > something is causing
> > > > the meter to read incorrectly which affects everything including
> > > setting the
> > > > bias. Can anyone give me an idea of what might be causing this and
> > > where I
> > > > should start to correct the problem? Any help will be greatly
> > > appreciated.
> > > > 73's
> > > > Butch Lewis

> > > > KÃ□Æ'Ã□Å"PSA
> > > >
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30233. Re: [TS-520_820_530_830] TS-520 HELP

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 21:21:40 UTC
From: jsloss
Topic: 30230 Message: 30233

No mic inserted and VOX is off. Momentary spike drops back to normal in under a second or two.

Joe k7mks

30234. Re: TS-520 HELP

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 21:31:21 UTC
From: w5rkl
Topic: 30230 Message: 30234

I agree with Gordon.

The driver tube, on it's own, does not produce any RF signal. The driver tube simply amplifies the RF signal given to it by the transmit mixer.

You may not achieve an exact carrier null that matches both USB and LSB. This is assuming the other adjustments are right. TC1 and VR2 work together to achieve the lowest possible carrier null between USB and LSB. Quite often you have to accept a compromise so both USB and LSB have a very low carrier null. I use a separate receiver tuned to the frequency of the transmitter and adjust the pot and variable capacitor for the lowest S meter reading possible between USB and LSB.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jsloss" <k7mks@...> wrote:
>
> My -520 has an Ip and PO "glitch". When in LSB or USB and switching to SEND there is a momentary Ip increase to 100-150 ma with appropriate power out. Does it with RCA or GE finals. Replacing Driver tube does not seem to increase or decrease problem.
>
> Neutralization is set correctly and I'm beginning to think the carrier null is not. Renulling carrier in LSB improves thje situation but does not help USB. For some reason cannot get a good null on USB and LSB at same control setting.
>
> Any trhoughts?
>
> JKoe k7mks
>
> [Non-text portions of this message have been removed]
>

30235. Re: [TS-520_820_530_830] Re: TS-520 HELP

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 22:37:28 UTC
From: jsloss
Topic: 30230 Message: 30235

Mike:

I can get a good carrier null in LSB when listening to an adjacent radio. PA Ip is 60 ma. When I switch back to RCVE and then back to SEN D Ip spikes to150-200 ma w/ corresponding PO. This spike drops back to 60 ma Ip in less than a second. The end result would be throwing a 20-30 watt carrier on your frequency, for just a second or less, whenever you keyed mike to transmit.

The same situation will occur in USB if I sought maximum null of the carrier in that mode.

Something is causing something to increase the Ip, even only momentarily, when switching from RCVR to SEND.

Thanks for your comments.

Joe k7mks

[Non-text portions of this message have been removed]

30236. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-15 23:43:48 UTC
From: wrench101
Topic: 30202 Message: 30236

The relays seem to be switching fine as tested through plugs 8 and 9 on the AF board. The cathode resistors were replaced a week or so ago and are reading 5.7 ohms "in circuit" which I assume is fine. Question, the state of the tubes are unknown, with all the very bad things that I've seen performed from a previous owner, could the tubes be fried? It is apparent to me that a previous owner was a complete numbscull. I wasn't sure if I'd said so previously, but the rectifier board was fried because a jumpered R11 and a foil wrapped fuse. Screen and cathode resistors were fried completely and have been replaced. I also completed a partial final cage repair purchased from Ken. (all my parts have come from Ken minus a few resistors and diodes). I recently found a bad solder joint on the rectifier board (silly me) and corrected my HV meter reading. All voltages seem to be correct. I'm wondering if replacing tubes is my next step, Everything else seems to be functioning now, but no bias, no idle current, no ALC. Suggestions? Thanks to all. 73 Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Steve,
>
> I also recommend you checking the final tube cathode resistors as Joe suggested. The original cathode resistors are 5% carbon resistors and over time they can increase in value as I discussed in a recent response. As Joe said, you do not have to remove the 4 resistors. However, if the resistance of the cathode resistors is not 5 ohms or within 5% of 5 ohms I would replace all 4 cathode resistors, as I also mentioned.
>
> I'm working on a 530 at the moment. I removed all 4 of the original cathode resistors. One measured "33 ohms". Now if you consider 5% tolerance rating of the original resistor then 33 ohms is "65%" above the original value. That 65% above the tolerance rating plus any additional increase above 5% tolerance with the other 3 resistors will result in a significant change in IP meter readings.
>
> When the final tubes are conducting, a voltage drop occurs across the cathode resistors. This voltage at the final tube cathodes also appears across IP metering resistors R6 and R10. The voltage drop that occurs across R6 is applied to the meter switch IP terminal. When the 530 is in transmit and current is flowing through the final tubes, the voltage that appears at the junction of R6 and R10 is applied through the IP switch terminal to the meter in transmit and with the meter switch set to IP, you see the IP current displayed on the top scale of the meter. If no current is flowing in the final tubes, for what ever reason, there will be no voltage drop occurring across the cathode resistors and no voltage appearing across R6 and R10 which results in no IP meter indication in transmit.
>
> I hope this helps you understanding how the IP meter works and what has to happen in order for the IP meter to display IP current in transmit.
>
> 73s
> Mike
> W5RKL

>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Steve,
> >
> > That's great. Glad you found an open in the receive signal path.
> >
> > The voltage readings you provide indicate there's no voltage problem.
> >
> > You said the 530 has no idling current. This could be caused by relay RL1 on the IF Unit.
> >
> > Relay RL1 on the IF Unit have 3 terminals that connect through the wiring harness to the AF Unit board. These 3 terminals control the AF Unit's driver and final tube biasing voltage levels between receive and transmit. What these 3 terminal do is turn ON and OFF 2 transistors on the AF unit. When the transistors are turned ON, the relay on the IF Unit is energized, the bias voltage level applied to the driver and both final tubes becomes "less negative", turning the driver and both final tubes ON. When the final tubes are turned ON, you see idling current in CW, USB, and LSB modes in transmit. When the relay on the IF Unit is not energized, receive mode, the AF Unit bias voltage level becomes "more negative" turning the driver tube and both final tubes OFF.
> >
> > Now if the 3 RL1 relay terminals mentioned above are bad then the driver and both final tubes will remain "OFF" even in transmit and that's is why you do not see any idling current in CW, USB, and LSB modes. This, of course, is assuming the cathode resistors have not burnt open resulting in no current flow in the final tubes in transmit. Open cathode resistors will produce an "open" in the current flow path in the final tube which will result in no idling current in any mode.
> >
> > The key is to watch the final tube voltages. In receive the voltages applied to the grid (negative voltage), the screen and plate (positive voltage) will be high in receive but become less in transmit when current is flowing in the tubes. If the voltages change only slightly, a few volts or so then I would look at RL1 on the IF Unit as a suspect, especially if the bias voltage doesn't change to a much less negative voltage on the grids of the final tubes.
> >
> > If RL1 on the IF Unit is found to be bad, you can purchase an exact replacement through Ken, K4EAA, (www.k4eaa.com) or Mouser Electronics (www.mouser.com).
> >
> > Mouser relay RL1 Part number:
> > 769-NR4EB-12V
> >
> > Mouser's Price:
> > $12.46 each
> >
> > It's your choice who you purchase the relay from.
> >
> >
> > 73s

> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > Hooray! I found a cold solder joint on the IF board and now I have a marker signal! It's weak, but it's there. I completed the test you explained below and got close to S9 on all bands. I adjusted the coils per the owners manual for maximum meter deflection. So at least now I know she CAN hear. Now to find out why I have to output. The screen and cathode resistors have been replace. Until next time...73, Steve
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > >
> > > > Put the 530 on 40 meters (7 on the band switch), push the Marker button to the right of the meter, and tune the VFO to a 25Khz dial interval, such as 7.025, 7.050, 7.075, etc. You should heat a beat note, a tone, and that beat note should vary in frequency up or down, depending on which direction you rotate the VFO at the 25Khz dial setting. When you hear the beat note, adjust the DRIVE control for a peak S meter reading. On 40 meters the S meter should display at least S9 or more when adjusting the DRIVE control for a peak S meter reading.
> > > >
> > > > Do not key the transmitter when doing this test. This tests the receiver's front end and all stages up to and including the audio amplifier.
> > > >
> > > > Do this same test on all bands. The S meter should peak at least S9 on all bands but 12 and 10 meters which is most likely will be S7 or slightly less.
> > > >
> > > > Lets us know how this simple receive test goes. Again, do not key the transmitter, this is a receive test.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > >
> > > > > I only have a DVM. I sure wish I had more! I was laid off last Monday, so getting something right now is out of the question.
> > > > >
> > > >
> > > >
> > >
> > >
> >
>

30237. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 01:50:23 UTC
From: w5rkl
Topic: 30202 Message: 30237

You said "no bias". Did you check the bias supply to determine there's no bias? If there is no bias voltage then the final tubes, along with the driver tube, would conduct at saturation levels in receive which would most likely lead to the fuse blowing.

I can't say whether the tubes are good or bad. You would have to take voltage measures of the final tube grid, screen, and plate voltages during receive and transmit. The 530 service manual schematic shows typical final tube grid, screen, and plate voltage levels in both receive and transmit. The voltages shown in brackets are with the 530 in transmit. The voltages shown not in brackets are with the 530 in receive. The voltage measurements will tell a lot about how the final tubes are conducting and how the final amplifier is working. This also applies to the driver tube as well.

You said the relays seem to be switching fine as tested through plugs 8 and 9 on the AF Unit. That's fine but that's only half of the switching action. You have to go further to ensure the bias voltages are actually switching.

The actual driver tube bias voltage appears on AF Unit plug 7 pin 5 "DRB" (DRiver Bias).

The actual final tube bias voltage appears on AF Unit "FG" (Final Grid) terminal.

In receive, the DRiver Bias voltage (DRB) is approximately -51VDC. Switching to transmit the DRiver Bias voltage (DRB) changes to approximately +.4VDC. The voltage changes are measured/monitored on AF Unit plug 7 pin 5.

In receive, the Final Grid bias voltage (FG) is approximately -110VDC. This high negative voltage applied to the Final Grids turns both final tubes OFF (biased to cut off). Switching to transmit, the Final Grid voltage (FG) changes to approximately -65VDC. This "less negative" bias voltage when applied to the final tube grids, turns both final tubes ON and is measured/monitored on the AF Unit "FG" terminal.

These two bias voltage measurements/monitoring will only tell you whether the IF Unit relay and all bias switching circuits are working and the bias voltage is actually present at plug 7 pin 5 and FG terminals on the AF Unit. The bias voltage flows to the driver and both final tubes and should appear at pin 2 of the driver tube and pin 5 of both final tubes. This will check the entire bias switching circuit and bias voltage path to the driver and both final tubes. I say this since you said a previous owner messed up the 530 before you got it. Never assume anything, check it to be sure.

I mean no disrespect, I just think it's important to check everything to be sure especially since you said the condition of this 530 is bad because of a previous owner messing thing up.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> The relays seem to be switching fine as tested through plugs 8 and 9 on the AF board. The cathode resistors were replaced a week or so ago and are reading 5.7 ohms "in circuit" which I assume is fine. Question, the state of the tubes are unknown, with all the very bad things that I've seen performed from a previous owner, could the tubes be fried? It is apparent to me that a previous owner was a complete numbscull. I wasn't sure if I'd said so previously, but the rectifier board was fried because a jumpered R11 and a foil wrapped fuse. Screen and cathode resistors were fried completely and have been replaced. I also completed a partial final cage repair purchased from Ken. (all my parts have come from Ken minus a few resistors and diodes). I recently found a bad solder joint on the rectifier board (silly me) and corrected my HV meter reading. All voltages seem to be correct. I'm wondering if replacing tubes is my next step, Everything else seems to be functioning now, but no bias, no idle current, no ALC. Suggestions? Thanks to all. 73 Steve
>
>

30238. Re: 520 RF mod G3 mosfet removal

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 07:55:41 UTC
From: tejohnsonphd
Topic: 30220 Message: 30238

Steve,
Thank you. I will check on the soldering and then get someone to hold the socket while I see if the transistor will come out.
Thomas

--- In TS-520_820_530_830@yahoogroups.com, Steve Bontempo <sbontempo@...> wrote:
>
> Hello Thomas,
>
> All of mine pulled out quite easily. Are they all hard to move in the
> sockets? If you look down where the leads are inserted into the
> socket does it look like someone soldered the leads into the socket?
> The MOSFETs should come right out with very little effort.
>
> Steve KU4BY
>

30239. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 13:52:23 UTC
From: wrench101
Topic: 30202 Message: 30239

The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> You said "no bias". Did you check the bias supply to determine there's no bias? If there is no bias voltage then the final tubes, along with the driver tube, would conduct at saturation levels in receive which would most likely lead to the fuse blowing.
>
> I can't say whether the tubes are good or bad. You would have to take voltage measures of the final tube grid, screen, and plate voltages during receive and transmit. The 530 service manual schematic shows typical final tube grid, screen, and plate voltage levels in both receive and transmit. The voltages shown in brackets are with the 530 in transmit. The voltages shown not in brackets are with the 530 in receive. The voltage measurements will tell a lot about how the final tubes are conducting and how the final amplifier is working. This also applies to the driver tube as well.
>
> You said the relays seem to be switching fine as tested through plugs 8 and 9 on the AF Unit. That's fine but that's only half of the switching action. You have to go further to ensure the bias voltages are actually switching.
>
> The actual driver tube bias voltage appears on AF Unit plug 7 pin 5 "DRB" (DRiver Bias).
>
> The actual final tube bias voltage appears on AF Unit "FG" (Final Grid) terminal.
>
> In receive, the DRiver Bias voltage (DRB) is approximately -51VDC. Switching to transmit the DRiver Bias voltage (DRB) changes to approximately +.4VDC. The voltage changes are measured/monitored on AF Unit plug 7 pin 5.
>
> In receive, the Final Grid bias voltage (FG) is approximately -110VDC. This high negative voltage applied to the Final Grids turns both final tubes OFF (biased to cut off). Switching to transmit, the Final Grid voltage (FG) changes to approximately -65VDC. This "less negative" bias voltage when applied to the final tube grids, turns both final tubes ON and is measured/monitored on the AF Unit "FG" terminal.
>
> These two bias voltage measurements/monitoring will only tell you whether the IF Unit relay and all bias switching circuits are working and the bias voltage is actually present at plug 7 pin 5 and FG terminals on the AF Unit. The bias voltage flows to the driver and both final tubes and should appear at pin 2 of the driver tube and pin 5 of both final tubes. This will check the entire bias switching circuit and bias voltage path to the driver and both final tubes. I say this since you said a previous owner messed up the 530 before you got it. Never assume anything, check it to be sure.
>

> I mean no disrespect, I just think it's important to check everything to be sure especially since you said the condition of this 530 is bad because of a previous owner messing thing up.
>
> 73s
> Mike
> W5RKL
>
>
>
>
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>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > The relays seem to be switching fine as tested through plugs 8 and 9 on the AF board. The cathode resistors were replaced a week or so ago and are reading 5.7 ohms "in circuit" which I assume is fine. Question, the state of the tubes are unknown, with all the very bad things that I've seen performed from a previous owner, could the tubes be fried? It is apparent to me that a previous owner was a complete numbscull. I wasn't sure if I'd said so previously, but the rectifier board was fried because a jumpered R11 and a foil wrapped fuse. Screen and cathode resistors were fried completely and have been replaced. I also completed a partial final cage repair purchased from Ken. (all my parts have come from Ken minus a few resistors and diodes). I recently found a bad solder joint on the rectifier board (silly me) and corrected my HV meter reading. All voltages seem to be correct. I'm wondering if replacing tubes is my next step, Everything else seems to be functioning now, but no bias, no idle current, no ALC. Suggestions? Thanks to all. 73 Steve
> >
> >
>

30240. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 14:04:47 UTC
From: w5rkl
Topic: 30202 Message: 30240

I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.

You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.

30241. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 14:40:40 UTC
From: wrench101
Topic: 30202 Message: 30241

SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.

Thanks again, 73, Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
>
> You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
>

30242. Knwd AT-230 FS

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 16:02:18 UTC
From: jsloss
Topic: 30180 Message: 30242

AT-230 tuner. 200W raring, 160-10m incl. WARC. Virtually new. $195. Pls reply direct.

Joe k7mks.

[Non-text portions of this message have been removed]

30243. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 16:17:40 UTC
From: w5rkl
Topic: 30202 Message: 30243

Hi Steve,

If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?

The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
>
> Thanks again, 73, Steve
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> >
> > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is

switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
> >
>

30244. TS-520 Carrier Glitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 17:16:59 UTC
From: jsloss
Topic: 30244 Message: 30244

What is the purpose of RL-1 on the Generator board. Neither the Operation or Service manuals indicate its purpose.

joe k7mks

[Non-text portions of this message have been removed]

30245. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 18:20:41 UTC
From: wrench101
Topic: 30202 Message: 30245

The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Steve,
>
> If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?
>
> The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.
>
>
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
> >
> > Thanks again, 73, Steve
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> > >

> > > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
> > >
> >
>

30246. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 18:43:21 UTC
From: w5rkl
Topic: 30202 Message: 30246

If the final tube screen voltage is the same whether the 530 is in receive or transmit, even though the grid voltage changes from -101VDC to -71VDC in transmit, if no electrons are emitting from the indirectly heated cathode then there will zero ALC (grid current) and zero IP current.

I would replace the final tubes. You can get replacement 6146B tubes from the following source:

http://www.vacuumtubes.net/

It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Steve,
> > >
> > > If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?
> > >
> > > The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL

> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
> > >
> > > Thanks again, 73, Steve
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> > > >
> > > > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > >
> > > > > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
> > > >
> > >
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>

30247. Re: TS-520 Carrier Glitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 18:45:13 UTC
From: w5rkl
Topic: 30244 Message: 30247

Hi Joe,

RL1 on the GENERATOR BOARD, when energize in transmit, provides a path for the CAR UNIT RF signal to the balance modulator. In receive RL1 is not energized which removes the CAR UNIT signal from the Balance Modulator.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jsloss" <k7mks@...> wrote:
>
> What is the purpose of RL-1 on the Generator board. Neither the Operation or Service manuals indicate its purpose.
>
> joe k7mks
>
> [Non-text portions of this message have been removed]
>

30248. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 18:50:02 UTC
From: wrench101
Topic: 30202 Message: 30248

Thanks a million Mike. I can't express how appreciative I am for your help. I was checking on the physical condition of the tubes, they sure don't look happy on the inside! Off to buy tubes!.....73, and again, thank you so much!

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If the final tube screen voltage is the same whether the 530 is in receive or transmit, even though the grid voltage changes from -101VDC to -71VDC in transmit, if no electrons are emitting from the indirectly heated cathode then there will zero ALC (grid current) and zero IP current.
>
> I would replace the final tubes. You can get replacement 6146B tubes from the following source:
>
> http://www.vacuumtubes.net/
>
> It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?
> > >
> > >
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hi Steve,
> > > >
> > > > If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?
> > > >
> > > > The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary

depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
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> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
> > > >
> > > > Thanks again, 73, Steve
> > > >
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> > > > >
> > > > > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
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> > > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > > >
> > > > > > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
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30249. TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 19:18:24 UTC
From: Will
Topic: 30249 Message: 30249

Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time. The ultimate answer is run an 817 or similar but you work with what you've got !!

Kind regards.....Will

30250. Re: [TS-520_820_530_830] Re: TS-520 Carrier Glitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 19:54:59 UTC
From: jsloss
Topic: 30244 Message: 30250

Thank you Mike for the info on RL-1..

Joe k7mks

[Non-text portions of this message have been removed]

30251. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 22:06:25 UTC
From: w5rkl
Topic: 30249 Message: 30251

Hello Will,

Are trying to run QRP on CW or sideband? If it's sideband the CAR control has no control over power output in sideband.

For sideband, tune the 830 up for maximum power then control RF output through the external ALC connection.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "Will" <gm0hks@...> wrote:
>
> Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time. The ultimate answer is run an 817 or similar but you work with what you've got !!
>
> Kind regards..........Will
>

30252. Re: [TS-520_820_530_830] Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 22:33:25 UTC
From: John Davidson
Topic: 30202 Message: 30252

My TS520 has a filament on/off switch to save battery current when mobile and no transmitting is planned.
If the 530 has a similar switch, make sure it is on or the filaments on the tubes light up before replacing anything. !
Forgive me if you already verified lit up filaments ...:D

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 16, 2011 2:43:21 PM
Subject: [TS-520_820_530_830] Re: 530 No Transmit, No Receive

If the final tube screen voltage is the same whether the 530 is in receive or transmit, even though the grid voltage changes from -101VDC to -71VDC in transmit, if no electrons are emitting from the indirectly heated cathode then there will zero ALC (grid current) and zero IP current.
It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.
73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> The SG voltage does not change when transmitting, which would tell me that the
>finals aren't conducting, correct?>
>
>
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.

[Non-text portions of this message have been removed]

30253. Re: [TS-520_820_530_830] TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 22:39:44 UTC
From: John Davidson
Topic: 30249 Message: 30253

I have operated my TS520 by setting the loading capacitor to minimum, re dipping the plate capacitor (usually somewhat reduced power output now) finally using the carrier setting to reduce further to desired power output. I have gotten down to 3/4 watts (750 mW) this way and have worked some good distances with a clean note .

This only works for CW mode !

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 16, 2011 3:18:24 PM
Subject: [TS-520_820_530_830] TS830S _ QRP ops

Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time.
The ultimate answer is run an 817 or similar but you work with what you've got !!

Kind regards.....Will

[Non-text portions of this message have been removed]

30254. Re: [TS-520_820_530_830] TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 22:48:11 UTC
From: Bob Macklin
Topic: 30249 Message: 30254

What's wrong with using the MIC control to limit the power?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 16, 2011 3:39 PM
Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops

I have operated my TS520 by setting the loading capacitor to minimum, re dipping the plate capacitor (usually somewhat reduced power output now) finally using the carrier setting to reduce further to desired power output. I have gotten down to 3/4 watts (750 mW) this way and have worked some good distances with a clean note .

This only works for CW mode !

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 16, 2011 3:18:24 PM
Subject: [TS-520_820_530_830] TS830S _ QRP ops

Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time.
The ultimate answer is run an 817 or similar but you work with what you've got !!

Kind regards.....Will

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30255. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-16 23:04:20 UTC
From: wrench101
Topic: 30202 Message: 30255

The filaments are working. With the help and great advice from the folks in this group, it has been determined that the finals in the rig are shot. A previous owner had done some pretty bad things to this rig. I should have new tubes by Friday and I can't wait to finally get on air. Thanks for the input though. 73 Steve

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> My TS520 has a filament on/off switch to save battery current when mobile and no
> transmitting is planned.
> If the 530 has a similar switch, make sure it is on or the filaments on the
> tubes light up before replacingÂ anything.Â !
> Forgive me if you already verified lit up filaments ...:D
>
> Â
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, March 16, 2011 2:43:21 PM
> Subject: [TS-520_820_530_830] Re: 530 No Transmit, No Receive
>
> Â
> If the final tube screen voltage is the same whether the 530 is in receive or
> transmit, even though the grid voltage changes from -101VDC to -71VDC in
> transmit, if no electrons are emitting from the indirectly heated cathode then
> there will zero ALC (grid current) and zero IP current.
> It appears to me, based on the screen voltages between receive and transmit,
> whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting
> which is why there is zero ALC and zero IP current indications on the meter.
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > The SG voltage does not change when transmitting, which would tell me that the
> >finals aren't conducting, correct?>
> >
> >
> Switch to: Text-Only, Daily Digest â¢ Unsubscribe â¢ Terms of Use
> .
>

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>
> [Non-text portions of this message have been removed]
>

30256. Re: [TS-520_820_530_830] 520 RF mod G3 mosfet removal

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 02:36:22 UTC
From: Walter Breining
Topic: 30220 Message: 30256

I don't understand why you would want to do this. While the NTE 222 is better than a 3SK 40 but only in the front end, the 3SK 35 is every bit as good as the NTE 222.

Also, why would you want to run the front end wide open ? All you are going to get is more noise and intermod.

The 3SK35 is a mosfet.

More sensitivity does not mean hearing more. The problem is signal to noise ratio. The noise floor on all HF bands is high enough that a further increase in gain will not improve things. Once a signal is in the ambient noise, you are not going to pull it out. This is true for AM and SSB which is a form of AM.

Now FM is a different story.

Vy 73, Walt N9WB

----- Original Message -----
From: tejohnsonphd
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 15, 2011 5:16 AM
Subject: [TS-520_820_530_830] 520 RF mod G3 mosfet removal

This mosfet (3SK35) sits on a socket. It seems stuck. I want to put a NTE222 in its place and run the mosfet wide open. Anyone have any experience removing this transistor?
Regards,
Thomas

[Non-text portions of this message have been removed]

30257. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 14:17:20 UTC
From: Will
Topic: 30249 Message: 30257

Hi Mike,
sorry, I should have made it clear that I am only using CW. Yes, I appreciate that the mic and carrier controls are of no use when using SSB voice but its purley CW. I had just wondered if in doing so, it might do some form of harm to the output bottles, ie, generated heated etc as, in reality, the rig is designed to run much greater power levels than 3 to 5 watts.
regards

Will

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Will,
>
> Are trying to run QRP on CW or sideband? If it's sideband the CAR control has no control over power output in sideband.
>
> For sideband, tune the 830 up for maximum power then control RF output through the external ALC connection.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@> wrote:
> >
> > Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> > My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time. The ultimate answer is run an 817 or similar but you work with what you've got !!
> >
> > Kind regards.....Will
> >
>

30258. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 14:21:53 UTC
From: Will
Topic: 30249 Message: 30258

Bob,
using the MIC control will not do anything other than upset the ALC of the rig and will, in effect, cease to function. I guess that it would reduce the transmitted audio down to whispers but it would not reduce the actual emitted rf to the low level I want. In any case, I am actually only wanting to work QRP CW so the carrier control should work. I am more concerned to learn if, in doing so, reducing the carrier to around 3 - 5 watts, it will impact on the final tubes ? heat etc ??

kind regards

Will

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> What's wrong with using the MIC control to limit the power?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 16, 2011 3:39 PM
> Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops
>
>
>
> I have operated my TS520 by setting the loading capacitor to minimum, re dipping
> the plate capacitor (usually somewhat reduced power output now) finally using
> the carrier setting to reduce further to desired power output. I have gotten
> down to 3/4 watts (750 mW) this way and have worked some good distances with a
> clean note .
>
> This only works for CW mode !
>
> _____
> From: Will <gm0hks@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, March 16, 2011 3:18:24 PM
> Subject: [TS-520_820_530_830] TS830S _ QRP ops
>
>
>
> Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> My questions would be: is it better to tune and load the rig, as normal, and
> then reduce the output power by screwing back the output power by use of the

> carrier control switch or, tune and load the rig to full output power and, using
> the ALC minus voltage feature (minus alc via the skt on the back of the rig)
> reduce power that way. I know the rig is not designed for this type of operating
> at large, but I am trying to understand if it will shorten bottle life or have
> any impact at all on the final output stage running QRP for a period of time.
> The ultimate answer is run an 817 or similar but you work with what you've got
> !!
>
> Kind regards.....Will
>
> [Non-text portions of this message have been removed]
>
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>
>
> [Non-text portions of this message have been removed]
>

30259. Re: [TS-520_820_530_830] Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 14:36:24 UTC
From: Bob Macklin
Topic: 30249 Message: 30259

Will,

I believe you are wrong about the MIC control on SSB. On all other SSB rigs this is how you set the power level. From what I have been able to read the these rigs are the same.

Running CW at a 5W power level will not hurt the final at all.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 17, 2011 7:21 AM
Subject: [TS-520_820_530_830] Re: TS830S _ QRP ops

Bob,
using the MIC control will not do anything other than upset the ALC of the rig and will, in effect, cease to function. I guess that it would reduce the transmitted audio down to whispers but it would not reduce the actual emitted rf to the low level I want. In any case, I am actually only wanting to work QRP CW so the carrier control should work. I am more concerned to learn if, in doing so, reducing the carrier to around 3 - 5 watts, it will impact on the final tubes ? heat etc ??

kind regards

Will

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> What's wrong with using the MIC control to limit the power?
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: John Davidson
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 16, 2011 3:39 PM
> Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops
>
>
>
> I have operated my TS520 by setting the loading capacitor to minimum, re dipping
> the plate capacitor (usually somewhat reduced power output now) finally using

> the carrier setting to reduce further to desired power output. I have gotten
> down to 3/4 watts (750 mW) this way and have worked some good distances with a
> clean note .
>
> This only works for CW mode !
>
> _____
> From: Will <gm0hks@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, March 16, 2011 3:18:24 PM
> Subject: [TS-520_820_530_830] TS830S _ QRP ops
>
>
> Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> My questions would be: is it better to tune and load the rig, as normal, and
> then reduce the output power by screwing back the output power by use of the
> carrier control switch or, tune and load the rig to full output power and, using
> the ALC minus voltage feature (minus alc via the skt on the back of the rig)
> reduce power that way. I know the rig is not designed for this type of operating
> at large, but I am trying to understand if it will shorten bottle life or have
> any impact at all on the final output stage running QRP for a period of time.
> The ultimate answer is run an 817 or similar but you work with what you've got
> !!
>
> Kind regards.....Will
>
> [Non-text portions of this message have been removed]
>
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> [Non-text portions of this message have been removed]
>

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30260. Re: [TS-520_820_530_830] Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 15:12:30 UTC
From: Chris and Alex
Topic: 30249 Message: 30260

Hi Will,

The rig gets a much easier life on low power. When I use my 830 for bpsk31, I tune up to full power and then use the mic gain to limit the rf power out. I use the plate current to set it up. At an Ip of around 100 mA it puts out around 20 watts RF and the signal couldn't be better. I get IMD reports of -28db. If I look at the ALC when transmitting it doesn't even leave the bottom peg. It's the same for CW. When you're set up for CW, tune for full power and then reduce the CAR as you watch the plate current and you'll see it go down. The less current that goes through the tubes, the less heat they'll generate. The tubes are also happier if the finals are in resonance that's why it's important to tune up as normal first.

Chris SV0XBQ/9

On 17 March 2011 16:17, Will <gm0hks@...> wrote:

>
>
> Hi Mike,
> sorry, I should have made it clear that I am only using CW. Yes, I
> appreciate that the mic and carrier controls are of no use when using SSB
> voice but its purley CW. I had just wondered if in doing so, it might do
> some form of harm to the output bottles, ie, generated heated etc as, in
> reality, the rig is designed to run much greater power levels than 3 to 5
> watts.
> regards
>
> Will
>
>
> --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@...> wrote:
> >
> > Hello Will,
> >
> > Are trying to run QRP on CW or sideband? If it's sideband the CAR control
> has no control over power output in sideband.
> >
> > For sideband, tune the 830 up for maximum power then control RF output
> through the external ALC connection.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >

> > --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@> wrote:
> > >
> > > Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> > > My questions would be: is it better to tune and load the rig, as
> normal, and then reduce the output power by screwing back the output power
> by use of the carrier control switch or, tune and load the rig to full
> output power and, using the ALC minus voltage feature (minus alc via the skt
> on the back of the rig) reduce power that way. I know the rig is not
> designed for this type of operating at large, but I am trying to understand
> if it will shorten bottle life or have any impact at all on the final output
> stage running QRP for a period of time. The ultimate answer is run an 817 or
> similar but you work with what you've got !!
> > >
> > > Kind regards.....Will
> > >
> >
>
>
>

[Non-text portions of this message have been removed]

30261. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 16:12:25 UTC
From: w5rkl
Topic: 30249 Message: 30261

Hello Will,

The MIC gain controls the level of audio applied to the balance modulator in sideband (USB and LSB).

In sideband, the audio from the speech amplifier is what varies the 8Mhz carrier signal level fed to the IF Unit. The lower the MIC gain setting the lower the audio level from the speech amplifier is applied to the balance modulator. This results in a lower level of 8Mhz carrier RF signal being applied to the IF Unit which ultimately results in lower RF output from the 830.

There is no requirement to "always" have ALC indication when transmitting in sideband whether USB or LSB.

ALC is produced when the level of RF signal from the driver tube to the final grids causes the final tube grids to swing positive during a portion of the RF sine wave cycle.

The final amplifier's in all of the hybrids operate in Class AB1. Normal Class AB1 amplifiers do not have grid current flowing during any portion of the RF or AF sine wave. The only time ALC is needed is when the level of RF signal from the driver tube causes the final tube grids to swing positive during a portion of the RF sine wave driving signal. Other than that, there's no need or requirement for ALC to be produced at any lower power setting and lack of ALC at lower power setting will not result in any negative affects or damage to the transmitter and transmit signal.

If QRP CW is desired, simply tune the transceiver up for maximum power output following the normal tune up procedures. Then once that is completed, switch to CW, key the transmitter and rotate the CAR control to the desired RF output level.

As for whether this will harm the transceiver? The answer is absolutely not.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Bob,
> using the MIC control will not do anything other than upset the ALC of the rig and will, in effect, cease to function. I guess that it would reduce the transmitted audio down to whispers but it would not reduce the actual emitted rf to the low level I want. In any case, I am actually only wanting to work QRP CW so the carrier control should work. I am more concerned to learn if, in doing so, reducing the carrier to around 3 - 5 watts, it will impact on the final tubes ? heat etc ??
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> kind regards
>

> Will
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> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> >
> > What's wrong with using the MIC control to limit the power?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: John Davidson
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, March 16, 2011 3:39 PM
> > Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops
> >
> >
> >
> > I have operated my TS520 by setting the loading capacitor to minimum, re dipping
> > the plate capacitor (usually somewhat reduced power output now) finally using
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> > down to 3/4 watts (750 mW) this way and have worked some good distances with a
> > clean note .
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> > This only works for CW mode !
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> > _____
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, March 16, 2011 3:18:24 PM
> > Subject: [TS-520_820_530_830] TS830S _ QRP ops
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> > any impact at all on the final output stage running QRP for a period of time.
> > The ultimate answer is run an 817 or similar but you work with what you've got
> > !!
> >
> > Kind regards.....Will
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >

> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30262. Re: [TS-520_820_530_830] TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 16:49:11 UTC
From: John Davidson
Topic: 30249 Message: 30262

The Mic gain control has absolutely NO EFFECT on CW output !

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 16, 2011 6:48:11 PM
Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops
What's wrong with using the MIC control to limit the power?

Bob Macklin
K5MYJ
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 16, 2011 3:39 PM
Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops

I have operated my TS520 by setting the loading capacitor to minimum, re dipping the plate capacitor (usually somewhat reduced power output now) finally using

the carrier setting to reduce further to desired power output. I have gotten down to 3/4 watts (750 mW) this way and have worked some good distances with a clean note .

This only works for CW mode !

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 16, 2011 3:18:24 PM
Subject: [TS-520_820_530_830] TS830S _ QRP ops

Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using

the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating

at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time.
The ultimate answer is run an 817 or similar but you work with what you've got !!

Kind regards.....Will

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30263. Bob Mansker

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 17:36:28 UTC
From: n6wk_skcc3
Topic: 30263 Message: 30263

Has anyone heard from Bob Mansker lately? I have sent him a couple of emails but no replies. He usually gets right back to me.

73,
Gordon
N6WK

30264. Re: Bob Mansker

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 18:04:23 UTC
From: Bob
Topic: 30263 Message: 30264

Gordon
I just talked to Bob on the phone he is fine. I let him know you were looking for a reply. He is just busy with LIFE! I know we don't have a life outside of Ham Radio but some people do.
73
Bob
KB6KPK
--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Has anyone heard from Bob Mansker lately? I have sent him a couple of emails but no replies. He usually gets right back to me.
>
> 73,
> Gordon
> N6WK
>

30265. Re: Bob Mansker

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 18:04:52 UTC
From: Bob
Topic: 30263 Message: 30265

Hi Gordon,
Still alive... :)
I did not receive your emails????
ke5ftf@mail.com
Bob
ke5ftf
303-719-5433
****

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Has anyone heard from Bob Mansker lately? I have sent him a couple of emails but no replies. He usually gets right back to me.
>
> 73,
> Gordon
> N6WK
>

30266. TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 18:09:39 UTC
From: n6wk_skcc3
Topic: 30266 Message: 30266

Does anyone know the exact inductance of the Plate choke L2 for the TS-830S?
I could remove one from an 830 to measure, but wondered if someone knows off hand. I know it is 206 turns of #34 enameled wire

Thanks,
Gordon
N6WK

30268. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 18:56:47 UTC
From: Will
Topic: 30249 Message: 30268

hi Everyone,
well, I guess I got a great response and some excellent feedback. May I thank everyone who contributed. It fully answered my queries. Very 73 all round.....Will

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Will,
>
> I believe you are wrong about the MIC control on SSB. On all other SSB rigs this is how you set the power level. From what I have been able to read the these rigs are the same.
>
> Running CW at a 5W power level will not hurt the final at all.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 17, 2011 7:21 AM
> Subject: [TS-520_820_530_830] Re: TS830S _ QRP ops
>
>
>
> Bob,
> using the MIC control will not do anything other than upset the ALC of the rig and will, in effect, cease to function. I guess that it would reduce the transmitted audio down to whispers but it would not reduce the actual emitted rf to the low level I want. In any case, I am actually only wanting to work QRP CW so the carrier control should work. I am more concerned to learn if, in doing so, reducing the carrier to around 3 - 5 watts, it will impact on the final tubes ? heat etc ??
>
> kind regards
>
> Will
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> >
> > What's wrong with using the MIC control to limit the power?
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"

> > ----- Original Message -----
> > From: John Davidson
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, March 16, 2011 3:39 PM
> > Subject: Re: [TS-520_820_530_830] TS830S _ QRP ops
> >
> >
> >
> > I have operated my TS520 by setting the loading capacitor to minimum, re dipping
> > the plate capacitor (usually somewhat reduced power output now) finally using
> > the carrier setting to reduce further to desired power output. I have gotten
> > down to 3/4 watts (750 mW) this way and have worked some good distances with a
> > clean note .
> >
> > This only works for CW mode !
> >
> > _____
> > From: Will <gm0hks@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, March 16, 2011 3:18:24 PM
> > Subject: [TS-520_820_530_830] TS830S _ QRP ops
> >
> >
> > Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> > My questions would be: is it better to tune and load the rig, as normal, and
> > then reduce the output power by screwing back the output power by use of the
> > carrier control switch or, tune and load the rig to full output power and, using
> > the ALC minus voltage feature (minus alc via the skt on the back of the rig)
> > reduce power that way. I know the rig is not designed for this type of operating
> > at large, but I am trying to understand if it will shorten bottle life or have
> > any impact at all on the final output stage running QRP for a period of time.
> > The ultimate answer is run an 817 or similar but you work with what you've got
> > !!
> >
> > Kind regards.....Will
> >
> > [Non-text portions of this message have been removed]
> >
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> >
> > [Non-text portions of this message have been removed]
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>
> [Non-text portions of this message have been removed]

>

30269. Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 19:04:54 UTC
From: w5rkl
Topic: 30266 Message: 30269

The 830 service manual, page 26 shows L2, part number L40-4711-03 Final Unit choke as 470uh.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "n6wk_skcc3" <n6wk@...> wrote:
>
> Does anyone know the exact inductance of the Plate choke L2 for the TS-830S?
> I could remove one from an 830 to measure, but wondered if someone knows off hand. I know it is 206 turns of #34 enameled wire
>
> Thanks,
> Gordon
> N6WK
>

30270. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 19:11:45 UTC
From: n6wk@n6wk.com
Topic: 30266 Message: 30270

Thanks Mike

73,
Gordon

On 3/17/2011 12:04 PM, w5rkl wrote:
>
> The 830 service manual, page 26 shows L2, part number L40-4711-03
> Final Unit choke as 470uh.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > Does anyone know the exact inductance of the Plate choke L2 for the
> TS-830S?
> > I could remove one from an 830 to measure, but wondered if someone
> knows off hand. I know it is 206 turns of #34 enameled wire
> >
> > Thanks,
> > Gordon
> > N6WK
> >
>
>

30271. Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 19:17:36 UTC
From: n6wk_skcc3
Topic: 30266 Message: 30271

Thanks Mike, but that is the wrong one. That is the one mounted on the Finals board. I need the stand up Ceramic Plate Choke value that has the suppressors attached to the top.
I think it is around 170uh

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Thanks Mike
>
>
> 73,
> Gordon
>
> On 3/17/2011 12:04 PM, w5rkl wrote:
> >
> > The 830 service manual, page 26 shows L2, part number L40-4711-03
> > Final Unit choke as 470uh.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@>
> > wrote:
> > >
> > > Does anyone know the exact inductance of the Plate choke L2 for the
> > TS-830S?
> > > I could remove one from an 830 to measure, but wondered if someone
> > knows off hand. I know it is 206 turns of #34 enameled wire
> > >
> > > Thanks,
> > > Gordon
> > > N6WK
> > >
> >
> >
>

30272. Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 21:58:54 UTC
From: w5rkl
Topic: 30266 Message: 30272

Yep, wrong one. The part number for the Final RF Choke is L33-0635-05 but there's no value listed in the service manual's part list under "General" parts. I tried to find it using search engine but nothing that says what the inductance is.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Thanks Mike, but that is the wrong one. That is the one mounted on the Finals board. I need the stand up Ceramic Plate Choke value that has the suppressors attached to the top.
> I think it is around 170uh
>
> 73,
> Gordon
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > Thanks Mike
> >
> >
> > 73,
> > Gordon
> >
> > On 3/17/2011 12:04 PM, w5rkl wrote:
> > >
> > > The 830 service manual, page 26 shows L2, part number L40-4711-03
> > > Final Unit choke as 470uh.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@>
> > > wrote:
> > > >
> > > > Does anyone know the exact inductance of the Plate choke L2 for the
> > > TS-830S?
> > > > I could remove one from an 830 to measure, but wondered if someone
> > > knows off hand. I know it is 206 turns of #34 enameled wire
> > > >
> > > > Thanks,
> > > > Gordon

> > > > N6WK
> > > >
> > >
> > >
> >
>

30273. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-17 22:39:47 UTC
From: n6wk@n6wk.com
Topic: 30266 Message: 30273

I took one out of another radio and measured it it shows 162uh on my
digital meter that seems to be very accurate. So the factory value is
probably 160uh
I just rewound the burnt one but added too many coils so it shows 170uh.
Time to remove a few turns :-)

Thanks,
Gordon
N6WK

On 3/17/2011 2:58 PM, w5rkl wrote:
>
> Yep, wrong one. The part number for the Final RF Choke is L33-0635-05
> but there's no value listed in the service manual's part list under
> "General" parts. I tried to find it using search engine but nothing
> that says what the inductance is.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > Thanks Mike, but that is the wrong one. That is the one mounted on
> the Finals board. I need the stand up Ceramic Plate Choke value that
> has the suppressors attached to the top.
> > I think it is around 170uh
> >
> > 73,
> > Gordon
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Thanks Mike
> > >
> > >
> > > 73,
> > > Gordon
> > >
> > > On 3/17/2011 12:04 PM, w5rkl wrote:
> > > >
> > > > The 830 service manual, page 26 shows L2, part number L40-4711-03

> > > > Final Unit choke as 470uh.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@>
> > > > wrote:
> > > > >
> > > > > Does anyone know the exact inductance of the Plate choke L2
> for the
> > > > TS-830S?
> > > > > I could remove one from an 830 to measure, but wondered if
> someone
> > > > knows off hand. I know it is 206 turns of #34 enameled wire
> > > > >
> > > > > Thanks,
> > > > > Gordon
> > > > > N6WK
> > > > >
> > > >
> > > >
> > > >
> > >
> >
>
>

30274. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 00:56:47 UTC
From: Terry Wagoner
Topic: 30266 Message: 30274

Gordon--Try this calculator
http://www.daycounter.com/Calculators/Air-Core-Inductor-Calculator.phtml
Terry K9TW

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 17, 2011 6:39:47 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

I took one out of another radio and measured it it shows 162uh on my
digital meter that seems to be very accurate. So the factory value is
probably 160uh
I just rewound the burnt one but added too many coils so it shows 170uh.
Time to remove a few turns :-)

Thanks,
Gordon
N6WK

On 3/17/2011 2:58 PM, w5rkl wrote:
>
> Yep, wrong one. The part number for the Final RF Choke is L33-0635-05
> but there's no value listed in the service manual's part list under
> "General" parts. I tried to find it using search engine but nothing
> that says what the inductance is.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > Thanks Mike, but that is the wrong one. That is the one mounted on
> the Finals board. I need the stand up Ceramic Plate Choke value that
> has the suppressors attached to the top.
> > I think it is around 170uh
> >
> > 73,
> > Gordon
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >

> > > Thanks Mike
> > >
> > >
> > > 73,
> > > Gordon
> > >
> > > On 3/17/2011 12:04 PM, w5rkl wrote:
> > > >
> > > > The 830 service manual, page 26 shows L2, part number L40-4711-03
> > > > Final Unit choke as 470uh.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@>
> > > > wrote:
> > > > >
> > > > > Does anyone know the exact inductance of the Plate choke L2
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> > > > > I could remove one from an 830 to measure, but wondered if
> someone
> > > > knows off hand. I know it is 206 turns of #34 enameled wire
> > > > >
> > > > > Thanks,
> > > > > Gordon
> > > > > N6WK
> > > > >
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

30275. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 16:17:24 UTC
From: n6wk@n6wk.com
Topic: 30266 Message: 30275

Thanks Terry,
It comes out to almost exactly what I wound. Great site

73,
Gordon
N6WK

On 3/17/2011 5:56 PM, Terry Wagoner wrote:
>
> Gordon--Try this calculator
> http://www.daycounter.com/Calculators/Air-Core-Inductor-Calculator.phtml
> Terry K9TW
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thu, March 17, 2011 6:39:47 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
>
> I took one out of another radio and measured it it shows 162uh on my
> digital meter that seems to be very accurate. So the factory value is
> probably 160uh
> I just rewound the burnt one but added too many coils so it shows 170uh.
> Time to remove a few turns :-)
>
> Thanks,
> Gordon
> N6WK
>
> On 3/17/2011 2:58 PM, w5rkl wrote:
> >
> > Yep, wrong one. The part number for the Final RF Choke is L33-0635-05
> > but there's no value listed in the service manual's part list under
> > "General" parts. I tried to find it using search engine but nothing
> > that says what the inductance is.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>

> > wrote:
> > >
> > > Thanks Mike, but that is the wrong one. That is the one mounted on
> > the Finals board. I need the stand up Ceramic Plate Choke value that
> > has the suppressors attached to the top.
> > > I think it is around 170uh
> > >
> > > 73,
> > > Gordon
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > > >
> > > > Thanks Mike
> > > > >
> > > > >
> > > > 73,
> > > > Gordon
> > > > >
> > > > On 3/17/2011 12:04 PM, w5rkl wrote:
> > > > > >
> > > > > The 830 service manual, page 26 shows L2, part number L40-4711-03
> > > > > Final Unit choke as 470uh.
> > > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3"
> <n6wk@>
> > > > > wrote:
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> > > > > > >
> > > > > Thanks,
> > > > > Gordon
> > > > > N6WK
> > > > > >
> > > > >
> > > > >
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>

30276. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 12:08:52 UTC
From: Terry Wagoner
Topic: 30266 Message: 30276

Gordon--I kind of miss the days of lattice or pi-wound plate chokes like National made. The old Heath, Collins, Johnson rigs used them. I guess they were too difficult to wind and too expensive so they went to the solenoid wound chokes. I have not seen what the early Kenwood hybrids used. I wonder if these solenoid chokes are burning up due to too high of plate current or due to self-resonance?? The ones in my Kenwood TS-530SP and TS-830Ss are not discolored, but I have never swept them (grid dipped) to see if they have any self-resonance in the ham bands. I was also surprised to see that they used #34 gage wire. Seems like I remember making some chokes years ago and I thought I used #24 or #26 wire? You clearly have far more experience than I do. Just curious whats going on here and if I need to be concerned about my rigs. Maybe I should contact Bob Mansker and buy a spare? Terry K9TW

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 12:17:24 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Thanks Terry,
It comes out to almost exactly what I wound. Great site

73,
Gordon
N6WK

On 3/17/2011 5:56 PM, Terry Wagoner wrote:
>
> Gordon--Try this calculator
> http://www.daycounter.com/Calculators/Air-Core-Inductor-Calculator.phtml
> Terry K9TW
>
> ---
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thu, March 17, 2011 6:39:47 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
>
> I took one out of another radio and measured it it shows 162uh on my
> digital meter that seems to be very accurate. So the factory value is
> probably 160uh
> I just rewound the burnt one but added too many coils so it shows 170uh.
> Time to remove a few turns :-)
>

> Thanks,
> Gordon
> N6WK
>
> On 3/17/2011 2:58 PM, w5rkl wrote:
> >
> > Yep, wrong one. The part number for the Final RF Choke is L33-0635-05
> > but there's no value listed in the service manual's part list under
> > "General" parts. I tried to find it using search engine but nothing
> > that says what the inductance is.
> >
> > 73s
> > Mike
> > W5RKL
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> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> > wrote:
> > >
> > > Thanks Mike, but that is the wrong one. That is the one mounted on
> > the Finals board. I need the stand up Ceramic Plate Choke value that
> > has the suppressors attached to the top.
> > > I think it is around 170uh
> > >
> > > 73,
> > > Gordon
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Thanks Mike
> > > >
> > > >
> > > > 73,
> > > > Gordon
> > > >
> > > > On 3/17/2011 12:04 PM, w5rkl wrote:
> > > > >
> > > > > The 830 service manual, page 26 shows L2, part number L40-4711-03
> > > > > Final Unit choke as 470uh.
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> > > > > 73s
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> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>

> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3"
> <n6wk@>
> > > > > wrote:
> > > > > >
> > > > > > Does anyone know the exact inductance of the Plate choke L2
> > for the
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> > > > > > Thanks,
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> > Yahoo! Groups Links
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Yahoo! Groups Links

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30277. Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 13:38:01 UTC
From: w5rkl
Topic: 30266 Message: 30277

Hi Terry,

If I remember correctly the TS-820 had one of the older looking PI-wound/lattice milti coil type RF Chokes you are talking about. The part list doesn't list the inductance value (P/N L33-0217-15).

I would think if the choke windings are nice and shinny then you don't have anything to worry about. IF the choke windings are discolored, turn dark, then you should be concerned.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Gordon--I kind of miss the days of lattice or pi-wound plate chokes like
> National made. The old Heath, Collins, Johnson rigs used them. I guess they were
> too difficult to wind and too expensive so they went to the solenoid wound
> chokes. I have not seen what the early Kenwood hybrids used. I wonder if these
> solenoid chokes are burning up due to too high of plate current or due to
> self-resonance?? The ones in my Kenwood TS-530SP and TS-830Ss are not
> discolored, but I have never swept them (grid dipped) to see if they have any
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> used #24 or #26 wire? You clearly have far more experience than I do. Just
> curious whats going on here and if I need to be concerned about my rigs. Maybe I
> should contact Bob Mansker and buy a spare? Terry K9TW
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>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, March 18, 2011 12:17:24 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
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> Thanks Terry,
> It comes out to almost exactly what I wound. Great site
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> > http://www.daycounter.com/Calculators/Air-Core-Inductor-Calculator.phtml
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> > _____
> > From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
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> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thu, March 17, 2011 6:39:47 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
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> > I took one out of another radio and measured it it shows 162uh on my
> > digital meter that seems to be very accurate. So the factory value is
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> > > Yep, wrong one. The part number for the Final RF Choke is L33-0635-05
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> > > W5RKL
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@>
> > > wrote:
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> > > > > On 3/17/2011 12:04 PM, w5rkl wrote:
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> Yahoo! Groups Links
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30278. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 13:55:21 UTC
From: Jim S
Topic: 30266 Message: 30278

I'll jump in here with my own personal opinion. I doubt that Kenwood would have used an improperly designed choke in their rigs. If that had been the case, there would have been hundreds of rigs going back for replacement of the part early on. That apparently did not happen.

So many of these rigs have gotten into the hands of freebanders, and other users that really had no idea of how to tune a rig properly. "All knobs full right" was their attitude, and if they could get another 10 or 20 or more MA out of their tubes, they would do it! That, more than anything else, is probably the cause of more burned up cathode resistors and plate chokes than anything else.

If your radio has burned resistors, and/or chokes, and has difficulty performing well on 10, but works great on 11, THAT is an almost sure bet that it was the victim of "The golden screwdriver" !

As I say, this is just my humble opinion.

73 and good luck with that rig. Jim AG3Y

----- Original Message -----
From: Terry Wagoner
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 18, 2011 8:08 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Gordon--I kind of miss the days of lattice or pi-wound plate chokes like National made. The old Heath, Collins, Johnson rigs used them. I guess they were too difficult to wind and too expensive so they went to the solenoid wound chokes. I have not seen what the early Kenwood hybrids used. I wonder if these solenoid chokes are burning up due to too high of plate current or due to self-resonance?? The ones in my Kenwood TS-530SP and TS-830Ss are not discolored, but I have never swept them (grid dipped) to see if they have any self-resonance in the ham bands. I was also surprised to see that they used #34 gage wire. Seems like I remember making some chokes years ago and I thought I used #24 or #26 wire? You clearly have far more experience than I do. Just curious whats going on here and if I need to be concerned about my rigs. Maybe I should contact Bob Mansker and buy a spare? Terry K9TW

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From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 12:17:24 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Thanks Terry,
It comes out to almost exactly what I wound. Great site

73,
Gordon
N6WK

On 3/17/2011 5:56 PM, Terry Wagoner wrote:
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> Gordon--Try this calculator
> http://www.daycounter.com/Calculators/Air-Core-Inductor-Calculator.phtml
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Thu, March 17, 2011 6:39:47 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
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Yahoo! Groups Links

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17140)
http://www.pctools.com
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=======
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30279. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 14:13:02 UTC
From: Bob Macklin
Topic: 30266 Message: 30279

The single layer chokes can be rewound. Discoloring is not a problem unless there are shorted turns.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 18, 2011 6:38 AM
Subject: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Hi Terry,

If I remember correctly the TS-820 had one of the older looking PI-wound/lattice milti coil type RF Chokes you are talking about. The part list doesn't list the inductance value (P/N L33-0217-15).

I would think if the choke windings are nice and shinny then you don't have anything to worry about. IF the choke windings are discolored, turn dark, then you should be concerned.

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> To: TS-520_820_530_830@yahoogroups.com

> Sent: Fri, March 18, 2011 12:17:24 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
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30280. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 15:18:58 UTC
From: n6wk@n6wk.com
Topic: 30266 Message: 30280

Hi Terry,
This choke, and everyone I have ever seen burnt up, was due to abuse or bad finals.
The gauge is definitely 34 . I have every size enameled wire here from 22 up to 34.
I measured it with a micrometer before I started winding so I knew had had the correct gauge.

73,
Gordon
N6WK

On 3/18/2011 5:08 AM, Terry Wagoner wrote:
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> > > > > > > The 830 service manual, page 26 shows L2, part number
> L40-4711-03
> > > > > > > Final Unit choke as 470uh.
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3"
> > <n6wk@>
> > > > > > wrote:
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> > > > > > > knows off hand. I know it is 206 turns of #34 enameled wire
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> > > > > > > Thanks,
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> > > > > > > N6WK
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30281. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 17:22:56 UTC
From: Terry Wagoner
Topic: 30266 Message: 30281

Mike: Very interesting that the TS-820 had the pi-wound choke and later models went to the solenoid wound ones. I dont know the history of my rigs but the plate choke windings are different colors. One is kind of a brass color and the other has more of a reddish tint. Neither one is black over entire length and neither one appears to have any hot or melted spots on them. I guess I was wondering if Kenwood hybrid plate chokes had a history of problems with series resonance (maybe with addition of the warc bands?) which can be far more of a problem than the precise inductance value. I see on Ken K4EEA website pictures of failed choke that appears discolored (burned black) over entire length of winding. I have no operational issues with my rigs so far, just was interested in what the failure mechanism was that caused Gordon to have to wind a new plate choke. From your response it appears not a common problem with Kenwood hybrid design that I have to be concerned with. Sounds like it may be from operator error from too high plate current. Thanks for feedback. 73s Terry

---
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 9:38:01 AM
Subject: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Hi Terry,

If I remember correctly the TS-820 had one of the older looking PI-wound/lattice milti coil type RF Chokes you are talking about. The part list doesn't list the inductance value (P/N L33-0217-15).

I would think if the choke windings are nice and shinny then you don't have anything to worry about. IF the choke windings are discolored, turn dark, then you should be concerned.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Gordon--I kind of miss the days of lattice or pi-wound plate chokes like
> National made. The old Heath, Collins, Johnson rigs used them. I guess they
>were
>
> too difficult to wind and too expensive so they went to the solenoid wound
> chokes. I have not seen what the early Kenwood hybrids used. I wonder if these
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> solenoid chokes are burning up due to too high of plate current or due to
> self-resonance?? The ones in my Kenwood TS-530SP and TS-830Ss are not

> discolored, but I have never swept them (grid dipped) to see if they have any
> self-resonance in the ham bands. I was also surprised to see that they used #34
>
> gage wire. Seems like I remember making some chokes years ago and I thought I
> used #24 or #26 wire? You clearly have far more experience than I do. Just
> curious whats going on here and if I need to be concerned about my rigs. Maybe
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> should contact Bob Mansker and buy a spare? Terry K9TW
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>
>
> _____
> From: "n6wk@..." <n6wk@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, March 18, 2011 12:17:24 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
>
> Thanks Terry,
> It comes out to almost exactly what I wound. Great site
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> 73,
> Gordon
> N6WK
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> On 3/17/2011 5:56 PM, Terry Wagoner wrote:
> >
> > Gordon--Try this calculator
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> > Terry K9TW
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> > <mailto:n6wk%40n6wk.com>>
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> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Thu, March 17, 2011 6:39:47 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance
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> > I took one out of another radio and measured it it shows 162uh on my
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> > I just rewound the burnt one but added too many coils so it shows 170uh.
> > Time to remove a few turns :-)
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> > > that says what the inductance is.
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> > > wrote:
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> > > > Thanks Mike, but that is the wrong one. That is the one mounted on
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30282. Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 17:38:12 UTC
From: Terry Wagoner
Topic: 30266 Message: 30282

Gordon--Wasnt doubting you. I knew you had to have miked the wire. I looked at both of my chokes where the lead terminates at the top of the form with the parasitic suppressors and it sure looks like a very small gauge wire. I havent looked at wire tables, but I bet the ampacity of 34 gauge magnet wire in free air isnt 2 or 3 times our normal plate current? I am not design engineer so not sure what would be normal reserve. I would think you would want something around 400 to 500ma? Maybe the air movement of the cooling fan helps dissipate the heat from the choke. I appreciate knowing that the failures you are seeing are from shorted finals and/or operator error and not series resonance. I mentioned to Mike that my two chokes are different colors but that may be normal between a TS-530 and TS-830 and differing production runs. I dont want to make problem that doesnt exist but I want to keep my boatanchor treasures going for as long as I will last! With parts getting harder and harder to get it is good to know that I could look to you to wind a replacement. Thanks for feedback. 73s Terry

---

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 11:18:58 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830 plate Choke Inductance

Hi Terry,
This choke, and everyone I have ever seen burnt up, was due to abuse or bad finals.
The gauge is definitely 34 . I have every size enameled wire here from 22 up to 34.
I measured it with a micrometer before I started winding so I knew had had the correct gauge.

73,
Gordon
N6WK

On 3/18/2011 5:08 AM, Terry Wagoner wrote:
>
> Gordon--I kind of miss the days of lattice or pi-wound plate chokes like
> National made. The old Heath, Collins, Johnson rigs used them. I guess
> they were
> too difficult to wind and too expensive so they went to the solenoid
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30283. Re: TS-830 plate Choke Inductance

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 18:22:53 UTC
From: w5rkl
Topic: 30266 Message: 30283

I don't believe one or two instances of high current during tuning would cause the choke wiring to overheat to the point of shorting failures. More then likely failures in the RF choke, overheating to the point the insulating varnish on the wire melts and the windings short is caused by continuous abuse by operators. The same applies to the cathode resistors. I have seen cathode resistors that were completely destroyed, bodies burnt, cracked, and that doesn't come from a few short durations of excessive current flowing through them. Destroyed resistors and RF chokes are caused by consistent abuse, day in and day out, not because of a short duration of high current flowing through them.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Gordon--Wasnt doubting you. I knew you had to have miked the wire. I looked at
> both of my chokes where the lead terminates at the top of the form with the
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> TS-530 and TS-830 and differing production runs. I dont want to make problem
> that doesnt exist but I want to keep my boatanchor treasures going for as long
> as I will last! With parts getting harder and harder to get it is good to know
> that I could look to you to wind a replacement. Thanks for feedback. 73s Terry

30284. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 18:17:42 UTC
From: Bill
Topic: 30249 Message: 30284

Hi Will,

I'm jumping in here with own personal experience that will reinforce the excellent advice others have given.

I have used my T-599 on CW, SSB, and digital modes using tones on SSB at reduced power levels. For CW, tune up as normal and then reduce power with the carrier control. I have found that my 599 will not go below about 10 watts without detuning it a little. I always make sure the plate is dipped last for resonance. I am reluctant to detune the final circuit but I do move the load control to add more capacitance there (just a little) and redip the plate. I am considering using another, better (in my mind) approach if I find the ALC trick unsatisfactory - I haven't tried that yet.

For low power SSB the mic control does the same job. I started out with QRP and I still like QRP operation. I have used other transmitters with tubes and with transistors in exactly the same manner successfully. The tubes will be loafing along so you won't be hurting them at all. I am looking at some designs to use the transverter output to a final amp box that is purose built for QRP and just turn the finals OFF for that kind of fun. Slapping a 100 watt transmitter down to get QRP seems like overkill when a purpose built unit might be more reasonable. But we already have our Kenwood transmitters and they can be made to do QRP.

Go ahead and do it and have fun.

73,

Bill KU8H

MI QRP Club M-1778

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Guys, pre suppose I wanted to do some QRP operating utilising my 830s;
> My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time. The ultimate answer is run an 817 or similar but you work with what you've got !!
>
> Kind regards..........Will
>

30285. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 21:22:58 UTC
From: Mark
Topic: 30249 Message: 30285

Will,

One other way to reduce the 830 to QRP levels is contained on page 20 of the TS-830 survival guide. In it, section 7.11 deals with one way to reduce power out to QRP levels. The text is, and I quote,"On SSB, turning down the mike gain is a poor way to reduce output power because doing so defeats the transmitter's ALC system. Thus, when you turn down the mic gain, you cannot assure any particular peak output level, and you're also turning down only the voice modulation content of your signal; the original carrier supression, unwanted sideband supression, misc transmitted noise, spurious and so forth are not adjusted "down" @ all, but remain as they were. As such, signal quality suffers. The best way to "turn down" the power of a TS830S.....is via the external ALC port onthe rig's rear panel. Providing an *djustable bias level to that port, ranging from 0 V DC to -10 V DC, will allow full-range power adjustment, down to zero output. This is accomplished with a 9 V transistor radio battery(POSATIVE terminal to chassis ground-ALC voltage supplies is negative) and a 1K ohm pot as wired as a voltage divider.

Tune up normally with poy adjusted for zero voltage @ ALC terminal, and should have about 100 watts out. With key down, adjust the pot until the power falls off to whatever power output you desire. Then, switch to SSB and your output will be that reduced level. DO NOT RETUNE anything on your rig, it's tuning will be just fine."

It closes by stating that the author(WB2WIK/6)had ran his rig that way for years and had no detrimental effects. It would provide all the audio punch and clarity, but @ reduced QRP levels. I have not tried it, but just thought I wouldf pass it along.

73's
Mark
N5SYR

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
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>
> Kind regards.....Will
>

30286. Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-18 21:23:05 UTC
From: Mark
Topic: 30249 Message: 30286

Will,

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>

30287. New to group

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 00:28:35 UTC
From: rsinland
Topic: 4654 Message: 30287

Hey folks, I'm new to the group but have been reading here for a couple weeks. I have a Kenwood TS-820S that I believe to be in good working order, though it has been in storage the past several years.
As I see several of you doing your own diagnostic and tech work I was wondering if anyone would care to make a recommendation on used oscilloscopes? I haven't touched one since high school and looking at them on ebay makes my head spin. Are there any functions/features that would lend themselves to working on these vintage radios? How about an RF generator? These are just some tools that I see are called for in some radio building kits which is where I would like to get my feet wet. Thanks for any advice.
Rob
KC0LKO

30288. Re: [TS-520_820_530_830] New to group

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 00:57:03 UTC
From: Bob Macklin
Topic: 4654 Message: 30288

I like the heathkit test equipment because the manuals are available and they are pretty easy to take care of.

I have 2 Heathkit scopes. IO-4550 and IO-4235. But for simple radio work most of the simpler (and more available) single channel scopes are good enough.

I use a Heathkit IG-102 signal generator.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: rsinland
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 18, 2011 5:28 PM
Subject: [TS-520_820_530_830] New to group

Hey folks, I'm new to the group but have been reading here for a couple weeks. I have a Kenwood TS-820S that I believe to be in good working order, though it has been in storage the past several years.
As I see several of you doing your own diagnostic and tech work I was wondering if anyone would care to make a recommendation on used oscilloscopes? I haven't touched one since high school and looking at them on ebay makes my head spin. Are there any functions/features that would lend themselves to working on these vintage radios? How about an RF generator? These are just some tools that I see are called for in some radio building kits which is where I would like to get my feet wet. Thanks for any advice.
Rob
KC0LKO

[Non-text portions of this message have been removed]

30289. TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 01:37:02 UTC
From: moody1951@bellsouth.net
Topic: 30289 Message: 30289

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

30290. Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 03:04:27 UTC
From: Joseph Stiles
Topic: 30289 Message: 30290

moody1951,

Is this the only band that has the problem?, or when you go to other bands...say 14MHz, 21MHz...etc... does the digital readout show "19.000.00," or "29.000.00?"

From: "moody1951@..." <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 6:37:02 PM
Subject: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

[Non-text portions of this message have been removed]

30291. TS-820 receive bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 03:48:15 UTC
From: ae5uu
Topic: 30291 Message: 30291

My TS-820 has decided to backfeed the 3.3vdc bias voltage with 5.8vdc. By process of elimination, I have found that this 5.8vdc is coming from the IF Unit.

With the IF Unit unpluged, the other RF1 voltage measurements in the radio are correct; 3.35vdc.

My 9.0vdc appears everywhere it should, the LEDs all function fine and I have 60ma bias. On Tun I can dip the Plate current, but I do nor register Drive with the meter switch in the ALC position.

I can adjust the Load to produce 225ma on CW, and I can easily peak the RF by fine tuning the Load and Plate controls. The radio transmits fine putting out 90 watts CW on 20 meters that I am able to tune to a SWR of 1.1:1

My external frequency display is working correctly, as is the VFO.

But I cannot hear a thing. Anybody have any ideas. Thanks

AE5UU

30292. Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 04:20:05 UTC
From: Reggie Moody
Topic: 30289 Message: 30292

I get the 9.000 mhz on every band when I key the mic. Does that suggest anything to you?

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 10:04:27 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

moody1951,

Is this the only band that has the problem?, or when you go to other bands...say

14MHz, 21MHz...etc... does the digital readout show "19.000.00," or "29.000.00?"

From: "moody1951@..." <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 6:37:02 PM
Subject: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why?

Help.

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when

I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30293. Re: New to group

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 10:21:17 UTC
From: Ger
Topic: 4654 Message: 30293

Rob,

If you want an oscilloscope with is on par (and better) with the build quality of the Kenwood hybrids, find yourself a Tektronix 465(A). These are build as a tank, dual channel and up to 150 Mhz. Have one myself and perfectly suitable to do all your measurements on the hybrids. One of the best scope ever made.
You will find many on ebay and they are pretty cheap: between 150-200 USS.

GL and 73's Ger PE1CZG

--- In TS-520_820_530_830@yahoogroups.com, "rsinland" <rsinland@...> wrote:
>
> Hey folks, I'm new to the group but have been reading here for a couple weeks. I have a Kenwood TS-820S that I believe to be in good working order, though it has been in storage the past several years.
> As I see several of you doing your own diagnostic and tech work I was wondering if anyone would care to make a recommendation on used oscilloscopes? I haven't touched one since high school and looking at them on ebay makes my head spin. Are there any functions/features that would lend themselves to working on these vintage radios? How about an RF generator? These are just some tools that I see are called for in some radio building kits which is where I would like to get my feet wet. Thanks for any advice.
> Rob
> KC0LKO
>

30294. Re: TS-820 receive bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 12:09:07 UTC
From: w5rkl
Topic: 30291 Message: 30294

Morning Russell,

If the IF Unit board appears to be the source of the problem you might contact Bob Mansker, KE5FTF. He more than likely has a replacement IF Unit board. His e-mail address is ke5ftf at mail.com

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> My TS-820 has decided to backfeed the 3.3vdc bias voltage with 5.8vdc. By process of elimination, I have found that this 5.8vdc is coming from the IF Unit.
>
> With the IF Unit unpluged, the other RF1 voltage measurements in the radio are correct; 3.35vdc.
>
> My 9.0vdc appears everywhere it should, the LEDs all function fine and I have 60ma bias. On Tun I can dip the Plate current, but I do nor register Drive with the meter switch in the ALC position.
>
> I can adjust the Load to produce 225ma on CW, and I can easily peak the RF by fine tuning the Load and Plate controls. The radio transmits fine putting out 90 watts CW on 20 meters that I am able to tune to a SWR of 1.1:1
>
> My external frequency display is working correctly, as is the VFO.
>
> But I cannot hear a thing. Anybody have any ideas. Thanks
>
> AE5UU
>

30295. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 12:36:26 UTC
From: Daniel TOESCA
Topic: 30202 Message: 30295

Sorry for being late, but it seems to me that -71 volts when transmitting on the final grids is too much, I mean bias is too high and the tubes are just biased close to the cutoff point - as I remember, bias voltage should be around - 50 volts when operating is SSB - does the BIAS control vary this voltage when transmitting ??? If it does not, check the bias voltage divider resistors / pot string -

Just my two eurocents..

73 - Daniel, ON5PY

[Non-text portions of this message have been removed]

30296. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 13:26:48 UTC
From: w5rkl
Topic: 30202 Message: 30296

Daniel,

No, the bias pot does not change the bias voltage between receive and transmit. Once the initial 60ma of idling current is set by adjusting the bias pot in USB or LSB mode the relay on the IF board controls the "level" of bias voltage applied to the final tubes.

Typical bias voltage levels to the final tube grids are -101VDC in receive and -65VDC in transmit with no RF applied to the final tubes.

A bias voltage of -71VDC is not bad.

Steve said the plate and screen voltage to the final tubes does not change between receive and transmit. The final tube plate and screen voltage will become "less" in transmit when the tubes conduct. If those voltage do not change even though the grid voltage does change, that indicates the tubes are not conducting.

For example, lets say the plate and screen voltages, as measured in receive, are as follows:

Plate - +950VDC
Screen - +265VDC

Switching to transmit the above voltage should become less with idling current flowing the the final tubes. Since Steve said the above voltage do not change, become less, when switching to transmit, that tells me the final tubes are not conducting. Steve did say the bias voltage does become "less negative" which is good. However, if the tube filaments are not emitting electrons, tubes are bad, the grid voltage can become "less negative" all day long but that will not cause the tubes to conduct. Electrons must be emitted from the filaments for conduction to occur. No electrons emitted from the filament, no electron flow will occur, regardless of how good the grid voltage is switching, and you will see no IP current, no change in plate and screen voltage, and no RF output in transmit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Daniel TOESCA <ON5PY1967@...> wrote:
>
> Sorry for being late, but it seems to me that -71 volts when transmitting on
> the final grids is too much, I mean bias is too high and the tubes are just
> biased close to the cutoff point - as I remember, bias voltage should be
> around - 50 volts when operating is SSB - does the BIAS control vary this
> voltage when transmitting ??? If it does not, check the bias voltage divider
> resistors / pot string -
>
> Just my two eurocents..
>

> 73 - Daniel, ON5PY
>
>
> [Non-text portions of this message have been removed]
>

30297. mic hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 11:10:29 UTC
From: w9aba@aim.com
Topic: 30297 Message: 30297

hi name is Ed i have a kenwood ts-830s i have been get a hum on ssb someone told me its the microphone its
not wired right the mic is a mc-50 4 pin he also sayed about keeping the grounds separate what is meant about
that i don't understand can someone help me so i can get rid of the hum.

thank you

Ed w9aba

[Non-text portions of this message have been removed]

30298. Re: [TS-520_820_530_830] mic hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 17:01:49 UTC
From: barrie@eos.net
Topic: 30297 Message: 30298

There is a ground for mic audio and a ground for PPT. You do not connect them together.
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: w9aba@...
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 19 Mar 2011 07:10:29
To: <ts-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] mic hum

hi name is Ed i have a kenwood ts-830s i have been get a hum on ssb someone told me its the microphone its
not wired right the mic is a mc-50 4 pin he also sayed about keeping the grounds separate what is meant about
that i don't understand can someone help me so i can get rid of the hum.

thank you

Ed w9aba

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[Non-text portions of this message have been removed]

30299. Re: [TS-520_820_530_830] mic hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 17:05:04 UTC
From: Gene Henderson
Topic: 30297 Message: 30299

Ed
Check page 6 of your manual and make sure the mic is wired like that. If you do not have a manual you can download one from the internet. Gene WB9HLA
----- Original Message -----
From: w9aba@...
To: ts-520_820_530_830@yahoogroups.com
Sent: Saturday, March 19, 2011 7:10 AM
Subject: [TS-520_820_530_830] mic hum

hi name is Ed i have a kenwood ts-830s i have been get a hum on ssb someone told me its the microphone its
not wired right the mic is a mc-50 4 pin he also sayed about keeping the grounds separate what is meant about
that i don't understand can someone help me so i can get rid of the hum.

thank you

Ed w9aba

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[Non-text portions of this message have been removed]

30300. Re: [TS-520_820_530_830] mic hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 17:09:35 UTC
From: Mel Farrer
Topic: 30297 Message: 30300

Hi Ed,

There are two grounds on the 4 pin microphone into the 830. Pin 4 is for the shield of the microphone cable to the mike element. Pin 3 is for the PTT ground and the two grounds should not be connected together at the plug. The center wire of the shielded cable goes to Pin 1 and the other side of the PTT goes to Pin 2. If you have the owners manual you will find it on figure 2-1.

Good luck,

Mel, K6KBE

--- On Sat, 3/19/11, w9aba@... <w9aba@...> wrote:

From: w9aba@... <w9aba@...>
Subject: [TS-520_820_530_830] mic hum
To: ts-520_820_530_830@yahoogroups.com
Date: Saturday, March 19, 2011, 4:10 AM

hi name is Ed i have a kenwood ts-830s i have been get a hum on ssb someone told me its the microphone its

not wired right the mic is a mc-50 4 pin he also sayed about keeping the grounds separate what is meant about

that i don't understand can someone help me so i can get rid of the hum.

thank you

Ed w9aba

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[Non-text portions of this message have been removed]

30301. Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 17:50:14 UTC
From: Joseph Stiles
Topic: 30289 Message: 30301

Reggie,

Ok...does the receive part of your rig seem to work OK? Does rig proper freq when changing bands and frequencies within the band? I am not an expert..as Mike(w6rkl), and several others are..but I've had my share of display problems with the 820S's. The DG-1 (counter/display unit) are nortorious. I would first try: Remove top and bottom connectors and clean pins and connectors of the DG-1 unit...it's the one with the wires going to the display tube, with DEOXIT or similar...apply/reapply connectors to pins several times...blow off with "canned air." Check for proper function. If still having problems, you can remove the DG-1 unit, remove and reinstall one board at a time after cleaning pins and connector(s) as above. Reassemble and see if it works. You may also have a malfunction of the VCO/PLL/PD unit. Try the above first....Mike and the others are better with dealing with the finer points of that unit. Check out pages #39, 40, & 41 of the TS820S service manual. Good luck.....

73's joe wb7uqu

From: Reggie Moody <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 9:20:05 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

I get the 9.000 mhz on every band when I key the mic. Does that suggest anything

to you?

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 10:04:27 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

moody1951,

Is this the only band that has the problem?, or when you go to other bands...say

14MHz, 21MHz...etc... does the digital readout show "19.000.00," or "29.000.00?"

From: "moody1951@..." <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 6:37:02 PM

Subject: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why?

Help.

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when

I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

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[Non-text portions of this message have been removed]

30302. Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 19:21:10 UTC
From: Reggie Moody
Topic: 30289 Message: 30302

Joe, thanks. I did what you suggested and we're now flying high again. Radio works great and send and receive freqs are the same. Appreciate your help and the help of all others.

reggie

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 19, 2011 12:50:14 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Reggie,

Ok...does the receive part of your rig seem to work OK? Does rig proper freq when changing bands and frequencies within the band? I am not an expert..as

Mike(w6rkl), and several others are..but I've had my share of display problems with the 820S's. The DG-1 (counter/display unit) are nortorious. I would first try: Remove top and bottom connectors and clean pins and connectors of the DG-1 unit...it's the one with the wires going to the display tube, with DEOXIT or similar...apply/reapply connectors to pins several times...blow off with "canned

air." Check for proper function. If still having problems, you can remove the DG-1 unit, remove and reinstall one board at a time after cleaning pins and connector(s) as above. Reassemble and see if it works. You may also have a malfunction of the VCO/PLL/PD unit. Try the above first....Mike and the others are better with dealing with the finer points of that unit. Check out pages #39,

40, & 41 of the TS820S service manual. Good luck.....

73's joe wb7uqu

From: Reggie Moody <moody1951@bellsouth.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 9:20:05 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

I get the 9.000 mhz on every band when I key the mic. Does that suggest anything

to you?

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 10:04:27 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

moody1951,

Is this the only band that has the problem?, or when you go to other bands...say

14MHz, 21MHz...etc... does the digital readout show "19.000.00," or "29.000.00?"

From: "moody1951@bellsouth.net" <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 6:37:02 PM
Subject: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why?

Help.

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when

I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

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30303. TS-530 / TS-830 front panel color

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 19:32:05 UTC
From: n6wk_skcc3
Topic: 30303 Message: 30303

Has anyone come up with a paint that matches the front panel of the 530 or 830 with the same finish.. ie not glossy ? Or maybe where I could take it to get it matched and have them mix me a pint or so ?
I have a couple here I want to touch up the upper edges on.
I have the case paint, but not the front panel

thanks,
Gordon
N6WK

30304. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 19:35:52 UTC
From: Bill
Topic: 30202 Message: 30304

Hi,

I was going to ask how he could set the bias by seeing 60mA on the IP if the tubes were not conducting but I went back and read the initial post. If I had noticed the "no bias current" part I would have been all over that. He did a lot of work just to be sure.

73,

Bill KU8H

30305. Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-19 20:34:57 UTC
From: Joseph Stiles
Topic: 30289 Message: 30305

Reggie,

Glad it was an easy fix. Mike's call is w5rkl..not w6rkl...there are numerous people here on this board that know just about everything about these fine KW hybrids. I have learned a great deal from them. As I said...the 820S's DG-1 unit can create numerous problems...the most common is getting some corrosion or gunk on the connectors/pins. Also...any liquid spilled on the top...is going to run right into the DG-1 unit...you don't want to go THERE!

73's joe wb7uqu

From: Reggie Moody <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 19, 2011 12:21:10 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Joe, thanks. I did what you suggested and we're now flying high again. Radio works great and send and receive freqs are the same. Appreciate your help and the help of all others.

reggie

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 19, 2011 12:50:14 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

Reggie,

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air." Check for proper function. If still having problems, you can remove the DG-1 unit, remove and reinstall one board at a time after cleaning pins and connector(s) as above. Reassemble and see if it works. You may also have a malfunction of the VCO/PLL/PD unit. Try the above first....Mike and the others

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73's joe wb7uqu

From: Reggie Moody <moody1951@bellsouth.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 9:20:05 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

I get the 9.000 mhz on every band when I key the mic. Does that suggest anything

to you?

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 10:04:27 PM
Subject: Re: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why? Help.

moody1951,

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14MHz, 21MHz...etc... does the digital readout show "19.000.00," or "29.000.00?"

From: "moody1951@bellsouth.net" <moody1951@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 18, 2011 6:37:02 PM
Subject: [TS-520_820_530_830] TS-820 changes frequency when I key the mic...why?

Help.

My Kenwood TS-820 changes from its received frequency of 7.215 to 9.000 Mhz when

I key the mic. This wasn't happening a week ago. Can anyone help me understand what is happening? Thank you for your help. I'm pulling out my hair (yes I know it's a hobby).

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[Non-text portions of this message have been removed]

30306. Two new pics of my basket-case 530S... Looking good, Gordon :)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 02:34:51 UTC
From: kd8hmo
Topic: 30306 Message: 30306

This radio was filthy, nasty, dirty... Destined for the trash can when I rescued it...

http://groups.yahoo.com/group/TS-520_820_530_830/photos/album/229964593/pic/list

30307. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 12:45:58 UTC
From: sceneryguru
Topic: 29864 Message: 30307

Good Morning Group:

What follows is an update on the Kenwood Screen Saver project.

I've combed through the images on the Website and selected the photos that are appropriate in quality and minimum size. With that accomplished, I now call for any addition photographs, and / or graphics, including scans of the original Kenwood spec' sheets to complete our Screen Saver.

If you would like to have your contribution incorporated into the finished software, please don't hesitate to send it along to me (k3ssb@...) as an attachment. Please mention "Kenwood Screen Saver" in the message subject line.

With time devoted to the project limited to my "down" time, I forecast completion in approximately thirty days. At which time it will be uploaded to the Group Website for the enjoyment of all.

tnx es 73

Tom G, Sr.
K3SSB

--- In TS-520_820_530_830@yahoogroups.com, "sceneryguru" <k3ssb@...> wrote:
>
>
>
> Good Morning Group:
>
> Thanks for the positive feedback regarding the Kenwood Vintage Screen Saver project.
>
> To clarify a couple of issues that were raised by the group;
>
> Yes... the photographs on the groups website can be used if, they are high resolution images, no smaller than 1024 W x 768 H. Which begs the question... which images? shall I comb through them and select the best or would the members like to pick the candidate and forward to me as an attachment vis e-mail?.
>
> I would like to ID each graphic: Equipment featured, Call and QTH.
>
> In closing; Gordon your offer of the scanned spec'sheets is perfect. We can interspace the station photos with spec' sheets. Please send them and all other graphics to me as attachments to my e-mail. Please keep the Kenwood Screen Saver as the subject line.
>
> tnx es 73
>
> Tom G, Sr.
>

> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > I haven't looked, but if the quality is good enough, then Yes !
> >
> > Gordon
> > N6WK
> >
> > On 2/20/2011 4:32 PM, Jojo Vicencio DU1VHY wrote:
> > >
> > > shouldn't the pictures we posted in the photo section be usable for this?
> > >
> > > 73,
> > >
> > > jojo
> > >
> > > Jojo Vicencio - DU1VHY
> > > +639178501759
> > > +6325020674
> > >
> > > _____
> > > From: "n6wk@ <mailto:n6wk%40n6wk.com>" <n6wk@
> > > <mailto:n6wk%40n6wk.com>>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Mon, February 21, 2011 8:10:51 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Kenwood Screen Saver
> > >
> > > I have some Original Brochures for the 830 Silver and Gold.
> > > I will scan them and make them ready to share
> > >
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > On 2/20/2011 3:54 PM, kd8hmo wrote:
> > > >
> > > > This sounds like a great idea. I would love to also see some nice
> > > > hybrid wallpapers too. Check out the Icom papers for an idea of what I
> > > > am talking about. You would need to somehow find someone that has
> > > > perfect condition examples of every model radio.
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> > > > <k3ssb@> wrote:
> > > > >
> > > > > Good Morning Group:
> > > > >
> > > > > I for one, spend more time then I would care to admit, in front of a
> > > > computer monitor. And thought that it might be nice to have something

> > > > enjoyable to look at to break the monotony during the day.
> > > > >
> > > > > I wanted to float a proposition to the group, regarding the idea of
> > > > a professionally produced screen saver dedicated to our prized Kenwood
> > > > hybrids, encompassing all the various models.
> > > > >
> > > > > I would be happy to coordinate the collection effort required in
> > > > obtaining the (high resolution) photographs. Once satisfied that the
> > > > best images are in hand, I will proceed to fabricate the screen saver
> > > > software. The photos will include the equipment model numbers, station
> > > > call and QTH.
> > > > >
> > > > > The finished software will be compatible across the spectrum of
> > > > Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.
> > > > >
> > > > > In closing, the proposed screen saver would be available
> > > > exclusively, to all group members at no cost, via a download from the
> > > > groups Yahoo Website.
> > > > >
> > > > > I look forward to any and all constructive feedback regarding this
> > > > initiative. Here's your opportunity to immortalize the ol' station, as
> > > > well as to share it with your peers.
> > > > >
> > > > > tnx es 73
> > > > >
> > > > > Tom G, Sr.
> > > > >
> > > >
> > > >
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > >
> >
>

30308. Re: Two new pics of my basket-case 530S... Looking good, Gordon :)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 12:36:40 UTC
From: andy_westcott2004
Topic: 30306 Message: 30308

Blimey - what happened to the plate choke?

I find it hard to believe it has overheated like that and yet the output devices seem intact. How do people do this to a radio??

Anyhow, well done on saving another of these beautiful hybrids from the spares box.

30309. Re: Two new pics of my basket-case 530S... Looking good, Gordon :)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 14:27:26 UTC
From: w5rkl
Topic: 30306 Message: 30309

That's what happens when consistent excessive current flows in the final tubes.

A choke that bad, more than likely the four 20 ohm cathode resistors are also bad.

As Gordon said in a recent response, you can rewind the coil with #34 enamel wire.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Blimey - what happened to the plate choke?
>
> I find it hard to believe it has overheated like that and yet the output devices seem intact. How do people do this to a radio??
>
> Anyhow, well done on saving another of these beautiful hybrids from the spares box.
>

30310. Re: Kenwood Screen Saver

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 18:34:28 UTC
From: kd8hmo
Topic: 29864 Message: 30310

Thanks for all the work and effort! I cant wait to see the finished product.

--- In TS-520_820_530_830@yahoogroups.com, "sceneryguru" <k3ssb@...> wrote:
>
>
>
> Good Morning Group:
>
> What follows is an update on the Kenwood Screen Saver project.
>
> I've combed through the images on the Website and selected the photos that are appropriate in quality and minimum size. With that accomplished, I now call for any addition photographs, and / or graphics, including scans of the original Kenwood spec' sheets to complete our Screen Saver.
>
> If you would like to have your contribution incorporated into the finished software, please don't hesitate to send it along to me (k3ssb@...) as an attachment. Please mention "Kenwood Screen Saver" in the message subject line.
>
> With time devoted to the project limited to my "down" time, I forecast completion in approximately thirty days. At which time it will be uploaded to the Group Website for the enjoyment of all.
>
> tnx es 73
>
> Tom G, Sr.
> K3SSB
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "sceneryguru" <k3ssb@> wrote:
> >
> >
> >
> > Good Morning Group:
> >
> > Thanks for the positive feedback regarding the Kenwood Vintage Screen Saver project.
> >
> > To clarify a couple of issues that were raised by the group;
> >
> > Yes... the photographs on the groups website can be used if, they are high resolution images, no smaller than 1024 W x 768 H. Which begs the question... which images? shall I comb through them and select the best or would the members like to pick the candidate and forward to me as an attachment vis e-mail?.
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> > I would like to ID each graphic: Equipment featured, Call and QTH.

> >
> > In closing; Gordon your offer of the scanned spec'sheets is perfect. We can interspace the station photos with spec' sheets. Please send them and all other graphics to me as attachments to my e-mail. Please keep the Kenwood Screen Saver as the subject line.
> >
> > tnx es 73
> >
> > Tom G, Sr.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >
> > > I haven't looked, but if the quality is good enough, then Yes !
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> > > Gordon
> > > N6WK
> > >
> > > On 2/20/2011 4:32 PM, Jojo Vicencio DU1VHY wrote:
> > > >
> > > > shouldn't the pictures we posted in the photo section be usable for this?
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> > > > 73,
> > > >
> > > > jojo
> > > >
> > > > Jojo Vicencio - DU1VHY
> > > > +639178501759
> > > > +6325020674
> > > >
> > > > _____
> > > > From: "n6wk@ <mailto:n6wk%40n6wk.com>" <n6wk@
> > > > <mailto:n6wk%40n6wk.com>>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Mon, February 21, 2011 8:10:51 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Kenwood Screen Saver
> > > >
> > > > I have some Original Brochures for the 830 Silver and Gold.
> > > > I will scan them and make them ready to share
> > > >
> > > > 73,
> > > > Gordon
> > > > N6WK
> > > >
> > > > On 2/20/2011 3:54 PM, kd8hmo wrote:
> > > > >
> > > > > This sounds like a great idea. I would love to also see some nice
> > > > > hybrid wallpapers too. Check out the Icom papers for an idea of what I
> > > > > am talking about. You would need to somehow find someone that has
> > > > > perfect condition examples of every model radio.
> > > > >

> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "sceneryguru"
> > > > > <k3ssb@> wrote:
> > > > > >
> > > > > > Good Morning Group:
> > > > > >
> > > > > > I for one, spend more time then I would care to admit, in front of a
> > > > > computer monitor. And thought that it might be nice to have something
> > > > > enjoyable to look at to break the monotony during the day.
> > > > > >
> > > > > > I wanted to float a proposition to the group, regarding the idea of
> > > > > a professionally produced screen saver dedicated to our prized Kenwood
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> > > > > >
> > > > > > I would be happy to coordinate the collection effort required in
> > > > > obtaining the (high resolution) photographs. Once satisfied that the
> > > > > best images are in hand, I will proceed to fabricate the screen saver
> > > > > software. The photos will include the equipment model numbers, station
> > > > > call and QTH.
> > > > > >
> > > > > > The finished software will be compatible across the spectrum of
> > > > > Windows OS 98/Me/NT/2000/2003/XP/Vista/Win7.
> > > > > >
> > > > > > In closing, the proposed screen saver would be available
> > > > > exclusively, to all group members at no cost, via a download from the
> > > > > groups Yahoo Website.
> > > > > >
> > > > > > I look forward to any and all constructive feedback regarding this
> > > > > initiative. Here's your opportunity to immortalize the ol' station, as
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> > > > > >
> > > > > > tnx es 73
> > > > > >
> > > > > > Tom G, Sr.
> > > > > >
> > > > >
> > > > >
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
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> > >
> >
>

30311. Re: TS-530 / TS-830 front panel color

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 19:49:09 UTC
From: ah6rr1
Topic: 30303 Message: 30311

Aloha Gordon,
I found Rust-Oleum 7754 Anodized Bronze a very close match it is not glossy and in small area's it works fine. I have only found it in a spray can but being here in Hawaii we are lucky if we can get anything hi hi.

Roland AH6RR

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Has anyone come up with a paint that matches the front panel of the 530 or 830 with the same finish.. ie not glossy ? Or maybe where I could take it to get it matched and have them mix me a pint or so ?
> I have a couple here I want to touch up the upper edges on.
> I have the case paint, but not the front panel
>
> thanks,
> Gordon
> N6WK
>

30312. Re: [TS-520_820_530_830] Re: TS-530 / TS-830 front panel color

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-20 19:53:21 UTC
From: n6wk@n6wk.com
Topic: 30303 Message: 30312

Hi Roland,
thanks for the info. I'll get a can and try it out.
I'll let you know how it works out.

73,
Gordon

On 3/20/2011 12:49 PM, ah6rr1 wrote:
>
> Aloha Gordon,
> I found Rust-Oleum 7754 Anodized Bronze a very close match it is not
> glossy and in small area's it works fine. I have only found it in a
> spray can but being here in Hawaii we are lucky if we can get anything
> hi hi.
>
> Roland AH6RR
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > Has anyone come up with a paint that matches the front panel of the
> 530 or 830 with the same finish.. ie not glossy ? Or maybe where I
> could take it to get it matched and have them mix me a pint or so ?
> > I have a couple here I want to touch up the upper edges on.
> > I have the case paint, but not the front panel
> >
> > thanks,
> > Gordon
> > N6WK
> >
>
>

30313. ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 11:20:10 UTC
From: w9aba@aim.com
Topic: 6293 Message: 30313

hi i think i sent enough message out about my hum on my ssb sig its not the mic i had someone record my voice when i talked
on my radio my voice sounds like its garble so can someone tell me what can be doing that is it in the radio it self

thank you

Ed w9aba

[Non-text portions of this message have been removed]

30314. Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 17:29:35 UTC
From: w5rkl
Topic: 6293 Message: 30314

Ed,

Did you try the recommendation(s) using the "MONI" push button to listen to your actual transmit audio? If you have not done that then I recommend you do that first before you do anything else.

Also, what microphone are you using? The ground return for the microphone "element" should not be connected "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if you do not keep the ground return of the microphone "element" above ground through a .01ufd capacitor.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
>
>
> hi i think i sent enough message out about my hum on my ssb sig its not the mic i had someone record my voice when i talked
> on my radio my voice sounds like its garble so can someone tell me what can be doing that is it in the radio it self
>
>
> thank you
>
> Ed w9aba
>
>
>
>
> [Non-text portions of this message have been removed]
>

30315. Re: [TS-520_820_530_830] Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 18:09:13 UTC
From: w9aba@aim.com
Topic: 6293 Message: 30315

i don't have MONI to listen to my audio and my mic is ok because i have hooked to kenwood 180s and it sound good

73's Ed w9aba

-----Original Message-----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Mon, Mar 21, 2011 12:29 pm
Subject: [TS-520_820_530_830] Re: ts-830s

Ed,

Did you try the recommendation(s) using the "MONI" push button to listen to your actual transmit audio? If you have not done that then I recommend you do that first before you do anything else.

Also, what microphone are you using? The ground return for the microphone "element" should not be connected "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if you do not keep the ground return of the microphone "element" above ground through a .01ufd capacitor.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
>
>
> hi i think i sent enough message out about my hum on my ssb sig its not the mic i had someone record my voice when i talked
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>
>
> thank you
>
> Ed w9aba
>
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30316. TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 19:11:40 UTC
From: ae5uu
Topic: 30316 Message: 30316

Group,

I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

Problem summary, Kenwood TS-820

External Symptoms

1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.
2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.
3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.
4) Everything else works correctly.

Internal Symptoms

1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.
2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.
3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.
4) Q-16 reads as follows: Base -5.86 It should read -3.0
Emitter -5.85 It is within spec.
Collector 6.54 It should read 0.0

Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.

The Q-16 Base path is
Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.
So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

The other path for Q-16B runs
Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

73,

Russell
AE5UU

30317. Re: [TS-520_820_530_830] Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 19:11:46 UTC
From: Bob Macklin
Topic: 6293 Message: 30317

If you know the mike is OK using it to find the problem is an exorcize in futility.

You need to use an audio signal generator and a scope to look at the signals.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w9aba@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 21, 2011 11:09 AM
Subject: Re: [TS-520_820_530_830] Re: ts-830s

i don't have MONI to listen to my audio and my mic is ok because i have hooked to kenwood 180s and it sound good

73's Ed w9aba

-----Original Message-----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
Sent: Mon, Mar 21, 2011 12:29 pm
Subject: [TS-520_820_530_830] Re: ts-830s

Ed,

Did you try the recommendation(s) using the "MONI" push button to listen to your actual transmit audio? If you have not done that then I recommend you do that first before you do anything else.

Also, what microphone are you using? The ground return for the microphone "element" should not be connected "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if you do not keep the ground return of the microphone "element" above ground through a .01ufd capacitor.

73s
Mike
W5RKL

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> hi i think i sent enough message out about my hum on my ssb sig its not the mic i had someone record my voice when i talked

> on my radio my voice sounds like its garble so can someone tell me what can be doing that is it in the radio it self
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> thank you
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> Ed w9aba
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30318. Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 19:21:21 UTC
From: Bob Macklin
Topic: 30316 Message: 30318

When the DRIVE control is peaked you will get the most antenna noise in the receiver.

With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: ae5uu
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 21, 2011 12:11 PM
Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Group,

I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

Problem summary, Kenwood TS-820

External Symptoms

1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.
2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.
3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.
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1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.
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So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

The other path for Q-16B runs
Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56.....AGC at the pin. At the transistor it should read 0.0vdc.

The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

73,

Russell
AE5UU

[Non-text portions of this message have been removed]

30319. Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 19:38:53 UTC
From: w5rkl
Topic: 6293 Message: 30319

The TS-830S has a row of push buttons on the left and right of the VFO knob.

The row of 3 push buttons on the front panel, just to the left of the VFO knob, are;

XIT
MONI
RF ATT

Are these the same push buttons your TS-830S has?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
>
>
>
>
> i don't have MONI to listen to my audio and my mic is ok because i have hooked to kenwood 180s and it sound good
>
> 73's Ed w9aba
>
>
>
>
>
>
>
> -----Original Message-----
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Mon, Mar 21, 2011 12:29 pm
> Subject: [TS-520_820_530_830] Re: ts-830s
>
>
>
>
>
> Ed,
>
> Did you try the recommendation(s) using the "MONI" push button to listen to your actual transmit audio? If you have not done that then I recommend you do that first before you do anything else.
>
> Also, what microphone are you using? The ground return for the microphone "element"

should not be connected "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if you do not keep the ground return of the microphone "element" above ground through a .01ufd capacitor.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, w9aba@ wrote:
> >
> >
> >
> >
> > hi i think i sent enough message out about my hum on my ssb sig its not the mic i had someone record my voice when i talked
> > on my radio my voice sounds like its garble so can someone tell me what can be doing that is it in the radio it self
> >
> >
> > thank you
> >
> > Ed w9aba
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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30320. Re: [TS-520_820_530_830] Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 19:59:14 UTC
From: Joseph Stiles
Topic: 6293 Message: 30320

Ed & Mike,

My 830S is right in front of me.....the switches are labeled "FIX" "MONI" "RF ATT" they are to the right of the MIC/CAR control and left of the vfo. I use the MONI often to check voice quality.

73's joe wb7uqu

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 21, 2011 12:38:53 PM
Subject: [TS-520_820_530_830] Re: ts-830s

The TS-830S has a row of push buttons on the left and right of the VFO knob.

The row of 3 push buttons on the front panel, just to the left of the VFO knob, are;

XIT
MONI
RF ATT

Are these the same push buttons your TS-830S has?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, w9aba@... wrote:
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>
>
> i don't have MONI to listen to my audio and my mic is ok because i have
>hooked to kenwood 180s and it sound good
>
> 73's Ed w9aba
>
>
>
>
>
>
> -----Original Message-----
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830 <TS-520_820_530_830@yahoogroups.com>

> Sent: Mon, Mar 21, 2011 12:29 pm
> Subject: [TS-520_820_530_830] Re: ts-830s
>
>
>
>
>
> Ed,
>
> Did you try the recommendation(s) using the "MONI" push button to listen to
>your actual transmit audio? If you have not done that then I recommend you do
>that first before you do anything else.
>
> Also, what microphone are you using? The ground return for the microphone
>"element" should not be connected "directly" to ground but rather through a
>.01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if
>you do not keep the ground return of the microphone "element" above ground
>through a .01ufd capacitor.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, w9aba@ wrote:
> >
> >
> >
> >
> > hi i think i sent enough message out about my hum on my ssb sig its not the
>mic i had someone record my voice when i talked
> > on my radio my voice sounds like its garble so can someone tell me what can
>be doing that is it in the radio it self
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> >
> > thank you
> >
> > Ed w9aba
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30321. Maximum Screen Grid Voltage on a 6146B

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 20:13:28 UTC
From: k3jls@verizon.net
Topic: 30321 Message: 30321

Hi Folks,

Just a quick question that pertains to the 6146B tube and not the QRO modification mentioned herein.

I am in the process of modifying a Yaesu FT-101 to work with 6146B tubes. I've installed the tubes, and the best output I can get (on 80 meters) is about 60 watts, with the screen grid running at about 170 volts in transmit. This voltage is provided by a dedicated winding on the transformer.

I would like to increase the screen voltage to around 220 volts (or therabouts) to generate a bit more RF. (Quick) tests that I have made with a high wattage variable resistor have indicated that the output can be increased to about 115 watts, nothing to sneeze at!

One possible problem with this approach is that I'm generating the 220 volts on transmit with a voltage divider hooked to the low voltage line - about 360 volts in the receive mode. While I can adjust my screen grid voltage to around 220 volts in transmit (when more power is being drawn from the power transformer), the voltage will jump up close to 300 volts when in the receive mode.

Now, the data sheets for the 6146 specify a maximum of 250 volts on the screen grid. If the 6146's are biased off in the receive mode, will this extra potential hurt the tubes as they won't actually be conducting, right(or wrong)??

The only other option would be some kind of zener regulation.

Any thoughts from you tube gurus??

73's - Joe - K3JLS

30322. Re: [TS-520_820_530_830] Maximum Screen Grid Voltage on a 6146B

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 20:31:41 UTC
From: barrie@eos.net
Topic: 30321 Message: 30322

I would run it stock. You're only talking a few db difference on the receiving station's S meter. Look for a SB200 amp or a better antenna.
Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: "k3jls@..." <k3jls@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 21 Mar 2011 20:13:28
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Maximum Screen Grid Voltage on a 6146B

Hi Folks,

Just a quick question that pertains to the 6146B tube and not the QRO modification mentioned herein.

I am in the process of modifying a Yaesu FT-101 to work with 6146B tubes. I've installed the tubes, and the best output I can get (on 80 meters) is about 60 watts, with the screen grid running at about 170 volts in transmit. This voltage is provided by a dedicated winding on the transformer.

I would like to increase the screen voltage to around 220 volts (or therabouts) to generate a bit more RF. (Quick) tests that I have made with a high wattage variable resistor have indicated that the output can be increased to about 115 watts, nothing to sneeze at!

One possible problem with this approach is that I'm generating the 220 volts on transmit with a voltage divider hooked to the low voltage line - about 360 volts in the receive mode. While I can adjust my screen grid voltage to around 220 volts in transmit (when more power is being drawn from the power transformer), the voltage will jump up close to 300 volts when in the receive mode.

Now, the data sheets for the 6146 specify a maximum of 250 volts on the screen grid. If the 6146's are biased off in the receive mode, will this extra potential hurt the tubes as they won't actually be conducting, right(or wrong)??

The only other option would be some kind of zener regulation.

Any thoughts from you tube gurus??

73's - Joe - K3JLS

[Non-text portions of this message have been removed]

30323. Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 20:49:53 UTC
From: Russell Nilson
Topic: 30316 Message: 30323

Bob,

That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 21, 2011, 2:21 PM

When the DRIVE control is peaked you will get the most antenna noise in the receiver.

With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.

Bob Macklin

K5MYJ

Seattle, Wa.

"Real Radios Glow In The Dark"

----- Original Message -----

From: ae5uu

To: TS-520_820_530_830@yahoogroups.com

Sent: Monday, March 21, 2011 12:11 PM

Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Group,

I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

Problem summary, Kenwood TS-820

External Symptoms

1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.

2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.

3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.

4) Everything else works correctly.

Internal Symptoms

1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.

2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.

3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.

4) Q-16 reads as follows: Base -5.86 It should read -3.0

Emitter -5.85 It is within spec.

Collector 6.54 It should read 0.0

Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.

The Q-16 Base path is
Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.

So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

The other path for Q-16B runs
Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56.....AGC at the pin. At the transistor it should read 0.0vdc.

The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

73,

Russell

AE5UU

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30324. Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 21:15:33 UTC
From: Bob Macklin
Topic: 30316 Message: 30324

The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Russell Nilson
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 21, 2011 1:49 PM
Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Bob,

That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 21, 2011, 2:21 PM

When the DRIVE control is peaked you will get the most antenna noise in the receiver.

With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.

Bob Macklin

K5MYJ

Seattle, Wa.

"Real Radios Glow In The Dark"

----- Original Message -----

From: ae5uu

To: TS-520_820_530_830@yahoogroups.com

Sent: Monday, March 21, 2011 12:11 PM

Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Group,

I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

Problem summary, Kenwood TS-820

External Symptoms

1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.

2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.

3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.

4) Everything else works correctly.

Internal Symptoms

1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.

2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.

3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.

4) Q-16 reads as follows: Base -5.86 It should read -3.0

Emitter -5.85 It is within spec.

Collector 6.54 It should read 0.0

Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

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So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

The other path for Q-16B runs
Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

73,

Russell

AE5UU

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30325. Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 21:22:04 UTC
From: Russell Nilson
Topic: 30316 Message: 30325

Bob,

I guess I wasn't clear; the Drive control gives both maximum receiver noise and maximum transmit power at a setting of 1 o'clock. My main problem, perhaps the one to which the others relate, is the 5.92vdc on my 3.3vdc bus. Do you think that I should pull Q-16 from the IF board an measure it for a short between the Base and the Emitter?

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>
Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 21, 2011, 4:15 PM

The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

Bob Macklin

K5MYJ

Seattle, Wa.

"Real Radios Glow In The Dark"

----- Original Message -----

From: Russell Nilson

To: TS-520_820_530_830@...m

Sent: Monday, March 21, 2011 1:49 PM

Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Bob,

That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.

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Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:

From: Bob Macklin <macklinbob@...>

Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

To: TS-520_820_530_830@yahoogroups.com

Date: Monday, March 21, 2011, 2:21 PM

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----- Original Message -----

From: ae5uu

To: TS-520_820_530_830@yahoogroups.com

Sent: Monday, March 21, 2011 12:11 PM

Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

Group,

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So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

73,

Russell

AE5UU

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[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30326. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 21:49:22 UTC
From: wrench101
Topic: 30202 Message: 30326

Well, I've changed the finals and the driver and now have idle current. Still have no ALC, or RF out. Grrrr! :)

TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Thanks a million Mike. I can't express how appreciative I am for your help. I was checking on the physical condition of the tubes, they sure don't look happy on the inside! Off to buy tubes!.....73, and again, thank you so much!
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > If the final tube screen voltage is the same whether the 530 is in receive or transmit, even though the grid voltage changes from -101VDC to -71VDC in transmit, if no electrons are emitting from the indirectly heated cathode then there will zero ALC (grid current) and zero IP current.
> >
> > I would replace the final tubes. You can get replacement 6146B tubes from the following source:
> >
> > http://www.vacuumtubes.net/
> >
> > It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >

> > > > Hi Steve,
> > > >
> > > > If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?
> > > >
> > > > The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.
> > > >
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > >
> > > > > SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
> > > > >
> > > > > Thanks again, 73, Steve
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> > > > >
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> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
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> > > > > > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> > > > > >
> > > > > > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> > > > > >
> > > > > > 73s
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> > > > > > > The bias voltages at the said locations seem fine, although nothing shows at

the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they don't appear to be as clean as others I've seen.
> > > > > >
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>

30327. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 22:22:41 UTC
From: w5rkl
Topic: 30202 Message: 30327

Now that you have idling current, have you checked R15 (56K 1/2 watt) resistor on the Rectifier Unit? If it's value is out of tolerance then you will experience loss of ALC in TUNE mode.

Have you tried tuning the 530 up in CW mode? To make it easy, remove any plug you may have inserted into the rear panel's "CW" socket. You do not need a CW key plugged into the CW socket to tune the 530 up in CW mode.

When tuning the 530 up in CW mode you must understand that "full final tube screen voltage" is applied to the final tube!! Therefore, keep your key down times short and monitor the IP current at ALL times.

1. Place MODE switch to CW and LOAD control fully CCW.
2. Connect 530 to dummy load
3. Set CAR control between 9 and 10 o'clock
4. Flip the SEND switch UP (switches to transmit)
5. Adjust the DRIVE control for a peak IP meter indication
6. Quickly adjust the PLATE control for a "dip" (reduction) in IP current
7. Switch meter to RF and adjust the LOAD control for a peak RF indication.
8. Flip the SEND switch DOWN (returns 530 to receive)

That's enough for now. Do you see any RF output on the RF meter switch setting? We'll continue more once you follow these simple CW tune up procedures. The key here is to determine whether or not the 530 is producing any RF output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Well, I've changed the finals and the driver and now have idle current. Still have no ALC, or RF out. Grrrr! :)
>
>
> TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Thanks a million Mike. I can't express how appreciative I am for your help. I was checking on the physical condition of the tubes, they sure don't look happy on the inside! Off to buy tubes!.....73, and again, thank you so much!
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > If the final tube screen voltage is the same whether the 530 is in receive or

transmit, even though the grid voltage changes from -101VDC to -71VDC in transmit, if no electrons are emitting from the indirectly heated cathode then there will zero ALC (grid current) and zero IP current.
> > >
> > > I would replace the final tubes. You can get replacement 6146B tubes from the following source:
> > >
> > > http://www.vacuumtubes.net/
> > >
> > > It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.
> > >
> > > 73s
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> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?
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30328. Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 22:32:38 UTC
From: w5rkl
Topic: 30316 Message: 30328

That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Russell Nilson
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, March 21, 2011 1:49 PM
> Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
>
>
>
> Bob,
>
> That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.
>
> 73,
>
> Russell Nilson
>
> Master Mariner, 3000 Tons, all oceans
>
> rmn43@...
>
> 817.310.3088
>
> AE5UU
>
> --- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:
>

> From: Bob Macklin <macklinbob@...>
> Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, March 21, 2011, 2:21 PM
>
>
>
> When the DRIVE control is peaked you will get the most antenna noise in the receiver.
>
> With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.
>
> Bob Macklin
>
> K5MYJ
>
> Seattle, Wa.
>
> "Real Radios Glow In The Dark"
>
> ----- Original Message -----
>
> From: ae5uu
>
> To: TS-520_820_530_830@yahoogroups.com
>
> Sent: Monday, March 21, 2011 12:11 PM
>
> Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
>
> Group,
>
> I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:
>
> Problem summary, Kenwood TS-820
>
> External Symptoms
>
> 1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.
>
> 2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.
>
> 3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.
>
> 4) Everything else works correctly.

>
> Internal Symptoms
>
> 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.
>
> 2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.
>
> 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.
>
> 4) Q-16 reads as follows: Base -5.86 It should read -3.0
>
> Emitter -5.85 It is within spec.
>
> Collector 6.54 It should read 0.0
>
> Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.
>
> I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.
>
> The Q-16 Base path is Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.
>
> So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)
>
> The other path for Q-16B runs Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin
>
> Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.
>
> The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)
>
> The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.
>
> So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.
>
> If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

>
> 73,
>
> Russell
>
> AE5UU
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

30329. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 23:19:07 UTC
From: w5rkl
Topic: 30202 Message: 30329

One more thing. This assumes that the rear panel "SG" switch is set to "ON" and not "OFF".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Now that you have idling current, have you checked R15 (56K 1/2 watt) resistor on the Rectifier Unit? If it's value is out of tolerance then you will experience loss of ALC in TUNE mode.
>
> Have you tried tuning the 530 up in CW mode? To make it easy, remove any plug you may have inserted into the rear panel's "CW" socket. You do not need a CW key plugged into the CW socket to tune the 530 up in CW mode.
>
> When tuning the 530 up in CW mode you must understand that "full final tube screen voltage" is applied to the final tube!! Therefore, keep your key down times short and monitor the IP current at ALL times.
>
> 1. Place MODE switch to CW and LOAD control fully CCW.
> 2. Connect 530 to dummy load
> 3. Set CAR control between 9 and 10 o'clock
> 4. Flip the SEND switch UP (switches to transmit)
> 5. Adjust the DRIVE control for a peak IP meter indication
> 6. Quickly adjust the PLATE control for a "dip" (reduction) in IP current
> 7. Switch meter to RF and adjust the LOAD control for a peak RF indication.
> 8. Flip the SEND switch DOWN (returns 530 to receive)
>
> That's enough for now. Do you see any RF output on the RF meter switch setting? We'll continue more once you follow these simple CW tune up procedures. The key here is to determine whether or not the 530 is producing any RF output.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Well, I've changed the finals and the driver and now have idle current. Still have no ALC, or RF out. Grrrr! :)
> >
> >
> > TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:

> > >
> > > Thanks a million Mike. I can't express how appreciative I am for your help. I was checking on the physical condition of the tubes, they sure don't look happy on the inside! Off to buy tubes!.....73, and again, thank you so much!
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> > > > I would replace the final tubes. You can get replacement 6146B tubes from the following source:
> > > >
> > > > http://www.vacuumtubes.net/
> > > >
> > > > It appears to me, based on the screen voltages between receive and transmit, whether in TUNE or CW/USB/LSB, that neither of the final tubes are conducting which is why there is zero ALC and zero IP current indications on the meter.
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> > > > > The SG voltage does not change when transmitting, which would tell me that the finals aren't conducting, correct? I get 121 volts on SG while in "tune" mode, which I assume is correct. It also does not change when transmitting. It seems that the bias voltage is changing in an attempt to turn the tubes on, but nothing is actually happening. Are these fried? Would this be the reason that I also have no ALC reading on the meter?
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30330. Re: [TS-520_820_530_830] Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-21 23:23:27 UTC
From: John Davidson
Topic: 6293 Message: 30330

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 21, 2011 1:29:35 PM
Subject: [TS-520_820_530_830] Re: ts-830s

Ed,

? The ground return for the microphone "element" should not be connected "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or distortion in the transmit audio can occur if you do not keep the ground return of the microphone "element" above ground through a .01ufd capacitor.

73smessage have been removed]
>

  This is the first time I have heard that info!!? Every Mic I have used or serviced (public safety dispatch centers) cable shield ends have been grounded to chassis ground ! Tracing out any separate mic return lead also ends at chassis ground potential.

[Non-text portions of this message have been removed]

30331. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 00:03:27 UTC
From: wrench101
Topic: 30202 Message: 30331

Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.

Thanks again
73
Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Now that you have idling current, have you checked R15 (56K 1/2 watt) resistor on the Rectifier Unit? If it's value is out of tolerance then you will experience loss of ALC in TUNE mode.
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> Mike
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> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > > Hi Steve,
> > > > > >

> > > > > > If the "SG" terminal voltage is 242VDC in receive, what is the screen voltage in transmit?
> > > > > >
> > > > > > The "SG" final tube screen voltage should be less in transmit then in receive if the final tubes are conducting. The "SG" screen voltage reduction in transmit will vary depending on the level of conduction in the final tubes but it should not be the same in transmit as it is in receive.
> > > > > >
> > > > > >
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
> > > > > >
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > > > >
> > > > > > > SG voltage at the SG terminal on the final unit, as well at pins 3 on both final tubes, is at 242. The FG terminal, as well as pins 5 on both final tubes, is at -101 in receive, and -71 in transmit.
> > > > > > >
> > > > > > > Thanks again, 73, Steve
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > > I see you said the SG switch is set to ON but you might check the voltage at the "SG" terminal on bottom of the final amplifier PC board. The SG switch could be bad. If the voltage on the "SG" terminal on the bottom of the Final Unit is "negative", even if the SG switch is set to ON, then the final tubes will not conduct and you will not see any IP idling current in transmit.
> > > > > > > >
> > > > > > > > You said the voltages at the said locations seems fine. What is the actual voltages at the Final Unit's "FG" terminal in receive and transmit?
> > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > > > > > > >
> > > > > > > > > The bias voltages at the said locations seem fine, although nothing shows at the meter. I've checked the meter circuits and they also appear to be fine. Everything is switching voltage at the tube contacts. Looking at the final tubes themselves, they

don't appear to be as clean as others I've seen.
> > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> >
>

30332. connecting 820s to mfj-784b dsp unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 02:02:46 UTC
From: kj4fcj
Topic: 30332 Message: 30332

Hello everyone, I need to know the easiest way to connect the receive out from the 820s to the receive input jack on the 784b, which is an RCA jack. The only RCA jack that comes close is the if out for a station monitor. According to the directions for the 784b, the receive signal(audio)is usually from either the speaker out jack or the headphone jack. Neither of which, is an RCA. Thank you very much for any help you can give. 73's to all, Charles Kj4fcj

30333. Re: [TS-520_820_530_830] connecting 820s to mfj-784b dsp unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 02:16:26 UTC
From: Bob Macklin
Topic: 30332 Message: 30333

Go to Radio Shack and buy a RCA to phone plug adapter.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: kj4fcj
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 21, 2011 7:02 PM
Subject: [TS-520_820_530_830] connecting 820s to mfj-784b dsp unit

Hello everyone, I need to know the easiest way to connect the receive out from the 820s to the receive input jack on the 784b, which is an RCA jack. The only RCA jack that comes close is the if out for a station monitor. According to the directions for the 784b, the receive signal(audio)is usually from either the speaker out jack or the headphone jack. Neither of which, is an RCA. Thank you very much for any help you can give. 73's to all, Charles Kj4fcj

[Non-text portions of this message have been removed]

30334. Re: ts-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 03:47:37 UTC
From: w5rkl
Topic: 6293 Message: 30334

That may be so with commercial gear. However, we are talking about a Kenwood 830 not a Gates, RCA, or some other commercial transmitter etc. I don't doubt your word so please don't think I am.

Kenwood, on the other hand, clearly states not to use the same ground for PTT and microphone element return. The operator manuals for the 520, 530, 820, and 830 clearly show this.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
>
>
>
>
> _____
>
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, March 21, 2011 1:29:35 PM
> Subject: [TS-520_820_530_830] Re: ts-830s
>
> Ed,
>
> ? The ground return for the microphone "element" should not be connected
> "directly" to ground but rather through a .01ufd disc capacitor. Hum and/or
> distortion in the transmit audio can occur if you do not keep the ground return
> of the microphone "element" above ground through a .01ufd capacitor.
>
> 73smessage have been removed]
> >
>
>
>
> Â This is the first time I have heard that info!!?Â Every Mic I have used or
> serviced (public safety dispatch centers) cable shieldÂ endsÂ have been grounded
> to chassis ground ! Tracing outÂ any separate Â mic return lead also ends at
> chassis ground potential.
>
>
>
>
> [Non-text portions of this message have been removed]

>

30335. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 03:55:02 UTC
From: w5rkl
Topic: 30202 Message: 30335

Steve,

Have you taken voltage readings on the driver tube to see if there is any change in voltages between receive and transmit with the new tubes? That's where I would start.

It's quite possible the relay on the IF Unit may be causing the problem. Clean the plugs on the IF and AF units, one at a time, with contact cleaner, making sure the plugs seat flush on the boards.

When you rotate the RF gain control CCW, in receive, does the meter rise and eventually peg full scale to the right? This is what it should do. Rotating the RF gain control CW should cause the meter to fall back to zero. Again, that's what it should do.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.
>
> Thanks again
> 73
> Steve

30336. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 10:31:47 UTC
From: wrench101
Topic: 30202 Message: 30336

Hi again Mike! I beleive I checked the voltages at the driver tube, but I'm going to check again just in case. I beleive everything there was ok. The s-meter works correctly with rf gain adjustment. I'll clean the connectors once I get my first cup of java in me!

73
Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Steve,
>
> Have you taken voltage readings on the driver tube to see if there is any change in voltages between receive and transmit with the new tubes? That's where I would start.
>
> It's quite possible the relay on the IF Unit may be causing the problem. Clean the plugs on the IF and AF units, one at a time, with contact cleaner, making sure the plugs seat flush on the boards.
>
> When you rotate the RF gain control CCW, in receive, does the meter rise and eventually peg full scale to the right? This is what it should do. Rotating the RF gain control CW should cause the meter to fall back to zero. Again, that's what it should do.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.
> >
> > Thanks again
> > 73
> > Steve
>

30337. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 13:59:20 UTC
From: w5rkl
Topic: 30202 Message: 30337

Morning Steve,

I just wanted to ensure the bias voltage was switching like it should between receive and transmit and vice verse.

You can check the driver bias voltage at the RF Unit plug 8 pin 1 and ground. In receive the voltage should be approximately -51VDC and in transmit +.4VDC.

Make sure the RF ATT push button on the front panel is not pressed. The receive signals flows through the RF ATTN push button switch. The CAL (Marker) signal does not flow through the RF ATTN switch. The PLL Unit's "MKR" (CAL) signal flows directly to the RF Unit through plug 4 pin 2.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Hi again Mike! I beleive I checked the voltages at the driver tube, but I'm going to check again just in case. I beleive everything there was ok. The s-meter works correctly with rf gain adjustment. I'll clean the connectors once I get my first cup of java in me!
>
> 73
> Steve
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Steve,
> >
> > Have you taken voltage readings on the driver tube to see if there is any change in voltages between receive and transmit with the new tubes? That's where I would start.
> >
> > It's quite possible the relay on the IF Unit may be causing the problem. Clean the plugs on the IF and AF units, one at a time, with contact cleaner, making sure the plugs seat flush on the boards.
> >
> > When you rotate the RF gain control CCW, in receive, does the meter rise and eventually peg full scale to the right? This is what it should do. Rotating the RF gain control CW should cause the meter to fall back to zero. Again, that's what it should do.
> >
> >
> > 73s
> > Mike
> > W5RKL

> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > >
> > > Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.
> > >
> > > Thanks again
> > > 73
> > > Steve
> >
>

30338. Maximum Screen Grid Voltage on 6146B

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 14:19:25 UTC
From: Bill Henderson
Topic: 30338 Message: 30338

I recall seeing detalis of such a conversion over on the Fox Tango Yahoo
(IIRC) group...
I think it was a complete article in the files section.
Perhaps a quick check there could help as well.

- Bill H. / va3hwa

[Non-text portions of this message have been removed]

30339. Re: Maximum Screen Grid Voltage on 6146B

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 14:47:04 UTC
From: w5rkl
Topic: 30338 Message: 30339

The maximum screen voltage and current for a single 6146B is 250VDC at 12ma.

The typical operating screen voltage and current levels depends on the class of amplifier the 6146B is operating in.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bill Henderson <cybertiger@...> wrote:
>
> I recall seeing detalis of such a conversion over on the Fox Tango Yahoo
> (IIRC) group...
> I think it was a complete article in the files section.
> Perhaps a quick check there could help as well.
>
> - Bill H. / va3hwa
>
>
> [Non-text portions of this message have been removed]
>

30340. Cross reference for transistor 2SC733(Y) and for diode 1S1555

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 16:26:49 UTC
From: ae5uu
Topic: 30340 Message: 30340

Good morning all,

Can anyone give me an updated part number (e.g.NTE) for a 2SC733(Y) transistor and for a 1S1555 Diode? These are found on the TS-820 IF board. Thanks.

73,

Russell
AE5UU

30341. Re: [TS-520_820_530_830] Cross reference for transistor 2SC733(Y) and for diode 1S1555

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 16:57:51 UTC
From: Charles Coffee
Topic: 30340 Message: 30341

NTE199 for the transistor and the NTE 177 for the diode
Chuck, KJ4GU

On Tue, Mar 22, 2011 at 12:26 PM, ae5uu <nilsonrussell@...> wrote:

> Good morning all,
>
> Can anyone give me an updated part number (e.g.NTE) for a 2SC733(Y)
> transistor and for a 1S1555 Diode? These are found on the TS-820 IF board.
> Thanks.
>
> 73,
>
> Russell
> AE5UU
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

30342. Re: [TS-520_820_530_830] Cross reference for transistor 2SC733(Y) and for diode 1S1555

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 17:33:50 UTC
From: Russell Nilson
Topic: 30340 Message: 30342

Thank you Charles. I appreciate it.

73,

Russell
AE5UU

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Tue, 3/22/11, Charles Coffee <chascoffee@...> wrote:

From: Charles Coffee <chascoffee@...>
Subject: Re: [TS-520_820_530_830] Cross reference for transistor 2SC733(Y) and for diode 1S1555
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 22, 2011, 11:57 AM

NTE199 for the transistor and the NTE 177 for the diode

Chuck, KJ4GU

On Tue, Mar 22, 2011 at 12:26 PM, ae5uu <nilsonrussell@...> wrote:

> Good morning all,

>

> Can anyone give me an updated part number (e.g.NTE) for a 2SC733(Y)

> transistor and for a 1S1555 Diode? These are found on the TS-820 IF board.

> Thanks.

>

> 73,

>

> Russell

> AE5UU

>

>

>

> ------------------------------------

>

> Yahoo! Groups Links

>

>

>

>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30343. Re: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 18:06:47 UTC
From: Russell Nilson
Topic: 30316 Message: 30343

Mike,

I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter. Does this seem reasonable to you?

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Mon, 3/21/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 21, 2011, 5:32 PM

That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:

>

> The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

>

> Bob Macklin

> K5MYJ

> Seattle, Wa.

> "Real Radios Glow In The Dark"

> ----- Original Message -----

> From: Russell Nilson

> To: TS-520_820_530_830@yahoogroups.com

> Sent: Monday, March 21, 2011 1:49 PM

> Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

>

>

>

> Bob,

>

> That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.

>

> 73,

>

> Russell Nilson

>

> Master Mariner, 3000 Tons, all oceans

>

> rmn43@...

>

> 817.310.3088

>

> AE5UU

>

> --- On Mon, 3/21/11, Bob Macklin <macklinbob@...> wrote:

>

> From: Bob Macklin <macklinbob@...>

> Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

> To: TS-520_820_530_830@yahoogroups.com

> Date: Monday, March 21, 2011, 2:21 PM

>

>

>

> When the DRIVE control is peaked you will get the most antenna noise in the receiver.

>

> With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.

>

> Bob Macklin

>

> K5MYJ

>

> Seattle, Wa.

>

> "Real Radios Glow In The Dark"

>

> ----- Original Message -----

>

> From: ae5uu

>

> To: TS-520_820_530_830@yahoogroups.com

>

> Sent: Monday, March 21, 2011 12:11 PM

>

> Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

>

> Group,

>

> I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

>

> Problem summary, Kenwood TS-820

>

> External Symptoms

>

> 1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.

>

> 2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.

>

> 3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.

>

> 4) Everything else works correctly.

>

> Internal Symptoms

>

> 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.

>

> 2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.

>

> 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.

>

> 4) Q-16 reads as follows: Base -5.86 It should read -3.0

>

> Emitter -5.85 It is within spec.

>

> Collector 6.54 It should read 0.0

>

> Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

>

> I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.

>

> The Q-16 Base path is
Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.

>

> So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

>

> The other path for Q-16B runs
Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

>

> Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

>

> The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

>

> The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

>

> So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

>

> If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

>

> 73,

>

> Russell

>

> AE5UU

>

> [Non-text portions of this message have been removed]

>

> [Non-text portions of this message have been removed]

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>

>

> [Non-text portions of this message have been removed]

>

[Non-text portions of this message have been removed]

30344. Transmission strong, receive noisy on TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 18:11:37 UTC
From: ae5uu
Topic: 30344 Message: 30344

Mike,

By way of further information, I received a strong signal report today in to MN. Receive was noisy but clearly audible.

73,

Russell

30345. Blown HV Capacitors C22 and C24

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 18:28:48 UTC
From: Paul Delange
Topic: 30345 Message: 30345

I got a TS-830 of ebay. After about 5 minutes of operation, the HV capacitors blew out. The tubes checked good and I fixed the corroded SG switch. There are no discolerations or other visual damage. Is there anyplace I should check before firing it up again?

Thanks
Paul, KF7HQ

30346. Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 19:18:55 UTC
From: w5rkl
Topic: 30316 Message: 30346

Russell,

I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:
>
> Mike,
>
> I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter.Â Does this seem reasonable to you?
>
> 73,
>
> Russell Nilson
>
> Master Mariner, 3000 Tons, all oceans
>
> rmn43@...
>
> 817.310.3088
>
> AE5UU
>
> --- On Mon, 3/21/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, March 21, 2011, 5:32 PM
>
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>
>
>
> That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.
>
>
>
> 73s
>
> Mike
>
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
>
> >
>
> > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.
>
> >
>
> > Bob Macklin
>
> > K5MYJ
>
> > Seattle, Wa.
>
> > "Real Radios Glow In The Dark"
>
> > ----- Original Message -----
>
> > From: Russell Nilson
>
> > To: TS-520_820_530_830@yahoogroups.com
>
> > Sent: Monday, March 21, 2011 1:49 PM
>
> > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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>
> > Bob,
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> > That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.
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> > 73,
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> > Russell Nilson
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> > Master Mariner, 3000 Tons, all oceans
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> > rmn43@
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>
> > 817.310.3088
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>
> > AE5UU
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>
> > --- On Mon, 3/21/11, Bob Macklin <macklinbob@> wrote:
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> >
>
> > From: Bob Macklin <macklinbob@>
>
> > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
>
> > To: TS-520_820_530_830@yahoogroups.com
>
> > Date: Monday, March 21, 2011, 2:21 PM
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>
> > When the DRIVE control is peaked you will get the most antenna noise in the receiver.
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>
> > With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.
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>
> > Bob Macklin
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> > K5MYJ
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> > Seattle, Wa.
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>
> > "Real Radios Glow In The Dark"
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>
> > ----- Original Message -----
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>
> > From: ae5uu
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>
> > To: TS-520_820_530_830@yahoogroups.com
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> >
>
> > Sent: Monday, March 21, 2011 12:11 PM
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>
> > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> >
>
> > Group,

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>
> > I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:
>
> >
>
> > Problem summary, Kenwood TS-820
>
> >
>
> > External Symptoms
>
> >
>
> > 1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.
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> >
>
> > 2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.
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>
> > 3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.
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> >
>
> > 4) Everything else works correctly.
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>
> > Internal Symptoms
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> >
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> > 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.
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> >
>
> > 2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.
>

> >
>
> > 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.
>
> >
>
> > 4) Q-16 reads as follows: Base -5.86 It should read -3.0
>
> >
>
> > Emitter -5.85 It is within spec.
>
> >
>
> > Collector 6.54 It should read 0.0
>
> >
>
> > Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.
>
> >
>
> > I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.
>
> >
>
> > The Q-16 Base path is Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.
>
> >
>
> > So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)
>
> >
>
> > The other path for Q-16B runs Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin
>
> >
>
> > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.
>
> >
>

> > The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)
>
> >
>
> > The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.
>
> >
>
> > So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.
>
> >
>
> > If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help
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> >
>
> > 73,
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> > Russell
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> > AE5UU
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30347. Re: Blown HV Capacitors C22 and C24

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 19:28:51 UTC
From: w5rkl
Topic: 30345 Message: 30347

Hello Paul,

I'll assume you replaced "both" HV filter capacitors and made sure you wired them in "series"! You should replace both HV filter capacitors even if only one failed.

Make absolutely sure you wired the capacitors correctly and not backwards and made sure you connected them correctly. This is very important otherwise you will cause further damage to the HV supply and possibly other components.

You should also check the 4 diodes in the HV supply. If one of the HV filter capacitors blew then it can easily take out one or more of the diodes in the HV supply. The diodes are D1 thru D4 with four 470K 1/2 watt resistors, R1 thru R4, across each diode. You can use 1N4007 (1KV at 1 amp) diodes as replacements. Replace all 4 of the diodes even if only one appears to be blown. Diodes, like resistors, are cheap.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Paul Delange" <1cpaul@...> wrote:
>
> I got a TS-830 of ebay. After about 5 minutes of operation, the HV capacitors blew out. The tubes checked good and I fixed the corroded SG switch. There are no discolerations or other visual damage. Is there anyplace I should check before firing it up again?
>
> Thanks
> Paul, KF7HQ
>

30348. Re: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 19:43:27 UTC
From: Russell Nilson
Topic: 30316 Message: 30348

Mike,

Pin 11 on the IF Board IF3 (AGC) measures +6.56vdc

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 22, 2011, 2:18 PM

Russell,

I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:

>

> Mike,

>

> I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter.Â Does this seem reasonable to you?

>

> 73,

>

> Russell Nilson

>

> Master Mariner, 3000 Tons, all oceans

>

> rmn43@...

>

> 817.310.3088

>

> AE5UU

>

> --- On Mon, 3/21/11, w5rkl <w5rkl@...> wrote:

>

> From: w5rkl <w5rkl@...>

> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

> To: TS-520_820_530_830@yahoogroups.com

> Date: Monday, March 21, 2011, 5:32 PM

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> That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.

>

>

>

> 73s

>

> Mike

>

> W5RKL

>

>

>

> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:

>

> >

>

> > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

>

> >

>

> > Bob Macklin

>

> > K5MYJ

>

> > Seattle, Wa.

>

> > "Real Radios Glow In The Dark"

>

> > ----- Original Message -----

>

> > From: Russell Nilson

>

> > To: TS-520_820_530_830@yahoogroups.com

>

> > Sent: Monday, March 21, 2011 1:49 PM

>

> > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > From: Bob Macklin <macklinbob@>

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> > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > To: TS-520_820_530_830@yahoogroups.com

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> > Date: Monday, March 21, 2011, 2:21 PM

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> > ----- Original Message -----

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> >

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> > From: ae5uu

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> > To: TS-520_820_530_830@yahoogroups.com

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> >

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> > Sent: Monday, March 21, 2011 12:11 PM

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> > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > External Symptoms

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> > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

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> > So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

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> > If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

>

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> > 73,

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> > Russell

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> > AE5UU

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30349. A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 20:28:18 UTC
From: gerryattrick69
Topic: 30349 Message: 30349

Its probably no big deal to most here but last night I tried my 530S in receive mode - I am not licenced yet so tx is out for a while. I only had a basic plain wire antenna so did not expect to hear anything..and I was not disappointed!.Actually I did hear something very faint I think on 40m. although it was probably wishful thinking on my part. I have had no guidance with using a ham radio and am taking it slowly using the manual and learning as I go.

However it was great to actually hear the rig making sounds as I had fears that it may well have been DOA.

Now my enthusiasm has been given a shot and tonight I plan to try sorting the antenna bit more and see if I can pick up something more interesting.

I might even try the TS-520S that I also have - its in much nicer condition but again I have never had it switched on yet.

I'll need to get a decent set of headphones sooner rather than later if I am not going to upset the XYL...any suggestions welcome.

73

Alan
ZL....

30350. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 20:41:07 UTC
From: Bob Macklin
Topic: 30349 Message: 30350

Try 40M between 6PM and 10PM local time. Yon may not hear much phone activity. Most 40M activity is CW between 7000 and 7100.

Then try 75M phone after 10PM local time. Look between 3800 and 4000. Also check between 3600 and 3800 but activy there will be more sparse

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: gerryattrick69
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 22, 2011 1:28 PM
Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Its probably no big deal to most here but last night I tried my 530S in receive mode - I am not licenced yet so tx is out for a while. I only had a basic plain wire antenna so did not expect to hear anything..and I was not disappointed!.Actually I did hear something very faint I think on 40m. although it was probably wishful thinking on my part. I have had no guidance with using a ham radio and am taking it slowly using the manual and learning as I go.

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ZL....

[Non-text portions of this message have been removed]

30351. Re: Blown HV Capacitors C22 and C24

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 20:45:00 UTC
From: andy_westcott2004
Topic: 30345 Message: 30351

--- In TS-520_820_530_830@yahoogroups.com, "Paul Delange" <1cpaul@...> wrote:

> I got a TS-830 of ebay. After about 5 minutes of operation, the HV capacitors blew out.

This could be because the radio had been in storage for a few years.

What can happen is that the dielectric within the caps deteriorates during storage, meaning a heavy leakage current will flow for a while until the dielectric re-forms. Unfortunately, all too often the caps will overheat due to this leakage current before they get a chance to 'heal up'. The failure can sometimes be explosive, as I have witnessed. (Not in a Kenwood, you may be pleased to hear!)

Replace both caps with similar capacity units, and observe the voltage rating - they should be rated at 500v.

New caps of the correct physical size can be ordered from our friend Ken:
[url]http://www.k4eaa.com/index.html[/url]

30352. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 20:45:49 UTC
From: Bob Macklin
Topic: 30349 Message: 30352

Check 40M in the evening between 6PM and 10PM local time. You may not hear much phone activity. Most 40M activity is CW between 7000 and 7100.

Then try 75M phone after 10PM local time. Most activity will probably be found between 3800 and 4000. But you might find some Extra Class people between 3625 and 3800.

This weekend is a major SSB contest. You can try 20M during the day. You should hear a lot of activity.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: gerryattrick69
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 22, 2011 1:28 PM
Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Its probably no big deal to most here but last night I tried my 530S in receive mode - I am not licenced yet so tx is out for a while. I only had a basic plain wire antenna so did not expect to hear anything..and I was not disappointed!.Actually I did hear something very faint I think on 40m. although it was probably wishful thinking on my part. I have had no guidance with using a ham radio and am taking it slowly using the manual and learning as I go.

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73

Alan
ZL....

[Non-text portions of this message have been removed]

30353. Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 21:13:54 UTC
From: w5rkl
Topic: 30316 Message: 30353

That's twice the voltage that should be present on IF3 pin 11.

What voltage do you see at AF AVR Unit plug AF2 pin 6?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:
>
> Mike,
>
> Pin 11 on the IF Board IF3 (AGC) measures +6.56vdc
>
> 73,
>
> Russell Nilson
>
> Master Mariner, 3000 Tons, all oceans
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> rmn43@...
>
> 817.310.3088
>
> AE5UU
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> --- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, March 22, 2011, 2:18 PM
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> Russell,
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> I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?
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> 73s
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> Mike
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> > Mike
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> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
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> > > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.
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> > > Bob Macklin

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> > > Seattle, Wa.
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> > > "Real Radios Glow In The Dark"
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> > > ----- Original Message -----
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> > > From: Russell Nilson
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > Sent: Monday, March 21, 2011 1:49 PM
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> > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.
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> > > From: Bob Macklin <macklinbob@>
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> > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > Date: Monday, March 21, 2011, 2:21 PM
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> > > ----- Original Message -----
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> > > From: ae5uu
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > Sent: Monday, March 21, 2011 12:11 PM
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> > > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > Group,
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> > > Problem summary, Kenwood TS-820
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> > > External Symptoms
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> > > 4) Everything else works correctly.
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> > > 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.
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> > > 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.
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> > > 4) Q-16 reads as follows: Base -5.86 It should read -3.0
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> > > Emitter -5.85 It is within spec.
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> > > Collector 6.54 It should read 0.0
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> > > Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.
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> > > I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.
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> > > The Q-16 Base path is Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.
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> > > So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)
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> > > The other path for Q-16B runs Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin
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> > > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56.....AGC at the pin. At the transistor it should read 0.0vdc.
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> > > The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)
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> > > The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.
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> > > So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.
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> > > If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

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30354. Re: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 22:16:10 UTC
From: Russell Nilson
Topic: 30316 Message: 30354

Mike,

I see 5.92 volts on the AF-AVR board AF2 pin 6, instead of the proper 3.3vdc. When I unplug the IF Unit, the voltage drops to 3.3vdc, and can be measured at that level everywhere it should be in the rest of the radio (excepting the IF Unit of course.) This is what sent me to the IF unit where I found Q-15 to have the correct voltages, but Q-16 base = -5.85, Q-16 emitter = -5.85, and Q-16 collector = =+6.54. While the emitter voltage is correct, the base is wrong, reading the same as the emitter, and perhaps this is causing the voltage reading on the collector to be wrong as well. If this transistor is bad (base shorted across to emitter), it would perhaps be the cause of my problems.

Also when I was on the air this morning to a friend in MN, he told me that my audio was greatly distorted. We got it right by lowering my MIC control all the way to 8 o'clock, where formerly it was correct at 12 o'clock. The pre-amp on the mic was unchanged from usual and the Processor was off as usual.

Incidentally, I have 9.0vdc from the AF-AVR Unit AF1 Pins 1 & 2, and it is present everywhere in the radio that it should be, with or without the IF board being plugged in.. Also all LED lights function correctly.

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@cornell.edu

817.310.3088

AE5UU

--- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 22, 2011, 4:13 PM

That's twice the voltage that should be present on IF3 pin 11.

What voltage do you see at AF AVR Unit plug AF2 pin 6?

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:

>

> Mike,

>

> Pin 11 on the IF Board IF3 (AGC) measures +6.56vdc

>

> 73,

>

> Russell Nilson

>

> Master Mariner, 3000 Tons, all oceans

>

> rmn43@...

>

> 817.310.3088

>

> AE5UU

>

> --- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:

>

> From: w5rkl <w5rkl@...>

> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

> To: TS-520_820_530_830@yahoogroups.com

> Date: Tuesday, March 22, 2011, 2:18 PM

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> Russell,

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> I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?

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> 73s

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> Mike

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> W5RKL

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> --- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@> wrote:

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> > Mike,

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> > I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter.Ã‚Â Does this seem reasonable to you?

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> > 73,

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> > Russell Nilson

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> > Master Mariner, 3000 Tons, all oceans

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> > rmn43@

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> > 817.310.3088

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> > AE5UU

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> > --- On Mon, 3/21/11, w5rkl <w5rkl@> wrote:

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> > From: w5rkl <w5rkl@>

>

> > Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

>

> > To: TS-520_820_530_830@yahoogroups.com

>

> > Date: Monday, March 21, 2011, 5:32 PM

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> > That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.

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> > 73s

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> > Mike

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> > W5RKL

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> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:

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> > > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

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> > > "Real Radios Glow In The Dark"

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> > > ----- Original Message -----

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>

> > > From: Russell Nilson

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> > > To: TS-520_820_530_830@yahoogroups.com

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> > > Sent: Monday, March 21, 2011 1:49 PM

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> > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > To: TS-520_820_530_830@yahoogroups.com

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> > > Date: Monday, March 21, 2011, 2:21 PM

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> > > ----- Original Message -----

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> > > From: ae5uu

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> > > To: TS-520_820_530_830@yahoogroups.com

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> > > Sent: Monday, March 21, 2011 12:11 PM

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> > > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > Problem summary, Kenwood TS-820

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> > > External Symptoms

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> > > Emitter -5.85 It is within spec.

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> > > The other path for Q-16B runs
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> > > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

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> > > The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

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> > > Russell

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30355. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-22 22:15:07 UTC
From: jeffrey lord
Topic: 30349 Message: 30355

ALLAN,
have a look at setting up a better ANTENNA , as you are in KIWI LAND , 3.5 Mhz to 3.8Mhz (day time)and 7.0Mhz t0 7.2Mhz & 14.0Mhz-14.300 (at night)will be best .

A set of good head Phones will help keep the XYL happy, I picked up a set at the local FLEA Market for $10.00 and theybwork well.

Your ANTENNA is crucial . the better the ANTNNA the more you hear. HAsve a look at DX ZONE and they have antennas for all bands and configerations that you can build yourself.
I currrently have a HF DOUBLET feed with open wire feeder which tunes from 3.5Mhz to 28.5Mhz.

Jeff
vk4fnrs

----- Original Message ----
From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, 22 March, 2011 12:45:49 PM
Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Check 40M in the evening between 6PM and 10PM local time. You may not hear much phone activity. Most 40M activity is CW between 7000 and 7100.

Then try 75M phone after 10PM local time. Most activity will probably be found between 3800 and 4000. But you might find some Extra Class people between 3625 and 3800.

This weekend is a major SSB contest. You can try 20M during the day. You should hear a lot of activity.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
  ----- Original Message -----
  From: gerryattrick69
  To: TS-520_820_530_830@yahoogroups.com
  Sent: Tuesday, March 22, 2011 1:28 PM
  Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

  Its probably no big deal to most here but last night I tried my 530S in receive mode - I am not licenced yet so tx is out for a while. I only had a basic plain wire antenna so did not expect to hear anything..and I was not disappointed!.Actually I did hear something very faint I think on 40m. although

it was probably wishful thinking on my part. I have had no guidance with using a ham radio and am taking it slowly using the manual and learning as I go.

  However it was great to actually hear the rig making sounds as I had fears that it may well have been DOA.

  Now my enthusiasm has been given a shot and tonight I plan to try sorting the antenna bit more and see if I can pick up something more interesting.

  I might even try the TS-520S that I also have - its in much nicer condition but again I have never had it switched on yet.

  I'll need to get a decent set of headphones sooner rather than later if I am not going to upset the XYL...any suggestions welcome.

  73

  Alan
  ZL....

[Non-text portions of this message have been removed]

Yahoo! Groups Links

30356. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 00:02:26 UTC
From: JT
Topic: 30349 Message: 30356

Hi Alan,
Listen to 3.850 at 5:30PM NZ time and 7.083 at 6:00 NZ time, these are two nets which are on every night. As the guys give signal reports from all over ZL, you should get some idea of what you are should be hearing.
Cheers,
John
ZL1DT
----- Original Message -----
From: gerryattrick69
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 23, 2011 9:28 AM
Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Its probably no big deal to most here but last night I tried my 530S in receive mode - I am not licenced yet so tx is out for a while. I only had a basic plain wire antenna so did not expect to hear anything..and I was not disappointed!.Actually I did hear something very faint I think on 40m. although it was probably wishful thinking on my part. I have had no guidance with using a ham radio and am taking it slowly using the manual and learning as I go.

However it was great to actually hear the rig making sounds as I had fears that it may well have been DOA.

Now my enthusiasm has been given a shot and tonight I plan to try sorting the antenna bit more and see if I can pick up something more interesting.

I might even try the TS-520S that I also have - its in much nicer condition but again I have never had it switched on yet.

I'll need to get a decent set of headphones sooner rather than later if I am not going to upset the XYL...any suggestions welcome.

73

Alan
ZL....

[Non-text portions of this message have been removed]

30357. Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 00:27:17 UTC
From: w5rkl
Topic: 30316 Message: 30357

I agree Russell. It does appear that Q16 is bad. I don't have a direct NTE replacement for Q16. I would replace Q16.

Q16's Emitter should be -6VDC and Q16's Base should be -3VDC which makes Q16's Collector 0VDC.

I have not measured Q16's voltages. The voltages given are from Kenwood's service manual IF Unit schematic.

Q15 and Q16 along with D18 and D19 is/are the receiver's AGC circuit/amplifiers along with fast attack slow decay components.

Since the IF amplifier Q1 is used in both receive and transmit, it stands to reason, distortion in receive will translate to distortion in transmit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:
>
> Mike,
>
> I see 5.92 volts on the AF-AVR board AF2 pin 6, instead of the proper 3.3vdc.Â When I unplug the IF Unit, the voltage drops to 3.3vdc, and can be measured at that level everywhere it should be in the rest of the radio (excepting the IF Unit of course.)Â This is what sent me to the IF unit where I found Q-15 to have the correct voltages, but Q-16 base = -5.85, Q-16 emitter = -5.85, and Q-16 collector = =+6.54.Â While the emitter voltage is correct, the base is wrong, reading the same as the emitter, and perhaps this is causing the voltage reading on the collector to be wrong as well.Â If this transistor is bad (base shorted across to emitter), it would perhaps be the cause of my problems.
>
> Also when I was on the air this morning to a friend in MN, he told me that my audio was greatly distorted.Â We got it right by lowering my MIC control all the way to 8 o'clock, where formerly it was correct at 12 o'clock.Â The pre-amp on the mic was unchanged from usual and the Processor was off as usual.
>
> Incidentally, I have 9.0vdc from the AF-AVR Unit AF1 Pins 1 & 2, and it is present everywhere in the radio that it shouldÂ be, with or without the IF board being plugged in..Â Also all LED lights function correctly.
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> 73,
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> Russell Nilson
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> Master Mariner, 3000 Tons, all oceans
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> rmn43@...
>
> 817.310.3088

>
> AE5UU
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> --- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
> To: TS-520_820_530_830@yahoogroups.com
> Date: Tuesday, March 22, 2011, 4:13 PM
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> That's twice the voltage that should be present on IF3 pin 11.
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> What voltage do you see at AF AVR Unit plug AF2 pin 6?
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> 73s
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> Mike
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> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@> wrote:
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> > > Mike,
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> > Pin 11 on the IF Board IF3 (AGC) measures +6.56vdc
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> > 73,
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> > Russell Nilson
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> > Master Mariner, 3000 Tons, all oceans
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> > --- On Tue, 3/22/11, w5rkl <w5rkl@> wrote:
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> > From: w5rkl <w5rkl@>
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> > Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
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> > To: TS-520_820_530_830@yahoogroups.com
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> > Date: Tuesday, March 22, 2011, 2:18 PM
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> > I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?
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> > Mike
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> > --- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@> wrote:
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> > > Mike,
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> > > I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter.Ã□â□□Ã□Â Does this seem reasonable to you?
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> > > --- On Mon, 3/21/11, w5rkl <w5rkl@> wrote:
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> > > From: w5rkl <w5rkl@>
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> > > Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > Date: Monday, March 21, 2011, 5:32 PM
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> > > That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.
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> > > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
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> > > > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.
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> > > > "Real Radios Glow In The Dark"
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> > > > From: Russell Nilson
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> > > > To: TS-520_820_530_830@yahoogroups.com
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> > > > Sent: Monday, March 21, 2011 1:49 PM
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> > > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > > That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.
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> > > > --- On Mon, 3/21/11, Bob Macklin <macklinbob@> wrote:
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> > > > From: Bob Macklin <macklinbob@>
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> > > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > > To: TS-520_820_530_830@yahoogroups.com
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> > > > Date: Monday, March 21, 2011, 2:21 PM
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> > > > When the DRIVE control is peaked you will get the most antenna noise in the receiver.
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> > > > With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.
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> > > > Sent: Monday, March 21, 2011 12:11 PM
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> > > > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage
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> > > I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:
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> > > Problem summary, Kenwood TS-820
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> > > External Symptoms
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> > > > 1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.
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> > > > 2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.
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> > > > 3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.

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> > > > 4) Everything else works correctly.
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> > > > 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the

radio reads 3.3vdc correctly.
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> > > > 2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.
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> > > > 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.
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> > > > 4) Q-16 reads as follows: Base -5.86 It should read -3.0
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> > > > Emitter -5.85 It is within spec.
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> > > > Collector 6.54 It should read 0.0
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> > > > Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

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> > > > I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.
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> > > > The Q-16 Base path is Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.
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> > > > So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

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> > > > The other path for Q-16B runs Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin
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> > > > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56.....AGC at the pin. At the transistor it should read 0.0vdc.
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> > > > The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)
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> > > The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.
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> > > So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.
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> > > If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

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30358. TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 01:32:12 UTC
From: n8ydadam
Topic: 30358 Message: 30358

Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.

While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?

The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a pinout for the relay, but I'm unable to find the rest in the schematics.

Thanks!
Adam, N8YD

30359. Re: [TS-520_820_530_830] Maximum Screen Grid Voltage on a 6146B

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 01:38:37 UTC
From: Michael D'Antignac AE6JL
Topic: 30321 Message: 30359

Try these files:

From the Fox Tango Yahoo group;
<http://f1.grp.yahoofs.com/v1/EEaJTXrTvboGyBe_-s-GuU6L_TlzSOEHkuA3R9r1Yh9VSqM3iyIkomqOXeungGgPxtVir2RL2s9l0bn5Sd1lr8vbGxpNK0eCkjA/6146B%20Substitutes%20and%20Their%20Kin%20%28ver%201.01%29>
"6146B Substitutes and Their Kin (ver 1.01) About replacements for the 6146 and 6146B"

and from The FT101 Yahoo Group;

9905068.pdf and 9909079.pdf

Mike AE6JL

k3jls@... wrote:
>
> Hi Folks,
>
> Just a quick question that pertains to the 6146B tube and not the QRO
> modification mentioned herein.
>
> I am in the process of modifying a Yaesu FT-101 to work with 6146B
> tubes. I've installed the tubes, and the best output I can get (on 80
> meters) is about 60 watts, with the screen grid running at about 170
> volts in transmit. This voltage is provided by a dedicated winding on
> the transformer.
>
> I would like to increase the screen voltage to around 220 volts (or
> therabouts) to generate a bit more RF. (Quick) tests that I have made
> with a high wattage variable resistor have indicated that the output
> can be increased to about 115 watts, nothing to sneeze at!
>
> One possible problem with this approach is that I'm generating the 220
> volts on transmit with a voltage divider hooked to the low voltage
> line - about 360 volts in the receive mode. While I can adjust my
> screen grid voltage to around 220 volts in transmit (when more power
> is being drawn from the power transformer), the voltage will jump up
> close to 300 volts when in the receive mode.
>
> Now, the data sheets for the 6146 specify a maximum of 250 volts on
> the screen grid. If the 6146's are biased off in the receive mode,
> will this extra potential hurt the tubes as they won't actually be
> conducting, right(or wrong)??
>
> The only other option would be some kind of zener regulation.

>
> Any thoughts from you tube gurus??
>
> 73's - Joe - K3JLS
>
>

30360. Re: [TS-520_820_530_830] TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 01:40:42 UTC
From: n6wk@n6wk.com
Topic: 30358 Message: 30360

Sounds like the band switch output part is clocked wrong.
Which caps are you referring to?
I know the coil has a .01 across it for the relay

Gordon
N6WK

On 3/22/2011 6:32 PM, n8ydadam wrote:
>
>
> Hello, all. I just picked up a 530 that a friend had given up on. He'd
> lost output (has drive, but no final), and it's the same with new tubes.
>
> While looking over the rig, I noticed that a cap has crumbled to bits
> on the antenna relay board, under the final cage. Could this be the
> problem?
>
> The next question.... Anyone know the value of the caps on the relay
> board, or have info on it? It's a ceramic disc, but I believe there
> are two there. My service manual shows a pinout for the relay, but I'm
> unable to find the rest in the schematics.
>
> Thanks!
> Adam, N8YD
>
>

30361. Re: [TS-520_820_530_830] TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 02:03:11 UTC
From: Joseph Stiles
Topic: 30358 Message: 30361

Adam,

Do you mean the "final unit?" X56-1380-00? Is iit the one that the final tubes fit into...on the rear left corner with radio bottom up and VFO facing you?

From: n8ydadam <aliette@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 22, 2011 6:32:12 PM
Subject: [TS-520_820_530_830] TS-530 Project...

Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.

While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?

The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a pinout for the relay, but I'm unable to find the rest in the schematics.

Thanks!
Adam, N8YD

[Non-text portions of this message have been removed]

30362. Re: [TS-520_820_530_830] TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 02:07:45 UTC
From: Adam Liette
Topic: 30358 Message: 30362

It's a small (1x1.5" maybe) board on a relay, mounted next to the final board. The board is actually inside the final cage, and the relay protrudes below the chassis with a metal cover.

Sent on the Sprint® Now Network from my BlackBerry®

-----Original Message-----
From: Joseph Stiles <stilesjoseph@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Tue, 22 Mar 2011 19:03:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-530 Project...

Adam,

Do you mean the "final unit?" X56-1380-00? Is iit the one that the final tubes fit into...on the rear left corner with radio bottom up and VFO facing you?

From: n8ydadam <aliette@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 22, 2011 6:32:12 PM
Subject: [TS-520_820_530_830] TS-530 Project...

Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.

While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?

The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a pinout for the relay, but I'm unable to find the rest in the schematics.

Thanks!
Adam, N8YD

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30363. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 02:21:12 UTC
From: w5rkl
Topic: 30358 Message: 30363

I have one of these relay boards in my hand. The board number on the relay board I has is J25-3015-0 which is different than the 530 service manual board number on page 11 which is J25-3015-04.

However, the board I have has 2 disc caps.

Looking at the 530 service manual, page 11, top right "foil side" picture, there are 4 terminal on the left and 4 terminals on the right.

Looking at the left side, second terminal from the top left is "ground" (shield from small coax). A small disc capacitor is connected from the second terminal from the top left to the second terminal from the top right. This capacitor is a "103" or ".01ufd" capacitor.

Looking at the left, 3 terminal from the top, another capacitor lead connects to this 3rd terminal from the top. This capacitor is marked "101" or "100pf".

I hope this helps.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "n8ydadam" <aliette@...> wrote:
>
>
> Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.
>
> While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?
>
> The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a pinout for the relay, but I'm unable to find the rest in the schematics.
>
> Thanks!
> Adam, N8YD
>

30364. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 02:30:41 UTC
From: Adam Liette
Topic: 30358 Message: 30364

Hello, Mike. The 100pf is what I'm looking for. Thanks! The mentioned diagram on page 11 is the only reference I've seen in the manual. Is there more?

Adam

Sent on the Sprint? Now Network from my BlackBerry?

-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 02:21:12
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

I have one of these relay boards in my hand. The board number on the relay board I has is J25-3015-0 which is different than the 530 service manual board number on page 11 which is J25-3015-04.

However, the board I have has 2 disc caps.

Looking at the 530 service manual, page 11, top right "foil side" picture, there are 4 terminal on the left and 4 terminals on the right.

Looking at the left side, second terminal from the top left is "ground" (shield from small coax). A small disc capacitor is connected from the second terminal from the top left to the second terminal from the top right. This capacitor is a "103" or ".01ufd" capacitor.

Looking at the left, 3 terminal from the top, another capacitor lead connects to this 3rd terminal from the top. This capacitor is marked "101" or "100pf".

I hope this helps.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "n8ydadam" <aliette@...> wrote:
>
>
> Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.
>
> While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?
>
> The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a

pinout for the relay, but I'm unable to find the rest in the schematics.
>
> Thanks!
> Adam, N8YD
>

[Non-text portions of this message have been removed]

30365. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 02:45:02 UTC
From: w5rkl
Topic: 30358 Message: 30365

You did not mention this so I will assume there is 60ma of final idling current with either the microphone PTT button pressed or the SEND switch flipped UP, showing on the IP meter with the MODE switch set to USB or LSB.

When you peak the drive then switch the meter to IP and adjust the PLATE control for a dip in IP current, do you see any dip at any position of the PLATE control?

I tend to agree with Gordon, it's quite possible the band switch shaft is out of sync with the final amplifier switch assembly S22.

Switch assembly S22 is the ONLY switch wafers inside the final amplifier enclosure. The shaft of S22 has "2" flat spots.

With the 530 front panel facing you, set the band switch to "10". with the final amplifier cover removed, look at the rear of the plastic coupler that connects the long band switch shaft to the plastic couple. You should see a flat spot on S22 shaft vertically on the "right". The other flat spots on S22's shaft should be on the "bottom". If this is NOT how S22's shaft is resting with the band switch set to 10, I agree with Gordon, switch S22's shaft is "out of sync" with the band switch. I just repaired a 530 that had this exact problem.

You have to look closely at the shaft of S22, the coupler may be slide too far onto the S22's shaft to see the flat spot.

The set screws are "1.5mm" hex wrench. If you only have U.S. hex wrenches they will NOT fit the set screws. Most hardware stores sell a complete long shaft set of metric hex wrenches for $6 or so.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Sounds like the band switch output part is clocked wrong.
> Which caps are you referring to?
> I know the coil has a .01 across it for the relay
>
> Gordon
> N6WK
>
> On 3/22/2011 6:32 PM, n8ydadam wrote:
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> > Hello, all. I just picked up a 530 that a friend had given up on. He'd
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> > are two there. My service manual shows a pinout for the relay, but I'm
> > unable to find the rest in the schematics.
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> > Thanks!
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> >
> >
>

30366. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 03:07:46 UTC
From: w5rkl
Topic: 30358 Message: 30366

HI Adam,

Unfortunately I do not know of any other reference or individual diagram showing the relay other than the main schematic.

Gordon's right, the 103 (.01ufd) cap is connected across the relay coil. That's the disc cap that connects between the second terminal from the top left to the second terminal from the top right.

The heavy solid wire connected to the 3rd terminal from the top left, same terminal the lead of the "101" capacitor is connected to, is the transmitter's PI Network "output" and connects to the antenna SO-239 but ONLY when the relay is energized.

The relay is a "solenoid" type relay. The relay is NOT on a socket, it's soldered to the board. You cannot "manually" activate the relay with your finger with the relay's plastic cover off. You must apply 12VDC to the relay coil to see how the relay works. You can do this removing plug 6 on the AF Unit board and applying 12VDC to plug 6 pin 6 and chassis ground. The relay connects directly to plug 6 pin 6. You will notice, when the relay is energized, the 2 copper strips move UP and DOWN, UP when the relay is energized and DOWN when the relay is NOT energized. Be very careful when removing the plastic cover to ensure you do not damage or bend any of the relay terminals.

DO NOT attempt any of these steps with power applied to the 530!! Remove ALL power, discharge the HV filter capacitors, BEFORE attempting any work inside the 530.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
>
>
> Hello, Mike. The 100pf is what I'm looking for. Thanks! The mentioned diagram on page 11 is the only reference I've seen in the manual. Is there more?
>
> Adam
>
> Sent on the Sprint® Now Network from my BlackBerry®
>
> -----Original Message-----
> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 02:21:12
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530 Project...
>

> I have one of these relay boards in my hand. The board number on the relay board I has is J25-3015-0 which is different than the 530 service manual board number on page 11 which is J25-3015-04.
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>
> Looking at the left, 3 terminal from the top, another capacitor lead connects to this 3rd terminal from the top. This capacitor is marked "101" or "100pf".
>
> I hope this helps.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "n8ydadam" <aliette@> wrote:
> >
> >
> > Hello, all. I just picked up a 530 that a friend had given up on. He'd lost output (has drive, but no final), and it's the same with new tubes.
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> > While looking over the rig, I noticed that a cap has crumbled to bits on the antenna relay board, under the final cage. Could this be the problem?
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> > The next question.... Anyone know the value of the caps on the relay board, or have info on it? It's a ceramic disc, but I believe there are two there. My service manual shows a pinout for the relay, but I'm unable to find the rest in the schematics.
> >
> > Thanks!
> > Adam, N8YD
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> [Non-text portions of this message have been removed]
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30367. Re: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 03:47:34 UTC
From: Russell Nilson
Topic: 30316 Message: 30367

Mike,

Thank you for the help. The replacement numbers for various components in the AGC circuit are as follows, in case anyone else develops this problem:

Q-15, Q-16 Kenwood number = 2SC733(Y) Replaced by NTE199
Q-1, Q-2, and Q-3 Kenwood number = 3SK35(GR) Replaced by NTE222
D-18, D-19 Kenwood number = 1N60 Replaced by CDSH270
D-20, D21 Kenwood number =
1S1555 Replaced by NTE177

Thanks to Charles and others in our group for some of these numbers. I tried mouser.com for the rest and came up short. But by going directly to the nteinc.com website, it was easy. Once I had the replacement numbers, mouser.com had them all.
They cost next to nothing, with the exception of the NTE222 (which I hope not to need; I haven't examined that part of the board yet), which cost $12 each.

Strangely, I discovered today that Mouser is only 35 miles my home here in the DFW area.

73,

Russell Nilson

Master Mariner, 3000 Tons, all oceans

rmn43@...

817.310.3088

AE5UU

--- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...m>
Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, March 22, 2011, 7:27 PM

I agree Russell. It does appear that Q16 is bad. I don't have a direct NTE replacement for Q16. I would replace Q16.

Q16's Emitter should be -6VDC and Q16's Base should be -3VDC which makes Q16's Collector 0VDC.

I have not measured Q16's voltages. The voltages given are from Kenwood's service manual IF Unit schematic.

Q15 and Q16 along with D18 and D19 is/are the receiver's AGC circuit/amplifiers along with fast attack slow decay components.

Since the IF amplifier Q1 is used in both receive and transmit, it stands to reason, distortion in receive will translate to distortion in transmit.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:

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> Mike,

>

> I see 5.92 volts on the AF-AVR board AF2 pin 6, instead of the proper 3.3vdc.Â When I unplug the IF Unit, the voltage drops to 3.3vdc, and can be measured at that level everywhere it should be in the rest of the radio (excepting the IF Unit of course.)Â This is what sent me to the IF unit where I found Q-15 to have the correct voltages, but Q-16 base = -5.85, Q-16 emitter = -5.85, and Q-16 collector = =+6.54.Â While the emitter voltage is correct, the base is wrong, reading the same as the emitter, and perhaps this is causing the voltage reading on the collector to be wrong as well.Â If this transistor is bad (base shorted across to emitter), it would perhaps be the cause of my problems.

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> Also when I was on the air this morning to a friend in MN, he told me that my audio was greatly distorted.Â We got it right by lowering my MIC control all the way to 8 o'clock, where formerly it was correct at 12 o'clock.Â The pre-amp on the mic was unchanged from usual and the Processor was off as usual.

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> Incidentally, I have 9.0vdc from the AF-AVR Unit AF1 Pins 1 & 2, and it is present everywhere in the radio that it shouldÂ be, with or without the IF board being plugged in..Â Also all LED lights function correctly.

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> 73,

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> Russell Nilson

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> Master Mariner, 3000 Tons, all oceans

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> rmn43@...

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> 817.310.3088

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> AE5UU

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> --- On Tue, 3/22/11, w5rkl <w5rkl@...> wrote:

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> From: w5rkl <w5rkl@...>

> Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

> To: TS-520_820_530_830@yahoogroups.com

> Date: Tuesday, March 22, 2011, 4:13 PM

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> That's twice the voltage that should be present on IF3 pin 11.

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> What voltage do you see at AF AVR Unit plug AF2 pin 6?

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> 73s

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> Mike

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> W5RKL

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> --- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@> wrote:

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> > Mike,

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> > Pin 11 on the IF Board IF3 (AGC) measures +6.56vdc

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> > 73,

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> > Russell Nilson

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> > Master Mariner, 3000 Tons, all oceans

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> > --- On Tue, 3/22/11, w5rkl <w5rkl@> wrote:

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> > From: w5rkl <w5rkl@>

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> > Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

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> > To: TS-520_820_530_830@yahoogroups.com

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> > Date: Tuesday, March 22, 2011, 2:18 PM

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> > Russell,

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> > I assume you are talk about Q16 on the IF board. If so what voltage do you see on IF board plug IF3 pin 11?

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> > 73s

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> > Mike

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> > W5RKL

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> > --- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@> wrote:

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> > > Mike,

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> > I feel it most likely that Q-16 is bad, shorted between the Base and the Emitter.Ãƒâ€šÃ‚Â Does this seem reasonable to you?

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> > > 73,

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> > > Russell Nilson

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> > > Master Mariner, 3000 Tons, all oceans

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> > > --- On Mon, 3/21/11, w5rkl <w5rkl@> wrote:

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> > > From: w5rkl <w5rkl@>

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> > > Subject: [TS-520_820_530_830] Re: TS-820 IF board and 3.3vdc bias voltage

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> > > To: TS-520_820_530_830@yahoogroups.com

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> > > Date: Monday, March 21, 2011, 5:32 PM

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> > > That is assuming the receiver's COIL Unit is adjusted for maximum input signal. One can peak the RF drive with the DRIVE control and still have a lower peak receive signal if the receiver's COIL PACK adjustments are not adjusted properly.

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> > > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:

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> > > > The point that gives you the maximum RF output is the proper position. You will also get maximum receiver noise at that point.

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> > > > Bob Macklin

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> > > > Seattle, Wa.

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> > > > "Real Radios Glow In The Dark"

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> > > > ----- Original Message -----

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> > > > From: Russell Nilson

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> > > > To: TS-520_820_530_830@yahoogroups.com

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> > > > Sent: Monday, March 21, 2011 1:49 PM

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> > > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > > That checks out, but it is hard to tell the difference in receive with the Drive control set at 1200, 1300, and 1400. I guess if you average at 1300, that does correspond to the maximum output of the transmitter section.

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> > > > Russell Nilson

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> > > > Master Mariner, 3000 Tons, all oceans

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> > > > --- On Mon, 3/21/11, Bob Macklin <macklinbob@> wrote:

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> > > > From: Bob Macklin <macklinbob@>

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> > > > Subject: Re: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > > To: TS-520_820_530_830@yahoogroups.com

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> > > > Date: Monday, March 21, 2011, 2:21 PM

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> > > > When the DRIVE control is peaked you will get the most antenna noise in the receiver.

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> > > > With the unit in RECIEVE try moving the DRIVE control from CCW to CW. Where the noise peaks is where you are in the proper position.

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> > > > "Real Radios Glow In The Dark"

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> > > > ----- Original Message -----

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> > > > From: ae5uu

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> > > > To: TS-520_820_530_830@yahoogroups.com

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> > > > Sent: Monday, March 21, 2011 12:11 PM

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> > > > Subject: [TS-520_820_530_830] TS-820 IF board and 3.3vdc bias voltage

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> > > > I am having difficulties with the 3.3vdc bias and with the IF board. I may have other problems as well, but I have started here:

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> > > > Problem summary, Kenwood TS-820

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> > > > External Symptoms

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> > > > 1) On tune up, with the MODE switch set to TUN and the Meter switch set to ALC, there is no Drive reading registered. And yet, it is easy to peak or eliminate output power with the Drive control, when done later in the tuning process.

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> > > > 2) RF GAIN control reduction does not reduce audio output and does not move the Meter CW.

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> > > > 3) The radio tunes up for full output, after blindly maximizing output with the Drive control at the end of the tune up process. Receive, on the other hand, seems noisier than before I started having this problem, and the ATT has effect, but seeming less than before.

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> > > > 4) Everything else works correctly.

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> > > > Internal Symptoms

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> > > > 1) While the 9.0vdc bus sets properly with VR-4 on the AF-AVR board, the 3.3vdc bus reads 5.92vdc, no matter the position of VR-1 on the same board. When the IF board is unplugged, the voltage at other access points in the radio reads 3.3vdc correctly.

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> > > > 2) Assuming, perhaps rightly or wrongly, I have a problem on the IF board at Q-15 or Q-16, I focused on this area.

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> > > 3) The voltages at Q-15 are correct. The voltages at Q-16 are not, and some neighboring component pieces are not performing properly.

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> > > > 4) Q-16 reads as follows: Base -5.86 It should read -3.0

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> > > > Emitter -5.85 It is within spec.

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> > > > Collector 6.54 It should read 0.0

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> > > > Maybe I am picking the voltages of the schematic incorrectly, they are rather small, but I don't think so.

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> > > > I have some rather strange readings along the voltage path for both Q-16 Base and Q-16 collector.

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> > > > The Q-16 Base path is Q-16B.....-5.85.....R-146.....-5.85.....D-18.....-5.85.....D-19....-5.85.....-6vdc bus. It should read -3.0vdc.

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> > > > So it is as if Q-16B is connected directly to the -6vdc source (reads -5.85vdc in my radio)

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> > > > The other path for Q-16B runs Q-16B.....-5.85.....R-146.....-5.85.....L-11.....-5.85.....AGO at the pin

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> > > > Q-16 Collector path is Q-16C.....6.56.....R-145.....6.56......AGC at the pin. At the transistor it should read 0.0vdc.

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> > > > The other path is Q-16C.....6.54.....C-142.....-6.56.....Q-16 Base (which should read -3.0vdc)

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> > > > The resistors mentioned above test within spec. I have not been able to test the diodes D-18 and D-19, but the voltage which passes through them both,wired in series, reads -5.85, which cannot be correct.

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> > > > So in summary, perhaps Q-16 Base and Emitter are shorted. And the Q-16 Collector reading of 6.54vdc isn't right.

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> > > > If anyone is intimately familiar with the TS-820 IF board, I sure would appreciate your help

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[Non-text portions of this message have been removed]

30368. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 03:49:23 UTC
From: Adam Liette
Topic: 30358 Message: 30368

Ok. I have proper idling current, and the bandswitch shaft is correct, if I understand you correctly. (Flat spots on the Long shaft to front panel are vertical, while the section inside the cage are horizontal.

The cap I'm working with would be the one from the relay to the Pi-network. Unless what I had wasn't a high enough voltage rating, upon testing it immediately cooked.....

Would that point to another issue?
-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 02:45:02
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

You did not mention this so I will assume there is 60ma of final idling current with either the microphone PTT button pressed or the SEND switch flipped UP, showing on the IP meter with the MODE switch set to USB or LSB.

When you peak the drive then switch the meter to IP and adjust the PLATE control for a dip in IP current, do you see any dip at any position of the PLATE control?

I tend to agree with Gordon, it's quite possible the band switch shaft is out of sync with the final amplifier switch assembly S22.

Switch assembly S22 is the ONLY switch wafers inside the final amplifier enclosure. The shaft of S22 has "2" flat spots.

With the 530 front panel facing you, set the band switch to "10". with the final amplifier cover removed, look at the rear of the plastic coupler that connects the long band switch shaft to the plastic couple. You should see a flat spot on S22 shaft vertically on the "right". The other flat spots on S22's shaft should be on the "bottom". If this is NOT how S22's shaft is resting with the band switch set to 10, I agree with Gordon, switch S22's shaft is "out of sync" with the band switch. I just repaired a 530 that had this exact problem.

You have to look closely at the shaft of S22, the coupler may be slide too far onto the S22's shaft to see the flat spot.

The set screws are "1.5mm" hex wrench. If you only have U.S. hex wrenches they will NOT fit the set screws. Most hardware stores sell a complete long shaft set of metric hex wrenches for $6 or so.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Sounds like the band switch output part is clocked wrong.
> Which caps are you referring to?
> I know the coil has a .01 across it for the relay
>
> Gordon
> N6WK
>
> On 3/22/2011 6:32 PM, n8ydadam wrote:
> >
> >
> > Hello, all. I just picked up a 530 that a friend had given up on. He'd
> > lost output (has drive, but no final), and it's the same with new tubes.
> >
> > While looking over the rig, I noticed that a cap has crumbled to bits
> > on the antenna relay board, under the final cage. Could this be the
> > problem?
> >
> > The next question.... Anyone know the value of the caps on the relay
> > board, or have info on it? It's a ceramic disc, but I believe there
> > are two there. My service manual shows a pinout for the relay, but I'm
> > unable to find the rest in the schematics.
> >
> > Thanks!
> > Adam, N8YD
> >
> >
>

[Non-text portions of this message have been removed]

30369. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 04:22:44 UTC
From: n6wk@n6wk.com
Topic: 30358 Message: 30369

The TS-530 and TS-830 should have, with the band switch in the 10 mhz (not 10 meters) position, one set of flats facing right (out) and the other set facing DOWN.
The output band switch has two flats that MUST match the set screws. it can be easily put 18-0 degrees out !!

Gordon
N6WK

On 3/22/2011 8:49 PM, Adam Liette wrote:
>
>
> Ok. I have proper idling current, and the bandswitch shaft is correct,
> if I understand you correctly. (Flat spots on the Long shaft to front
> panel are vertical, while the section inside the cage are horizontal.
>
> The cap I'm working with would be the one from the relay to the
> Pi-network. Unless what I had wasn't a high enough voltage rating,
> upon testing it immediately cooked.....
>
> Would that point to another issue?
> -----Original Message-----
> From: "w5rkl" <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Wed, 23 Mar 2011 02:45:02
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: TS-530 Project...
>
> You did not mention this so I will assume there is 60ma of final
> idling current with either the microphone PTT button pressed or the
> SEND switch flipped UP, showing on the IP meter with the MODE switch
> set to USB or LSB.
>
> When you peak the drive then switch the meter to IP and adjust the
> PLATE control for a dip in IP current, do you see any dip at any
> position of the PLATE control?
>
> I tend to agree with Gordon, it's quite possible the band switch shaft
> is out of sync with the final amplifier switch assembly S22.
>
> Switch assembly S22 is the ONLY switch wafers inside the final

> amplifier enclosure. The shaft of S22 has "2" flat spots.
>
> With the 530 front panel facing you, set the band switch to "10". with
> the final amplifier cover removed, look at the rear of the plastic
> coupler that connects the long band switch shaft to the plastic
> couple. You should see a flat spot on S22 shaft vertically on the
> "right". The other flat spots on S22's shaft should be on the
> "bottom". If this is NOT how S22's shaft is resting with the band
> switch set to 10, I agree with Gordon, switch S22's shaft is "out of
> sync" with the band switch. I just repaired a 530 that had this exact
> problem.
>
> You have to look closely at the shaft of S22, the coupler may be slide
> too far onto the S22's shaft to see the flat spot.
>
> The set screws are "1.5mm" hex wrench. If you only have U.S. hex
> wrenches they will NOT fit the set screws. Most hardware stores sell a
> complete long shaft set of metric hex wrenches for $6 or so.
>
> 73s
> Mike
> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Sounds like the band switch output part is clocked wrong.
> > Which caps are you referring to?
> > I know the coil has a .01 across it for the relay
> >
> > Gordon
> > N6WK
> >
> > On 3/22/2011 6:32 PM, n8ydadam wrote:
> > >
> > >
> > > Hello, all. I just picked up a 530 that a friend had given up on.
> He'd
> > > lost output (has drive, but no final), and it's the same with new
> tubes.
> > >
> > > While looking over the rig, I noticed that a cap has crumbled to bits
> > > on the antenna relay board, under the final cage. Could this be the
> > > problem?
> > >
> > > The next question.... Anyone know the value of the caps on the relay
> > > board, or have info on it? It's a ceramic disc, but I believe there

> > > are two there. My service manual shows a pinout for the relay, but
> I'm
> > > unable to find the rest in the schematics.
> > >
> > > Thanks!
> > > Adam, N8YD
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> [Non-text portions of this message have been removed]
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30370. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 11:17:33 UTC
From: Charles Coffee
Topic: 30349 Message: 30370

Alan;
Since you are new to the hobby, in addition to the info from others,
normally on
7MHz or the 3.8-4.0 MHz bands you will need to be in LSB for voice. 14MHz
and
up frequencies you should normally be in USB mode for voice. Of course, CW
mode
is the same for all of the bands.

For listening, a standard dipole is probably your best bet for now, and even
one
set up for 7.0MHz will work fine for receive with the Kenwood hybrids on the
bands.

Good luck and enjoy.

Chuck, KJ4GU

On Tue, Mar 22, 2011 at 4:28 PM, gerryattrick69 <anicholson@...>wrote:

> Its probably no big deal to most here but last night I tried my 530S in
> receive mode - I am not licenced yet so tx is out for a while. I only had a
> basic plain wire antenna so did not expect to hear anything..and I was not
> disappointed!.Actually I did hear something very faint I think on 40m.
> although it was probably wishful thinking on my part. I have had no guidance
> with using a ham radio and am taking it slowly using the manual and learning
> as I go.
>
> However it was great to actually hear the rig making sounds as I had fears
> that it may well have been DOA.
>
> Now my enthusiasm has been given a shot and tonight I plan to try sorting
> the antenna bit more and see if I can pick up something more interesting.
>
> I might even try the TS-520S that I also have - its in much nicer condition
> but again I have never had it switched on yet.
>
> I'll need to get a decent set of headphones sooner rather than later if I
> am not going to upset the XYL...any suggestions welcome.
>
> 73
>
> Alan
> ZL....
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[Non-text portions of this message have been removed]

30371. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 12:54:33 UTC
From: w5rkl
Topic: 30358 Message: 30371

Adam,

No, it appears you did not understand what I said. I never said or even referred to "the flat spots on the long shaft to the front panel". I said the flat spots on the shaft of the only switch assembly (S22) "inside the final amplifier enclosure".

I also said to set the band switch to "10". The front panel band switch markings are from lower right, clockwise (CW), 1.5, 3.5, 7, 10, 14, 18, 21, 24.5, 28, and 29. When I said set the band switch to "10" I meant exactly that, "10" on the front panel. If anyone assumes I meant "10 meters" then that assumption would be wrong.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
>
>
> Ok. I have proper idling current, and the bandswitch shaft is correct, if I understand you correctly. (Flat spots on the Long shaft to front panel are vertical, while the section inside the cage are horizontal.
>
> The cap I'm working with would be the one from the relay to the Pi-network. Unless what I had wasn't a high enough voltage rating, upon testing it immediately cooked.....
>
> Would that point to another issue?
> -----Original Message-----
> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 02:45:02
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530 Project...
>
> You did not mention this so I will assume there is 60ma of final idling current with either the microphone PTT button pressed or the SEND switch flipped UP, showing on the IP meter with the MODE switch set to USB or LSB.
>
> When you peak the drive then switch the meter to IP and adjust the PLATE control for a dip in IP current, do you see any dip at any position of the PLATE control?
>
> I tend to agree with Gordon, it's quite possible the band switch shaft is out of sync with the final amplifier switch assembly S22.
>
> Switch assembly S22 is the ONLY switch wafers inside the final amplifier enclosure. The shaft of S22 has "2" flat spots.

>
> With the 530 front panel facing you, set the band switch to "10". with the final amplifier cover removed, look at the rear of the plastic coupler that connects the long band switch shaft to the plastic couple. You should see a flat spot on S22 shaft vertically on the "right". The other flat spots on S22's shaft should be on the "bottom". If this is NOT how S22's shaft is resting with the band switch set to 10, I agree with Gordon, switch S22's shaft is "out of sync" with the band switch. I just repaired a 530 that had this exact problem.
>
> You have to look closely at the shaft of S22, the coupler may be slide too far onto the S22's shaft to see the flat spot.
>
> The set screws are "1.5mm" hex wrench. If you only have U.S. hex wrenches they will NOT fit the set screws. Most hardware stores sell a complete long shaft set of metric hex wrenches for $6 or so.
>
> 73s
> Mike
> W5RKL
>
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>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > Sounds like the band switch output part is clocked wrong.
> > Which caps are you referring to?
> > I know the coil has a .01 across it for the relay
> >
> > Gordon
> > N6WK
> >
> > On 3/22/2011 6:32 PM, n8ydadam wrote:
> > >
> > >
> > > Hello, all. I just picked up a 530 that a friend had given up on. He'd
> > > lost output (has drive, but no final), and it's the same with new tubes.
> > >
> > > While looking over the rig, I noticed that a cap has crumbled to bits
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> > > problem?
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> > > The next question.... Anyone know the value of the caps on the relay
> > > board, or have info on it? It's a ceramic disc, but I believe there
> > > are two there. My service manual shows a pinout for the relay, but I'm
> > > unable to find the rest in the schematics.
> > >
> > > Thanks!
> > > Adam, N8YD
> > >

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> [Non-text portions of this message have been removed]
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30372. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 15:03:01 UTC
From: w5rkl
Topic: 30358 Message: 30372

I said

"I also said to set the band switch to "10". The front panel band switch markings are from lower right..."

I meant "Lower left", typo, meaning rotating clockwise from lower left to lower right.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Adam,
>
> No, it appears you did not understand what I said. I never said or even referred to "the flat spots on the long shaft to the front panel". I said the flat spots on the shaft of the only switch assembly (S22) "inside the final amplifier enclosure".
>
> I also said to set the band switch to "10". The front panel band switch markings are from lower right, clockwise (CW), 1.5, 3.5, 7, 10, 14, 18, 21, 24.5, 28, and 29. When I said set the band switch to "10" I meant exactly that, "10" on the front panel. If anyone assumes I meant "10 meters" then that assumption would be wrong.
>
> 73s
> Mike
> W5RKL
>
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>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@> wrote:
> >
> >
> > Ok. I have proper idling current, and the bandswitch shaft is correct, if I understand you correctly. (Flat spots on the Long shaft to front panel are vertical, while the section inside the cage are horizontal.
> >
> > The cap I'm working with would be the one from the relay to the Pi-network. Unless what I had wasn't a high enough voltage rating, upon testing it immediately cooked.....
> >
> > Would that point to another issue?
> > -----Original Message-----
> > From: "w5rkl" <w5rkl@>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Wed, 23 Mar 2011 02:45:02

> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> >
> > You did not mention this so I will assume there is 60ma of final idling current with either the microphone PTT button pressed or the SEND switch flipped UP, showing on the IP meter with the MODE switch set to USB or LSB.
> >
> > When you peak the drive then switch the meter to IP and adjust the PLATE control for a dip in IP current, do you see any dip at any position of the PLATE control?
> >
> > I tend to agree with Gordon, it's quite possible the band switch shaft is out of sync with the final amplifier switch assembly S22.
> >
> > Switch assembly S22 is the ONLY switch wafers inside the final amplifier enclosure. The shaft of S22 has "2" flat spots.
> >
> > With the 530 front panel facing you, set the band switch to "10". with the final amplifier cover removed, look at the rear of the plastic coupler that connects the long band switch shaft to the plastic couple. You should see a flat spot on S22 shaft vertically on the "right". The other flat spots on S22's shaft should be on the "bottom". If this is NOT how S22's shaft is resting with the band switch set to 10, I agree with Gordon, switch S22's shaft is "out of sync" with the band switch. I just repaired a 530 that had this exact problem.
> >
> > You have to look closely at the shaft of S22, the coupler may be slide too far onto the S22's shaft to see the flat spot.
> >
> > The set screws are "1.5mm" hex wrench. If you only have U.S. hex wrenches they will NOT fit the set screws. Most hardware stores sell a complete long shaft set of metric hex wrenches for $6 or so.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >
> > > Sounds like the band switch output part is clocked wrong.
> > > Which caps are you referring to?
> > > I know the coil has a .01 across it for the relay
> > >
> > > Gordon
> > > N6WK
> > >
> > > On 3/22/2011 6:32 PM, n8ydadam wrote:
> > > >

> > > >
> > > > Hello, all. I just picked up a 530 that a friend had given up on. He'd
> > > > lost output (has drive, but no final), and it's the same with new tubes.
> > > >
> > > > While looking over the rig, I noticed that a cap has crumbled to bits
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> > > > The next question.... Anyone know the value of the caps on the relay
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> > > > unable to find the rest in the schematics.
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> > > > Thanks!
> > > > Adam, N8YD
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> >
> > [Non-text portions of this message have been removed]
> >
>

30373. Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 19:19:37 UTC
From: Alan Nicholson (ADHB)
Topic: 30349 Message: 30373

Thanks Chuck (and the others who responded with some words of advice)

I worked out the LSB/USB issue last night and managed to pick up a couple more very faint transmissions but I will definitely have to do something about the antenna. It's a bit trial and error at the moment until I can get someone to sit with me and explain some of the features on the radio

We are in a fairly deep depression where we live and even cellphone coverage is marginal so I suspect the hookup wire is just not up to the job. I'll try a longer and higher version at the weekend when I have more time on my hands.

I'll do a bit of a Google tonight and see what I can find to help me build a halfway decent antenna - thanks for suggesting I try a 7.0MHz.

If I am still struggling with receiving a decent signal I'll take the rig across to the beach at Easter where reception should be much better.

Lots to learn but I think I am going to enjoy it. Now all I want is a Kenwood TM255E to cover VHF and I "should" be happy for a while....maybe judging by the gear in some shacks

73

Alan

##
Scanned by MailMarshal - Marshal8e6's comprehensive email content security solution.
Download a free evaluation of MailMarshal at www.marshal.com
##

30374. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 20:23:02 UTC
From: Adam Liette
Topic: 30358 Message: 30374

To try and simplify things... I see two little black nubs on part of the band switch inside the final cage. These appear to be what hold the switch's position. When set for 10MHz/30m where should these be in relation to the front panel?

-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 15:03:01
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

I said

"I also said to set the band switch to "10". The front panel band switch markings are from lower right..."

I meant "Lower left", typo, meaning rotating clockwise from lower left to lower right.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Adam,
>
> No, it appears you did not understand what I said. I never said or even referred to "the flat spots on the long shaft to the front panel". I said the flat spots on the shaft of the only switch assembly (S22) "inside the final amplifier enclosure".
>
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> 73s
> Mike
> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@> wrote:
> >
> >

> > Ok. I have proper idling current, and the bandswitch shaft is correct, if I understand you correctly. (Flat spots on the Long shaft to front panel are vertical, while the section inside the cage are horizontal.
> >
> > The cap I'm working with would be the one from the relay to the Pi-network. Unless what I had wasn't a high enough voltage rating, upon testing it immediately cooked.....
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> >
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> > 73s
> > Mike
> > W5RKL
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> >

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> > >
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> > > Which caps are you referring to?
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> > > Gordon
> > > N6WK
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> > > On 3/22/2011 6:32 PM, n8ydadam wrote:
> > > >
> > > >
> > > > Hello, all. I just picked up a 530 that a friend had given up on. He'd
> > > > lost output (has drive, but no final), and it's the same with new tubes.
> > > >
> > > > While looking over the rig, I noticed that a cap has crumbled to bits
> > > > on the antenna relay board, under the final cage. Could this be the
> > > > problem?
> > > >
> > > > The next question.... Anyone know the value of the caps on the relay
> > > > board, or have info on it? It's a ceramic disc, but I believe there
> > > > are two there. My service manual shows a pinout for the relay, but I'm
> > > > unable to find the rest in the schematics.
> > > >
> > > > Thanks!
> > > > Adam, N8YD
> > > >
> > > >
> > > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
>

[Non-text portions of this message have been removed]

30375. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S Message to Alan Nicholson

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 19:53:00 UTC
From: Alan
Topic: 30375 Message: 30375

Hi Alan.

Which part of NZ are you located?

regards

Alan
ZL4FM
----- Original Message -----
From: "Alan Nicholson (ADHB)" <anicholson@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, March 24, 2011 8:19 AM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

> Thanks Chuck (and the others who responded with some words of advice)
>
> I worked out the LSB/USB issue last night and managed to pick up a couple
> more very faint transmissions but I will definitely have to do something
> about the antenna. It's a bit trial and error at the moment until I can
> get someone to sit with me and explain some of the features on the radio
>
> We are in a fairly deep depression where we live and even cellphone
> coverage is marginal so I suspect the hookup wire is just not up to the
> job. I'll try a longer and higher version at the weekend when I have more
> time on my hands.
>
> I'll do a bit of a Google tonight and see what I can find to help me build
> a halfway decent antenna - thanks for suggesting I try a 7.0MHz.
>
> If I am still struggling with receiving a decent signal I'll take the rig
> across to the beach at Easter where reception should be much better.
>
> Lots to learn but I think I am going to enjoy it. Now all I want is a
> Kenwood TM255E to cover VHF and I "should" be happy for a while....maybe
> judging by the gear in some shacks
>
> 73
>
> Alan
>
> ##
> Scanned by MailMarshal - Marshal8e6's comprehensive email content security
> solution.
> Download a free evaluation of MailMarshal at www.marshal.com
> ##

>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3523 - Release Date: 03/22/11
19:34:00

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3523 - Release Date: 03/22/11 19:34:00

[Non-text portions of this message have been removed]

30376. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 20:39:34 UTC
From: jeffrey lord
Topic: 30349 Message: 30376

Allan,

the more wire and the higher you can get it above the ground, the better.

With wire antennas the 2 basics are length and height.

As i said try DX ZONE and you will find literilly hundreds of antennas to make.

Jeff
VK4FNRS

----- Original Message ----
From: Alan Nicholson (ADHB) <anicholson@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, 23 March, 2011 11:19:37 AM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Thanks Chuck (and the others who responded with some words of advice)

I worked out the LSB/USB issue last night and managed to pick up a couple more
very faint transmissions but I will definitely have to do something about the
antenna. It's a bit trial and error at the moment until I can get someone to sit
with me and explain some of the features on the radio

We are in a fairly deep depression where we live and even cellphone coverage is
marginal so I suspect the hookup wire is just not up to the job. I'll try a
longer and higher version at the weekend when I have more time on my hands.

I'll do a bit of a Google tonight and see what I can find to help me build a
halfway decent antenna - thanks for suggesting I try a 7.0MHz.

If I am still struggling with receiving a decent signal I'll take the rig across
to the beach at Easter where reception should be much better.

Lots to learn but I think I am going to enjoy it. Now all I want is a Kenwood
TM255E to cover VHF and I "should" be happy for a while....maybe judging by the
gear in some shacks

73

Alan

##

Scanned by MailMarshal - Marshal8e6's comprehensive email content security
solution.

Download a free evaluation of MailMarshal at www.marshal.com
##

Yahoo! Groups Links

30377. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 21:56:15 UTC
From: w5rkl
Topic: 30358 Message: 30377

Adam,

Before doing any visual inspections and attempting to correct any out of sync band switch alignment, remove ALL power cable, ensure ALL power supplies are discharged, and take your time. If you attempt to do any of the following in a hurry you can make matters worse than they already are. If you do not understand any of this, ask questions. Do NOT assume anything. Switch "S22" is "inside" the final amplifier and it is the ONLY switch assembly inside the final amplifier.

Remove the top and bottom covers then remove the top cover off of the final amplifier enclosure.

Remove final tube V1, the front 6146. You cannot see the coupler and S22 switch assembly inside the final amplifier clearly without removing V1.

Look, from the right side of the final amplifier enclosure, through the space occupied by V1. You will see the mounting bracket that supports S22. You will also see the plastic coupler that connects the long band switch shaft to S22 switch assembly inside the final amplifier enclosure.

There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear set screws that hold the plastic coupler to S22's shaft and "2" front set screws that hold the plastic coupler to the long shaft to the front panel knob.

Look closely as S22 shaft, the portion that slides into and is held to the plastic coupler by the 2 "rear" 1.5mm small dark colored set screws. You should see 2 flat spots on S22's shaft.

With the band switch knob set so the band switch knob points "exactly" at "10" on the front panel, one of the flat spots on S22 shaft MUST be exactly "vertical" on the right. The other flat spot on S22 shaft MUST be exactly "horizontal" on the "bottom", again with the front panel band switch knob pointing "exactly" at "10" on the front panel! This is the "correct" alignment of the entire band switch system/assembly. Any thing different than this means the band switch system/assembly is "out of sync"!

The band switch "will" rotate "continuously 360 degrees" in either direction! There are "NO" stops to the band switch!

You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to remove/loosen the coupler set screws with any tool but a 1.5mm hex tool. If you do you will permanently damage the set screws.

Do NOT loosen the plastic couplers' front set screws on the long band switch shaft unless you are replacing a broken coupler!! If the coupler is NOT cracked or broken and you have found S22 is out of sync with the rest of the band switch system/assembly, then the only set screws you need to loosen are the 2 "rear" set screws.

Do NOT over tighten the set screws! Over tighten set screws will "break" or cause the coupler to "crack" at the set screws! If this occurs you will have to replace the coupler! You do NOT have to replace the coupler simply because it's old. As the old saying goes, "if it ain't broke don't fix it!!!".

The end result, when this alignment is done properly, the front panel band switch knob pointing exactly at 10 with results in S22's shaft flat spots be exactly vertical on the right side and exactly horizontal on the bottom. Any other S22 shaft flat spot alignment with the band switch knob pointing to exactly 10 on the front panel will be wrong!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
>
>
> To try and simplify things... I see two little black nubs on part of the band switch inside the final cage. These appear to be what hold the switch's position. When set for 10MHz/30m where should these be in relation to the front panel?
>

30378. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 22:52:02 UTC
From: Adam Liette
Topic: 30358 Message: 30378

Thanks for some clarification, Mike. No problem on unplugging the set. I hope to be able to use it if I get it figured out. ;-)

I wasn't quite sure on the orientation of the shaft for the band switch, but now I think I got it.

Do you happen to know the voltage ratings for the caps on the antenna relay board? I have a recap kit, but it's only electrolytics.

Adam

-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 21:56:15
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

Adam,

Before doing any visual inspections and attempting to correct any out of sync band switch alignment, remove ALL power cable, ensure ALL power supplies are discharged, and take your time. If you attempt to do any of the following in a hurry you can make matters worse than they already are. If you do not understand any of this, ask questions. Do NOT assume anything. Switch "S22" is "inside" the final amplifier and it is the ONLY switch assembly inside the final amplifier.

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There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear set screws that hold the plastic coupler to S22's shaft and "2" front set screws that hold the plastic coupler to the long shaft to the front panel knob.

Look closely as S22 shaft, the portion that slides into and is held to the plastic coupler by the 2 "rear" 1.5mm small dark colored set screws. You should see 2 flat spots on S22's shaft.

With the band switch knob set so the band switch knob points "exactly" at "10" on the front panel, one of the flat spots on S22 shaft MUST be exactly "vertical" on the right. The other flat spot on S22 shaft MUST be exactly "horizontal" on the "bottom", again with the front panel band switch knob pointing "exactly" at "10" on the front panel! This is the "correct" alignment of the entire band switch system/assembly. Any thing different than this means the band switch system/assembly is "out of sync"!

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Do NOT over tighten the set screws! Over tighten set screws will "break" or cause the coupler to "crack" at the set screws! If this occurs you will have to replace the coupler! You do NOT have to replace the coupler simply because it's old. As the old saying goes, "if it ain't broke don't fix it!!!".

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73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
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>
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[Non-text portions of this message have been removed]

30379. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 23:38:24 UTC
From: w5rkl
Topic: 30358 Message: 30379

Ceramic disc capacitors "typically" do not fail nor do they change values over time. That does not mean ceramic disc capacitors NEVER fail.

There are times when disc capacitors do fail such as pulling hard/abusing the leads that can lead to the internal capacitor plates to separate from the leads. Capacitors that are subjected to a voltage that exceeds the safe working voltage of the capacitor can be physically damaged, they explode.

C12, the 100pf ceramic disc capacitor, has a voltage rating of "500VDC". This capacitor is listed in the 530 parts list on page 21 under "TS-530 General" listing.

C25, the capacitor across the relay coil terminals, should be at least 25VDC. When coil voltage is removed, switching from transmit to receive, the magnetic field that surrounds the coil collapses. As the magnetic field collapses, the magnetic lines cut the windings of the relay coil, resulting in an "induced" voltage that can be much higher than the 12VDC source voltage. Diode D10 on the AF unit provides some protection against this collapsing magnetic field induced voltage.

Again, unless there is physical damage and/or the capacitors' working voltage has been exceeded causing destruction of the capacitor, most ceramic disc capacitors do not fail over time.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
>
>
> Thanks for some clarification, Mike. No problem on unplugging the set. I hope to be able to use it if I get it figured out. ;-)
>
> I wasn't quite sure on the orientation of the shaft for the band switch, but now I think I got it.
>
> Do you happen to know the voltage ratings for the caps on the antenna relay board? I have a recap kit, but it's only electrolytics.
>
> Adam
>
> -----Original Message-----
> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 21:56:15
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com

> Subject: [TS-520_820_530_830] Re: TS-530 Project...
>
> Adam,
>
> Before doing any visual inspections and attempting to correct any out of sync band switch alignment, remove ALL power cable, ensure ALL power supplies are discharged, and take your time. If you attempt to do any of the following in a hurry you can make matters worse than they already are. If you do not understand any of this, ask questions. Do NOT assume anything. Switch "S22" is "inside" the final amplifier and it is the ONLY switch assembly inside the final amplifier.
>
> Remove the top and bottom covers then remove the top cover off of the final amplifier enclosure.
>
> Remove final tube V1, the front 6146. You cannot see the coupler and S22 switch assembly inside the final amplifier clearly without removing V1.
>
> Look, from the right side of the final amplifier enclosure, through the space occupied by V1. You will see the mounting bracket that supports S22. You will also see the plastic coupler that connects the long band switch shaft to S22 switch assembly inside the final amplifier enclosure.
>
> There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear set screws that hold the plastic coupler to S22's shaft and "2" front set screws that hold the plastic coupler to the long shaft to the front panel knob.
>
> Look closely as S22 shaft, the portion that slides into and is held to the plastic coupler by the 2 "rear" 1.5mm small dark colored set screws. You should see 2 flat spots on S22's shaft.
>
> With the band switch knob set so the band switch knob points "exactly" at "10" on the front panel, one of the flat spots on S22 shaft MUST be exactly "vertical" on the right. The other flat spot on S22 shaft MUST be exactly "horizontal" on the "bottom", again with the front panel band switch knob pointing "exactly" at "10" on the front panel! This is the "correct" alignment of the entire band switch system/assembly. Any thing different than this means the band switch system/assembly is "out of sync"!
>
> The band switch "will" rotate "continuously 360 degrees" in either direction! There are "NO" stops to the band switch!
>
> You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to remove/loosen the coupler set screws with any tool but a 1.5mm hex tool. If you do you will permanently damage the set screws.
>
> Do NOT loosen the plastic couplers' front set screws on the long band switch shaft unless you are replacing a broken coupler!! If the coupler is NOT cracked or broken and you have found S22 is out of sync with the rest of the band switch system/assembly, then the only set screws you need to loosen are the 2 "rear" set screws.
>
> Do NOT over tighten the set screws! Over tighten set screws will "break" or cause the

coupler to "crack" at the set screws! If this occurs you will have to replace the coupler! You do NOT have to replace the coupler simply because it's old. As the old saying goes, "if it ain't broke don't fix it!!!".
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> The end result, when this alignment is done properly, the front panel band switch knob pointing exactly at 10 with results in S22's shaft flat spots be exactly vertical on the right side and exactly horizontal on the bottom. Any other S22 shaft flat spot alignment with the band switch knob pointing to exactly 10 on the front panel will be wrong!
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> W5RKL
>
>
>
>
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> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

30380. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 23:44:44 UTC
From: w5rkl
Topic: 30358 Message: 30380

You bought a "recap kit" of electrolytic capacitors. I assume you bought the kit to replace electrolytic capacitors.

What evidence or troubleshooting results do you have that says you should replace electrolytic capacitors?

Are you replacing the capacitors simply because they are old? If so then don't! Unless there is evidence whether physical damage to the capacitor or evidence through troubleshooting that indicates one or more of the electrolytic capacitors are failing, don't simply replace them because they are "old"!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...> wrote:
>
>
> Thanks for some clarification, Mike. No problem on unplugging the set. I hope to be able to use it if I get it figured out. ;-)
>
> I wasn't quite sure on the orientation of the shaft for the band switch, but now I think I got it.
>
> Do you happen to know the voltage ratings for the caps on the antenna relay board? I have a recap kit, but it's only electrolytics.
>
> Adam
>
> -----Original Message-----
> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 21:56:15
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530 Project...
>
> Adam,
>
> Before doing any visual inspections and attempting to correct any out of sync band switch alignment, remove ALL power cable, ensure ALL power supplies are discharged, and take your time. If you attempt to do any of the following in a hurry you can make matters worse than they already are. If you do not understand any of this, ask questions. Do NOT assume anything. Switch "S22" is "inside" the final amplifier and it is the ONLY switch assembly inside the final amplifier.
>

> Remove the top and bottom covers then remove the top cover off of the final amplifier enclosure.
>
> Remove final tube V1, the front 6146. You cannot see the coupler and S22 switch assembly inside the final amplifier clearly without removing V1.
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> Look, from the right side of the final amplifier enclosure, through the space occupied by V1. You will see the mounting bracket that supports S22. You will also see the plastic coupler that connects the long band switch shaft to S22 switch assembly inside the final amplifier enclosure.
>
> There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear set screws that hold the plastic coupler to S22's shaft and "2" front set screws that hold the plastic coupler to the long shaft to the front panel knob.
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> Do NOT loosen the plastic couplers' front set screws on the long band switch shaft unless you are replacing a broken coupler!! If the coupler is NOT cracked or broken and you have found S22 is out of sync with the rest of the band switch system/assembly, then the only set screws you need to loosen are the 2 "rear" set screws.
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> Mike

> W5RKL
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>
> [Non-text portions of this message have been removed]
>

30381. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 23:59:42 UTC
From: Adam Liette
Topic: 30358 Message: 30381

It was simply included in the deal. The caps on the relay board are the only ones I'm looking at right now.

-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 23:44:44
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

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W5RKL

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> -----Original Message-----
> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 21:56:15
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com

> Subject: [TS-520_820_530_830] Re: TS-530 Project...
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30382. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-23 23:59:41 UTC
From: kurt@kuhlroad.net
Topic: 30358 Message: 30382

I disagree. Any electrolytic older than 15 or so years old should be considered suspect and an accident waiting to happen. Especially if the device has been sitting around a few years. These caps may show no external evidence of crystalizing.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 23:44:44
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-530 Project...

You bought a "recap kit" of electrolytic capacitors. I assume you bought the kit to replace electrolytic capacitors.

What evidence or troubleshooting results do you have that says you should replace electrolytic capacitors?

Are you replacing the capacitors simply because they are old? If so then don't! Unless there is evidence whether physical damage to the capacitor or evidence through troubleshooting that indicates one or more of the electrolytic capacitors are failing, don't simply replace them because they are "old"!

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> From: "w5rkl" <w5rkl@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Wed, 23 Mar 2011 21:56:15

> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: TS-530 Project...
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30383. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 01:23:23 UTC
From: Sandy
Topic: 30358 Message: 30383

I believe it's called /Preventive Maintenance :-)

73

n9pgo - Sandy
/

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30384. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 01:45:04 UTC
From: Adam Liette
Topic: 30358 Message: 30384

This is true. I may trace back from the section I'm on and check the electrolytics and diodes Mike had mentioned.

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From: Sandy <n9pgo@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 23 Mar 2011 20:23:23
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...

I believe it's called /Preventive Maintenance :-)

73

n9pgo - Sandy
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30385. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 03:02:19 UTC
From: Terry Wagoner
Topic: 30358 Message: 30385

The subject of "pre-emptive" replacement of electrolytic capacitors has been the subject of debate on this forum and others. Aluminum electrolytics that are in installed/operating equipment are constantly being "reformed" when powered on and off. Measurement of Capacitance, DC Leakage Current (DCL), and ESR confirms this. If you have a rig that hasnt been powered on in 5 plus years then "soft starting" with a variac or an in series light bulb is probably warranted. One of the risks involved with pre-emptive cap change out is the lifting of circuit board foils. With a 30+ year old rig how often would you wholesale change out the caps? On a 15 year cycle? When you buy an "NOS" capacitor kit off ebay you do not know where these caps are relative to shelf life. Do you reform these caps before installing them? Also, with the new downsized components I am still on the fence when it comes to reliability. They pack an awful lot of ufds in a very small can.

I suggest a better approach would be to purchase or build an inexpensive ESR test set. These testers can test the capacitor in circuit. Capacitors at or near end of life can still have capacitance values within the nameplate +/- tolerances. Therefore an LCR meter isnt the best test. DC leakage current and ESR are better tests. Hams who repair and service rigs depend on test equipment and using an ESR meter to test suspect and/or key electrolytics (power supply filter caps?) would be more in line with how an electronic technician would operate. Just my 2 cents. Terry K9TW

From: Adam Liette <aliette@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, March 23, 2011 9:45:04 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...

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> > From: "w5rkl" <w5rkl@...>
> > Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Date: Wed, 23 Mar 2011 21:56:15
> > To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> >
> > Adam,
> >
> > Before doing any visual inspections and attempting to correct any
> out of sync band switch alignment, remove ALL power cable, ensure ALL
> power supplies are discharged, and take your time. If you attempt to
> do any of the following in a hurry you can make matters worse than
> they already are. If you do not understand any of this, ask questions.
> Do NOT assume anything. Switch "S22" is "inside" the final amplifier
> and it is the ONLY switch assembly inside the final amplifier.
> >
> > Remove the top and bottom covers then remove the top cover off of
> the final amplifier enclosure.
> >
> > Remove final tube V1, the front 6146. You cannot see the coupler and
> S22 switch assembly inside the final amplifier clearly without
> removing V1.
> >
> > Look, from the right side of the final amplifier enclosure, through
> the space occupied by V1. You will see the mounting bracket that
> supports S22. You will also see the plastic coupler that connects the
> long band switch shaft to S22 switch assembly inside the final
> amplifier enclosure.
> >
> > There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear
> set screws that hold the plastic coupler to S22's shaft and "2" front
> set screws that hold the plastic coupler to the long shaft to the
> front panel knob.
> >
> > Look closely as S22 shaft, the portion that slides into and is held
> to the plastic coupler by the 2 "rear" 1.5mm small dark colored set
> screws. You should see 2 flat spots on S22's shaft.
> >
> > With the band switch knob set so the band switch knob points
> "exactly" at "10" on the front panel, one of the flat spots on S22
> shaft MUST be exactly "vertical" on the right. The other flat spot on
> S22 shaft MUST be exactly "horizontal" on the "bottom", again with the
> front panel band switch knob pointing "exactly" at "10" on the front
> panel! This is the "correct" alignment of the entire band switch

> system/assembly. Any thing different than this means the band switch
> system/assembly is "out of sync"!
> >
> > The band switch "will" rotate "continuously 360 degrees" in either
> direction! There are "NO" stops to the band switch!
> >
> > You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to
> remove/loosen the coupler set screws with any tool but a 1.5mm hex
> tool. If you do you will permanently damage the set screws.
> >
> > Do NOT loosen the plastic couplers' front set screws on the long
> band switch shaft unless you are replacing a broken coupler!! If the
> coupler is NOT cracked or broken and you have found S22 is out of sync
> with the rest of the band switch system/assembly, then the only set
> screws you need to loosen are the 2 "rear" set screws.
> >
> > Do NOT over tighten the set screws! Over tighten set screws will
> "break" or cause the coupler to "crack" at the set screws! If this
> occurs you will have to replace the coupler! You do NOT have to
> replace the coupler simply because it's old. As the old saying goes,
> "if it ain't broke don't fix it!!!".
> >
> > The end result, when this alignment is done properly, the front
> panel band switch knob pointing exactly at 10 with results in S22's
> shaft flat spots be exactly vertical on the right side and exactly
> horizontal on the bottom. Any other S22 shaft flat spot alignment with
> the band switch knob pointing to exactly 10 on the front panel will be
> wrong!
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@...m
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Adam Liette"
> <aliette@> wrote:
> > >
> > >
> > > To try and simplify things... I see two little black nubs on part
> of the band switch inside the final cage. These appear to be what hold
> the switch's position. When set for 10MHz/30m where should these be in
> relation to the front panel?
> > >
> >

> >
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> > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

30386. Low out put power on TS 520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 05:08:04 UTC
From: Ravi
Topic: 30386 Message: 30386

Hi Friends,

My TS 520SE's out put power is low.It gives 50W on 14 MHz,around 35 W on 7,3.6 & 1.8 and even low on 21,28 Mhz.when I measured with Comet CMX-1 power meter.

This question would have answered many times before but I've discovered this low power only recently as I did not had a meter to check earlier.

Does it needs re-alignment?
Are the finals reached to it's end of life?
Is the drive power is low? (will it be ok if I plug a new 12BY7A and see)

Grateful for any suggestions

73's de 4S6RAV (Ravi)

30387. Re: [TS-520_820_530_830] Low out put power on TS 520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 09:47:41 UTC
From: MICHAEL MIHAILOVIC
Topic: 30386 Message: 30387

Hi Ravi.
It could be all the issues u suggested i would check to see how much rf drive is coming out of the 12by7 driver tube also check to see what level of signal rf is coming into 12by7 if u have plenty coming into 12by7 then faulut lies elsewhwre see what's coming out of 12by7 should be lots maore than coming in go to grids of 6146's make sure u dont touch the ht see what u have there.if all okay check voltages on the screens and on anodes of 6146's be careful.
If all okay as per manual do u have service manual if not email me vk2oz@... i will give info u need to do this we will leave it at that fer now Ravi hope this helps u i have a ts520se aas well gud rig simple to fix.
73's
Mike
VK2OZ.

From: Ravi <mindover2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 24 March, 2011 4:08:04 PM
Subject: [TS-520_820_530_830] Low out put power on TS 520SE

Hi Friends,

My TS 520SE's out put power is low.It gives 50W on 14 MHz,around 35 W on 7,3.6 & 1.8 and even low on 21,28 Mhz.when I measured with Comet CMX-1 power meter.

This question would have answered many times before but I've discovered this low power only recently as I did not had a meter to check earlier.

Does it needs re-alignment?
Are the finals reached to it's end of life?
Is the drive power is low? (will it be ok if I plug a new 12BY7A and see)

Grateful for any suggestions

73's de 4S6RAV (Ravi)

[Non-text portions of this message have been removed]

30388. Re: Low out put power on TS 520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 13:29:09 UTC
From: w5rkl
Topic: 30386 Message: 30388

Hello Ravi,

Your problem could be caused by alignment, especially since power output is not consistent on all bands. Since power output is not consistent on all bands I do not believe your problem is caused by bad tubes. Tubes will not cause the power output differences you are experiencing on different bands.

Check the PC board and ground mounting screws to ensure the mounting screws are tight.

You might clean the band switch and Mode switch wafers with contact cleaner first. Use only enough cleaner to do the job then use canned air to remove any/all cleaner residue.

If cleaning the band switch and Mode switch wafers does not fix your power output problem then I recommend performing the COIL PACK alignment.

You can download the complete TS-520S service manual which contains the COIL PACK alignment at Gordon's website

www.n6wk.com/kenwood/

Gordon's TS-520SE service manual does not contain the alignment section but his TS-520S service manual does. The TS-520S COIL PACK alignment is the same for the TS-520SE. Therefore, you can use the TS-520S service manuals' COIL PACK alignment steps for your TS-520SE.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi Friends,
>
> My TS 520SE's out put power is low.It gives 50W on 14 MHz,around 35 W on 7,3.6 & 1.8 and even low on 21,28 Mhz.when I measured with Comet CMX-1 power meter.
>
> This question would have answered many times before but I've discovered this low power only recently as I did not had a meter to check earlier.
>
> Does it needs re-alignment?
> Are the finals reached to it's end of life?
> Is the drive power is low? (will it be ok if I plug a new 12BY7A and see)
>
> Grateful for any suggestions
>
> 73's de 4S6RAV (Ravi)
>

30389. Re: [TS-520_820_530_830] Re: Low out put power on TS 520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 15:23:31 UTC
From: ravi sumith
Topic: 30386 Message: 30389

Thanks Mike (w5rkl) and vk2oz for your suggestions.
Yes I have the service manual.Finals could have been replaced by the previous owner but no records with me They are S2001A's.
When I got this rig about 3 years ago,mike (w5rkl) suggested to clean band and mode switches,which I did.
I have not done an alignment coz she is ok with TX/RX until recently I've observed this low out put.That;s why I thought that she needs re-alignment.

73's
Ravi

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 18:59:09
Subject: [TS-520_820_530_830] Re: Low out put power on TS 520SE

Hello Ravi,

Your problem could be caused by alignment, especially since power output is not consistent on all bands. Since power output is not consistent on all bands I do not believe your problem is caused by bad tubes. Tubes will not cause the power output differences you are experiencing on different bands.

Check the PC board and ground mounting screws to ensure the mounting screws are tight.

You might clean the band switch and Mode switch wafers with contact cleaner first. Use only enough cleaner to do the job then use canned air to remove any/all cleaner residue.

If cleaning the band switch and Mode switch wafers does not fix your power output problem then I recommend performing the COIL PACK alignment.

You can download the complete TS-520S service manual which contains the COIL PACK alignment at Gordon's website

www.n6wk.com/kenwood/

Gordon's TS-520SE service manual does not contain the alignment section but his TS-520S service manual does. The TS-520S COIL PACK alignment is the same for the TS-520SE. Therefore, you can use the TS-520S service manuals' COIL PACK alignment steps for your TS-520SE.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi Friends,
>
> My TS 520SE's out put power is low.It gives 50W on 14 MHz,around 35 W on 7,3.6
>& 1.8 and even low on 21,28 Mhz.when I measured with Comet CMX-1 power meter.
>
> This question would have answered many times before but I've discovered this
>low power only recently as I did not had a meter to check earlier.
>
> Does it needs re-alignment?
> Are the finals reached to it's end of life?
> Is the drive power is low? (will it be ok if I plug a new 12BY7A and see)
>
> Grateful for any suggestions
>
> 73's de 4S6RAV (Ravi)
>

[Non-text portions of this message have been removed]

30390. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 16:23:53 UTC
From: Kurt Cathcart, KR2C
Topic: 30358 Message: 30390

All good points. There are certain electrolytic caps that I would swap without hesitation. Such as power supply caps. If these aren't formed properly, are leaking, not to spec, or crystalized, then a failure of these caps can do a lot of damage as opposed the the standard bypass/circuit electrolytic caps that just leak out onto the circuit board.

On 3/23/2011 11:02 PM, Terry Wagoner wrote:
>
> The subject of "pre-emptive" replacement of electrolytic capacitors
> has been the
> subject of debate on this forum and others. Aluminum electrolytics
> that are in
> installed/operating equipment are constantly being "reformed" when
> powered on
> and off. Measurement of Capacitance, DC Leakage Current (DCL), and ESR
> confirms
> this. If you have a rig that hasnt been powered on in 5 plus years
> then "soft
> starting" with a variac or an in series light bulb is probably
> warranted. One of
> the risks involved with pre-emptive cap change out is the lifting of
> circuit
> board foils. With a 30+ year old rig how often would you wholesale
> change out
> the caps? On a 15 year cycle? When you buy an "NOS" capacitor kit off
> ebay you
> do not know where these caps are relative to shelf life. Do you reform
> these
> caps before installing them? Also, with the new downsized components I
> am still
> on the fence when it comes to reliability. They pack an awful lot of
> ufds in a
> very small can.
>
> I suggest a better approach would be to purchase or build an
> inexpensive ESR
> test set. These testers can test the capacitor in circuit. Capacitors
> at or near
> end of life can still have capacitance values within the nameplate +/-
> tolerances. Therefore an LCR meter isnt the best test. DC leakage
> current and
> ESR are better tests. Hams who repair and service rigs depend on test
> equipment
> and using an ESR meter to test suspect and/or key electrolytics (power
> supply

> filter caps?) would be more in line with how an electronic technician
> would
> operate. Just my 2 cents. Terry K9TW
>
> _____
> From: Adam Liette <aliette@...
> <mailto:aliette%40centurylink.net>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wed, March 23, 2011 9:45:04 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...
>
> This is true. I may trace back from the section I'm on and check the
> electrolytics and diodes Mike had mentioned.
>
> -----Original Message-----
> From: Sandy <n9pgo@... <mailto:n9pgo%40att.net>>
> Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Wed, 23 Mar 2011 20:23:23
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...
>
> I believe it's called /Preventive Maintenance :-)
>
> 73
>
> n9pgo - Sandy
> /
>
> On 3/23/2011 6:59 PM, kurt@... <mailto:kurt%40kuhlroad.net>
> wrote:
> >
> > I disagree. Any electrolytic older than 15 or so years old should be
> > considered suspect and an accident waiting to happen. Especially if
> > the device has been sitting around a few years. These caps may show no
> > external evidence of crystalizing.
> > Sent from my Verizon Wireless BlackBerry
> >
> > -----Original Message-----
> > From: "w5rkl" <w5rkl@... <mailto:w5rkl%40yahoo.com>
> <mailto:w5rkl%40yahoo.com>>
> > Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Date: Wed, 23 Mar 2011 23:44:44
> > To: <TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> >
> > You bought a "recap kit" of electrolytic capacitors. I assume you
> > bought the kit to replace electrolytic capacitors.
> >
> > What evidence or troubleshooting results do you have that says you
> > should replace electrolytic capacitors?
> >
> > Are you replacing the capacitors simply because they are old? If so
> > then don't! Unless there is evidence whether physical damage to the
> > capacitor or evidence through troubleshooting that indicates one or
> > more of the electrolytic capacitors are failing, don't simply replace
> > them because they are "old"!
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Adam Liette"
> > <aliette@...> wrote:
> > >
> > >
> > > Thanks for some clarification, Mike. No problem on unplugging the
> > set. I hope to be able to use it if I get it figured out. ;-)
> > >
> > > I wasn't quite sure on the orientation of the shaft for the band
> > switch, but now I think I got it.
> > >
> > > Do you happen to know the voltage ratings for the caps on the
> > antenna relay board? I have a recap kit, but it's only electrolytics.
> > >
> > > Adam
> > >
> > > -----Original Message-----
> > > From: "w5rkl" <w5rkl@...>
> > > Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Date: Wed, 23 Mar 2011 21:56:15
> > > To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>>

> > > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> > >
> > > Adam,
> > >
> > > Before doing any visual inspections and attempting to correct any
> > out of sync band switch alignment, remove ALL power cable, ensure ALL
> > power supplies are discharged, and take your time. If you attempt to
> > do any of the following in a hurry you can make matters worse than
> > they already are. If you do not understand any of this, ask questions.
> > Do NOT assume anything. Switch "S22" is "inside" the final amplifier
> > and it is the ONLY switch assembly inside the final amplifier.
> > >
> > > Remove the top and bottom covers then remove the top cover off of
> > the final amplifier enclosure.
> > >
> > > Remove final tube V1, the front 6146. You cannot see the coupler and
> > S22 switch assembly inside the final amplifier clearly without
> > removing V1.
> > >
> > > Look, from the right side of the final amplifier enclosure, through
> > the space occupied by V1. You will see the mounting bracket that
> > supports S22. You will also see the plastic coupler that connects the
> > long band switch shaft to S22 switch assembly inside the final
> > amplifier enclosure.
> > >
> > > There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear
> > set screws that hold the plastic coupler to S22's shaft and "2" front
> > set screws that hold the plastic coupler to the long shaft to the
> > front panel knob.
> > >
> > > Look closely as S22 shaft, the portion that slides into and is held
> > to the plastic coupler by the 2 "rear" 1.5mm small dark colored set
> > screws. You should see 2 flat spots on S22's shaft.
> > >
> > > With the band switch knob set so the band switch knob points
> > "exactly" at "10" on the front panel, one of the flat spots on S22
> > shaft MUST be exactly "vertical" on the right. The other flat spot on
> > S22 shaft MUST be exactly "horizontal" on the "bottom", again with the
> > front panel band switch knob pointing "exactly" at "10" on the front
> > panel! This is the "correct" alignment of the entire band switch
> > system/assembly. Any thing different than this means the band switch
> > system/assembly is "out of sync"!
> > >
> > > The band switch "will" rotate "continuously 360 degrees" in either
> > direction! There are "NO" stops to the band switch!
> > >
> > > You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to

> > remove/loosen the coupler set screws with any tool but a 1.5mm hex
> > tool. If you do you will permanently damage the set screws.
> > >
> > > Do NOT loosen the plastic couplers' front set screws on the long
> > band switch shaft unless you are replacing a broken coupler!! If the
> > coupler is NOT cracked or broken and you have found S22 is out of sync
> > with the rest of the band switch system/assembly, then the only set
> > screws you need to loosen are the 2 "rear" set screws.
> > >
> > > Do NOT over tighten the set screws! Over tighten set screws will
> > "break" or cause the coupler to "crack" at the set screws! If this
> > occurs you will have to replace the coupler! You do NOT have to
> > replace the coupler simply because it's old. As the old saying goes,
> > "if it ain't broke don't fix it!!!".
> > >
> > > The end result, when this alignment is done properly, the front
> > panel band switch knob pointing exactly at 10 with results in S22's
> > shaft flat spots be exactly vertical on the right side and exactly
> > horizontal on the bottom. Any other S22 shaft flat spot alignment with
> > the band switch knob pointing to exactly 10 on the front panel will be
> > wrong!
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Adam Liette"
> > <aliette@> wrote:
> > > >
> > > >
> > > > To try and simplify things... I see two little black nubs on part
> > of the band switch inside the final cage. These appear to be what hold
> > the switch's position. When set for 10MHz/30m where should these be in
> > relation to the front panel?
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> > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

30391. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 17:52:51 UTC
From: wrench101
Topic: 30202 Message: 30391

Ok, back at it! I've cleaned the connectors on all boards. Checked R15, which I recently replaced. All seems good. Voltages on drive tube are within specs and switching when put into transmit. Seems like there is no drive going to the finals. Idle current at 60ma.

Thanks
Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Morning Steve,
>
> I just wanted to ensure the bias voltage was switching like it should between receive and transmit and vice verse.
>
> You can check the driver bias voltage at the RF Unit plug 8 pin 1 and ground. In receive the voltage should be approximately -51VDC and in transmit +.4VDC.
>
> Make sure the RF ATT push button on the front panel is not pressed. The receive signals flows through the RF ATTN push button switch. The CAL (Marker) signal does not flow through the RF ATTN switch. The PLL Unit's "MKR" (CAL) signal flows directly to the RF Unit through plug 4 pin 2.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Hi again Mike! I beleive I checked the voltages at the driver tube, but I'm going to check again just in case. I beleive everything there was ok. The s-meter works correctly with rf gain adjustment. I'll clean the connectors once I get my first cup of java in me!
> >
> > 73
> > Steve
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Steve,
> > >
> > > Have you taken voltage readings on the driver tube to see if there is any change in voltages between receive and transmit with the new tubes? That's where I would start.
> > >
> > > It's quite possible the relay on the IF Unit may be causing the problem. Clean the

plugs on the IF and AF units, one at a time, with contact cleaner, making sure the plugs seat flush on the boards.
> > >
> > > When you rotate the RF gain control CCW, in receive, does the meter rise and eventually peg full scale to the right? This is what it should do. Rotating the RF gain control CW should cause the meter to fall back to zero. Again, that's what it should do.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.
> > > >
> > > > Thanks again
> > > > 73
> > > > Steve
> > > >
> > >
>

30392. ts520_820_530_830@yahoogroups.com

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 18:24:46 UTC
From: CRAIG
Topic: 30392 Message: 30392

unsubscribe

30393. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 18:25:40 UTC
From: Terry Wagoner
Topic: 30358 Message: 30393

Kurt --I agree visual inspection is part of any refurb/repair and if it reveals ruptured seals, leaking electrolyte, swelled cans etc. then of course change them out. I was just talking about wholesale change out of all electrolytics when you buy a used rig or on some periodicity as a means to pre-empt failure. If one of the main power supply caps fails of course change out both, but would you recommend changing them out on some interval just as a precaution even if loaded Plate Voltage is within spec? I guess you could do that as they are relatively easy to change out. I would not do it. Terry

---
From: "Kurt Cathcart, KR2C" <kurt@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 24, 2011 12:23:53 PM
Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...

All good points. There are certain electrolytic caps that I would swap without hesitation. Such as power supply caps. If these aren't formed properly, are leaking, not to spec, or crystalized, then a failure of these caps can do a lot of damage as opposed the the standard bypass/circuit electrolytic caps that just leak out onto the circuit board.

On 3/23/2011 11:02 PM, Terry Wagoner wrote:
>
> The subject of "pre-emptive" replacement of electrolytic capacitors
> has been the
> subject of debate on this forum and others. Aluminum electrolytics
> that are in
> installed/operating equipment are constantly being "reformed" when
> powered on
> and off. Measurement of Capacitance, DC Leakage Current (DCL), and ESR
> confirms
> this. If you have a rig that hasnt been powered on in 5 plus years
> then "soft
> starting" with a variac or an in series light bulb is probably
> warranted. One of
> the risks involved with pre-emptive cap change out is the lifting of
> circuit
> board foils. With a 30+ year old rig how often would you wholesale
> change out
> the caps? On a 15 year cycle? When you buy an "NOS" capacitor kit off
> ebay you
> do not know where these caps are relative to shelf life. Do you reform
> these
> caps before installing them? Also, with the new downsized components I
> am still
> on the fence when it comes to reliability. They pack an awful lot of

> ufds in a
> very small can.
>
> I suggest a better approach would be to purchase or build an
> inexpensive ESR
> test set. These testers can test the capacitor in circuit. Capacitors
> at or near
> end of life can still have capacitance values within the nameplate +/-
> tolerances. Therefore an LCR meter isnt the best test. DC leakage
> current and
> ESR are better tests. Hams who repair and service rigs depend on test
> equipment
> and using an ESR meter to test suspect and/or key electrolytics (power
> supply
> filter caps?) would be more in line with how an electronic technician
> would
> operate. Just my 2 cents. Terry K9TW
>
> _____
> From: Adam Liette <aliette@...
> <mailto:aliette%40centurylink.net>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Wed, March 23, 2011 9:45:04 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...
>
> This is true. I may trace back from the section I'm on and check the
> electrolytics and diodes Mike had mentioned.
>
> -----Original Message-----
> From: Sandy <n9pgo@... <mailto:n9pgo%40att.net>>
> Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Wed, 23 Mar 2011 20:23:23
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] Re: TS-530 Project...
>
> I believe it's called /Preventive Maintenance :-)
>
> 73
>
> n9pgo - Sandy
> /
>
> On 3/23/2011 6:59 PM, kurt@... <mailto:kurt%40kuhlroad.net>
> wrote:
> >

> > I disagree. Any electrolytic older than 15 or so years old should be
> > considered suspect and an accident waiting to happen. Especially if
> > the device has been sitting around a few years. These caps may show no
> > external evidence of crystalizing.
> > Sent from my Verizon Wireless BlackBerry
> >
> > -----Original Message-----
> > From: "w5rkl" <w5rkl@... <mailto:w5rkl%40yahoo.com>
> <mailto:w5rkl%40yahoo.com>>
> > Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Date: Wed, 23 Mar 2011 23:44:44
> > To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> >
> > You bought a "recap kit" of electrolytic capacitors. I assume you
> > bought the kit to replace electrolytic capacitors.
> >
> > What evidence or troubleshooting results do you have that says you
> > should replace electrolytic capacitors?
> >
> > Are you replacing the capacitors simply because they are old? If so
> > then don't! Unless there is evidence whether physical damage to the
> > capacitor or evidence through troubleshooting that indicates one or
> > more of the electrolytic capacitors are failing, don't simply replace
> > them because they are "old"!
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Adam Liette"
> > <aliette@...> wrote:
> > >
> > >
> > > Thanks for some clarification, Mike. No problem on unplugging the
> > set. I hope to be able to use it if I get it figured out. ;-)
> > >
> > > I wasn't quite sure on the orientation of the shaft for the band
> > switch, but now I think I got it.
> > >

> > > Do you happen to know the voltage ratings for the caps on the
> > antenna relay board? I have a recap kit, but it's only electrolytics.
> > >
> > > Adam
> > >
> > > -----Original Message-----
> > > From: "w5rkl" <w5rkl@...>
> > > Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Date: Wed, 23 Mar 2011 21:56:15
> > > To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> > >
> > > Adam,
> > >
> > > Before doing any visual inspections and attempting to correct any
> > out of sync band switch alignment, remove ALL power cable, ensure ALL
> > power supplies are discharged, and take your time. If you attempt to
> > do any of the following in a hurry you can make matters worse than
> > they already are. If you do not understand any of this, ask questions.
> > Do NOT assume anything. Switch "S22" is "inside" the final amplifier
> > and it is the ONLY switch assembly inside the final amplifier.
> > >
> > > Remove the top and bottom covers then remove the top cover off of
> > the final amplifier enclosure.
> > >
> > > Remove final tube V1, the front 6146. You cannot see the coupler and
> > S22 switch assembly inside the final amplifier clearly without
> > removing V1.
> > >
> > > Look, from the right side of the final amplifier enclosure, through
> > the space occupied by V1. You will see the mounting bracket that
> > supports S22. You will also see the plastic coupler that connects the
> > long band switch shaft to S22 switch assembly inside the final
> > amplifier enclosure.
> > >
> > > There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear
> > set screws that hold the plastic coupler to S22's shaft and "2" front
> > set screws that hold the plastic coupler to the long shaft to the
> > front panel knob.
> > >
> > > Look closely as S22 shaft, the portion that slides into and is held
> > to the plastic coupler by the 2 "rear" 1.5mm small dark colored set
> > screws. You should see 2 flat spots on S22's shaft.

> > >
> > > With the band switch knob set so the band switch knob points
> > "exactly" at "10" on the front panel, one of the flat spots on S22
> > shaft MUST be exactly "vertical" on the right. The other flat spot on
> > S22 shaft MUST be exactly "horizontal" on the "bottom", again with the
> > front panel band switch knob pointing "exactly" at "10" on the front
> > panel! This is the "correct" alignment of the entire band switch
> > system/assembly. Any thing different than this means the band switch
> > system/assembly is "out of sync"!
> > >
> > > The band switch "will" rotate "continuously 360 degrees" in either
> > direction! There are "NO" stops to the band switch!
> > >
> > > You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to
> > remove/loosen the coupler set screws with any tool but a 1.5mm hex
> > tool. If you do you will permanently damage the set screws.
> > >
> > > Do NOT loosen the plastic couplers' front set screws on the long
> > band switch shaft unless you are replacing a broken coupler!! If the
> > coupler is NOT cracked or broken and you have found S22 is out of sync
> > with the rest of the band switch system/assembly, then the only set
> > screws you need to loosen are the 2 "rear" set screws.
> > >
> > > Do NOT over tighten the set screws! Over tighten set screws will
> > "break" or cause the coupler to "crack" at the set screws! If this
> > occurs you will have to replace the coupler! You do NOT have to
> > replace the coupler simply because it's old. As the old saying goes,
> > "if it ain't broke don't fix it!!!".
> > >
> > > The end result, when this alignment is done properly, the front
> > panel band switch knob pointing exactly at 10 with results in S22's
> > shaft flat spots be exactly vertical on the right side and exactly
> > horizontal on the bottom. Any other S22 shaft flat spot alignment with
> > the band switch knob pointing to exactly 10 on the front panel will be
> > wrong!
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Adam Liette"
> > <aliette@> wrote:

> > > >
> > > >
> > > > To try and simplify things... I see two little black nubs on part
> > of the band switch inside the final cage. These appear to be what hold
> > the switch's position. When set for 10MHz/30m where should these be in
> > relation to the front panel?
> > > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >
> >
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> > [Non-text portions of this message have been removed]
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>

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[Non-text portions of this message have been removed]

30394. Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 19:54:51 UTC
From: Alan Nicholson (ADHB)
Topic: 30349 Message: 30394

Hi Alan
ZL4FM,

I am in Birkenhead, North Shore,Auckland

Jeff
VK4FNRS...re better antenna

I'm on to it. I am heading out to get some more wire today and have downloaded some info from the net (DXZone and others). I think I now have enough info to attempt my first antenna...another milestone perhaps?

I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Eventually I conceded defeat and have decided that, until I have a half way decent antenna I will be chasing my tail. Problem is I don't have the time in the evening after work to sort anything so it has to wait until weekends.

One thing I have noticed is that the Main Tuning dial(s) on the 530S seem to be binding on each other to the extent that they both turn at the same rate. Obviously the rig needs some TLC as it is no where near as pristine as the 520S. I think I might try the 520S over the weekend if I can sort the antenna first

73

Alan Nicholson
0212779900

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30395. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 20:55:36 UTC
From: meyer@bevcomm.net
Topic: 30349 Message: 30395

Gentlemen,
I have a 530s and the RF gain should always be fully clockwise when listening. S. meter is correct in this mode. turn it back if a station is close and overloading the front end.

Hi Alan
ZL4FM,

I am in Birkenhead, North Shore,Auckland

Jeff
VK4FNRS...re better antenna

I'm on to it. I am heading out to get some more wire today and have downloaded some info from the net (DXZone and others). I think I now have enough info to attempt my first antenna...another milestone perhaps?

I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Eventually I conceded defeat and have decided that, until I have a half way decent antenna I will be chasing my tail. Problem is I don't have the time in the evening after work to sort anything so it has to wait until weekends.

One thing I have noticed is that the Main Tuning dial(s) on the 530S seem to be binding on each other to the extent that they both turn at the same rate. Obviously the rig needs some TLC as it is no where near as pristine as the 520S. I think I might try the 520S over the weekend if I can sort the antenna first

73

Alan Nicholson
0212779900

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##

[Non-text portions of this message have been removed]

30396. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 21:20:26 UTC
From: Jim S
Topic: 30349 Message: 30396

Your remarks are confusing me, concerning the RF gain and the "calibration". Are you expecting the S-meter to hover at some pre-determined value ? You know, don't you that you turn the RF gain all the way clockwise, and the S-meter should rise and fall with the strength of the signals coming in.

If you turn it counter-clockwise, the S-meter probably will go up scale (that is the way most radios work, anyway) and the signals will get weaker and weaker, because you are forcing your radio to act as if a very strong signal is coming in, when in fact there is nothing much there!

Also, remember that these types of radios are meant to work with a 50 ohm antenna. That means, a resonant dipole working through 50 ohm coax cable, such as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is no wonder that you are not getting much performance out of the receiver.

If you insist on using a random piece of wire, please get an "antenna tuner" which will match the impedance of the random wire (probably very high) to the radio (50 ohms, as stated)

Please clarify if that is how you are trying to operate the rig.

73, Jim AG3Y

----- Original Message -----
From: Alan Nicholson (ADHB)
To: 'TS-520_820_530_830@yahoogroups.com'
Sent: Thursday, March 24, 2011 3:54 PM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Hi Alan
ZL4FM,

I am in Birkenhead, North Shore,Auckland

Jeff
VK4FNRS...re better antenna

I'm on to it. I am heading out to get some more wire today and have downloaded some info from the net (DXZone and others). I think I now have enough info to attempt my first antenna...another milestone perhaps?

I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Eventually I conceded defeat and have decided that, until I have a half way decent antenna I will be chasing my tail. Problem is I don't have the time in the evening after work to sort anything so it has to wait until weekends.

One thing I have noticed is that the Main Tuning dial(s) on the 530S seem to be binding on each other to the extent that they both turn at the same rate. Obviously the rig needs some TLC as it is no where near as pristine as the 520S. I think I might try the 520S over the weekend if I can sort the antenna first

73

Alan Nicholson
0212779900

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=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17180)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17180)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

30397. a reply to Alan from Alan

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 21:16:16 UTC
From: Alan
Topic: 30397 Message: 30397

Hi,

Have you approached your local Ham club?

I am in Dunedin,
The first HF set I ever used was a 530S and we have one at our local club in the shack. So I am really familiar with it.

If you have any questions you can email me of the list if you want

alan@...

save annoying everyone else.

Best of luck getting you license.

Alan
ZL4FM

----- Original Message -----
From: "Alan Nicholson (ADHB)" <anicholson@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, March 25, 2011 8:54 AM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

> Hi Alan
> ZL4FM,
>
> I am in Birkenhead, North Shore,Auckland
>
> Jeff
> VK4FNRS...re better antenna
>
> I'm on to it. I am heading out to get some more wire today and have
> downloaded some info from the net (DXZone and others). I think I now have
> enough info to attempt my first antenna...another milestone perhaps?
>
> I tried again last night using the procedures suggested by Terry (K9TW).
> All went well except that I had to turn the RF Gain to around the 6 mark
> to get the calibration to S9...any lower and it went right off the dial.
> Eventually I conceded defeat and have decided that, until I have a half
> way decent antenna I will be chasing my tail. Problem is I don't have the
> time in the evening after work to sort anything so it has to wait until
> weekends.
>
> One thing I have noticed is that the Main Tuning dial(s) on the 530S seem
> to be binding on each other to the extent that they both turn at the same

> rate. Obviously the rig needs some TLC as it is no where near as pristine
> as the 520S. I think I might try the 520S over the weekend if I can sort
> the antenna first
>
>
> 73
>
> Alan Nicholson
> 0212779900
>
> ##
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> solution.
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> ##
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3526 - Release Date: 03/24/11
07:34:00

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3526 - Release Date: 03/24/11 07:34:00

[Non-text portions of this message have been removed]

30398. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 21:39:37 UTC
From: Bob Macklin
Topic: 30349 Message: 30398

To start just use a long wire for receiving. It can be an open wire all the way from the xcvr to a tree outside somewhere.

I use #18 insulated stranded wire for this kind of antenna.

If you cannot receive with this kind of antenna a more complex antenna may not do you any good.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Alan Nicholson (ADHB)
To: 'TS-520_820_530_830@yahoogroups.com'
Sent: Thursday, March 24, 2011 12:54 PM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Hi Alan
ZL4FM,

I am in Birkenhead, North Shore,Auckland

Jeff
VK4FNRS...re better antenna

I'm on to it. I am heading out to get some more wire today and have downloaded some info from the net (DXZone and others). I think I now have enough info to attempt my first antenna...another milestone perhaps?

I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Eventually I conceded defeat and have decided that, until I have a half way decent antenna I will be chasing my tail. Problem is I don't have the time in the evening after work to sort anything so it has to wait until weekends.

One thing I have noticed is that the Main Tuning dial(s) on the 530S seem to be binding on each other to the extent that they both turn at the same rate. Obviously the rig needs some TLC as it is no where near as pristine as the 520S. I think I might try the 520S over the weekend if I can sort the antenna first

73

Alan Nicholson
0212779900

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[Non-text portions of this message have been removed]

30399. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 21:44:34 UTC
From: Bob Macklin
Topic: 30349 Message: 30399

Random long wires do work fine for receiving. They do not work for transmitting.

A good transmitting antenna needs to be resonant at all transmitting frequencies. This makes for multiple antennas or complex antennas.

Using a tuner with a real long wire will only give you marginal gains. Probably not worth the effort or expense.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 2:20 PM
Subject: Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Your remarks are confusing me, concerning the RF gain and the "calibration". Are you expecting the S-meter to hover at some pre-determined value ? You know, don't you that you turn the RF gain all the way clockwise, and the S-meter should rise and fall with the strength of the signals coming in.

If you turn it counter-clockwise, the S-meter probably will go up scale (that is the way most radios work, anyway) and the signals will get weaker and weaker, because you are forcing your radio to act as if a very strong signal is coming in, when in fact there is nothing much there!

Also, remember that these types of radios are meant to work with a 50 ohm antenna. That means, a resonant dipole working through 50 ohm coax cable, such as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is no wonder that you are not getting much performance out of the receiver.

If you insist on using a random piece of wire, please get an "antenna tuner" which will match the impedance of the random wire (probably very high) to the radio (50 ohms, as stated)

Please clarify if that is how you are trying to operate the rig.

73, Jim AG3Y

----- Original Message -----
From: Alan Nicholson (ADHB)
To: 'TS-520_820_530_830@yahoogroups.com'
Sent: Thursday, March 24, 2011 3:54 PM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Hi Alan
ZL4FM,

I am in Birkenhead, North Shore,Auckland

Jeff
VK4FNRS...re better antenna

I'm on to it. I am heading out to get some more wire today and have downloaded some info from the net (DXZone and others). I think I now have enough info to attempt my first antenna...another milestone perhaps?

I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Eventually I conceded defeat and have decided that, until I have a half way decent antenna I will be chasing my tail. Problem is I don't have the time in the evening after work to sort anything so it has to wait until weekends.

One thing I have noticed is that the Main Tuning dial(s) on the 530S seem to be binding on each other to the extent that they both turn at the same rate. Obviously the rig needs some TLC as it is no where near as pristine as the 520S. I think I might try the 520S over the weekend if I can sort the antenna first

73

Alan Nicholson
0212779900

##
Scanned by MailMarshal - Marshal8e6's comprehensive email content security solution.
Download a free evaluation of MailMarshal at www.marshal.com
##

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17180)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17180)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30400. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 22:19:09 UTC
From: John Davidson
Topic: 30349 Message: 30400

On those recievers it is normal tor the S-meter to respond that way.
 You normally run the RF gain at max, this setting , along with the AVC circuit allows weak signals to be heard and strong ones will reduce the IF gain and have a reasonable volume . Using the AF gain to control the overall volume is recommended.
Kenwood fan here.
JD

, March 24, 2011 3:54:51 PM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Hi Alan
ZL4FM,

Jeff
VK4FNRS...re better antenna
I tried again last night using the procedures suggested by Terry (K9TW). All went well except that I had to turn the RF Gain to around the 6 mark to get the calibration to S9...any lower and it went right off the dial. Alan Nicholson
0212779900

[Non-text portions of this message have been removed]

30401. Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 22:22:44 UTC
From: Doug Fitts
Topic: 30401 Message: 30401

I know this is a Yahoo list devoted to the Kenwood models 520, 530,820 but, I just have to ask one simple question. I may take delivery in a few days of a TS-440S HF rig, I have heard that there is a electronic issue with the display. It looses the normal frequency digital readout and reverts to a bunch of dots.

I was told there is either a mod to fix this problem or a parts kit [with instructions] to fix the problem. Anyone on the list aware of this and can steer me in the right direction, without me having to look for and join a TS-440S specialized Yahoo group?

73

Doug W7FDF
Vail Arizona U.S.A.

30402. Re: [TS-520_820_530_830] Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 23:31:15 UTC
From: Joseph Stiles
Topic: 30401 Message: 30402

Doug,

"GOOGLE" the following: Kenwood TS-440S with dots on the display. It's funny...I was look at a site yesterday about the same thing....right now I can not remember which one...but it was within the first 3 results. Good luck.....

73' joe wb7uqu

From: Doug Fitts <w7fdf@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 24, 2011 3:22:44 PM
Subject: [TS-520_820_530_830] Repair Kit: TS-440S

I know this is a Yahoo list devoted to the Kenwood models 520, 530,820 but, I just have to ask one simple question. I may take delivery in a few days of a TS-440S HF rig, I have heard that there is a electronic issue with the display. It looses the normal frequency digital readout and reverts to a bunch of dots.

I was told there is either a mod to fix this problem or a parts kit [with instructions] to fix the problem. Anyone on the list aware of this and can steer me in the right direction, without me having to look for and join a TS-440S specialized Yahoo group?

73

Doug W7FDF
Vail Arizona U.S.A.

[Non-text portions of this message have been removed]

30403. Re: [TS-520_820_530_830] Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-24 23:47:08 UTC
From: Bob Macklin
Topic: 30401 Message: 30403

Try the Kenwood TS-440 group:
http://groups.yahoo.com/group/TS-440/

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Doug Fitts
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 3:22 PM
Subject: [TS-520_820_530_830] Repair Kit: TS-440S

I know this is a Yahoo list devoted to the Kenwood models 520, 530,820 but, I just have to ask one simple question. I may take delivery in a few days of a TS-440S HF rig, I have heard that there is a electronic issue with the display. It looses the normal frequency digital readout and reverts to a bunch of dots.

I was told there is either a mod to fix this problem or a parts kit [with instructions] to fix the problem. Anyone on the list aware of this and can steer me in the right direction, without me having to look for and join a TS-440S specialized Yahoo group?

73

Doug W7FDF
Vail Arizona U.S.A.

[Non-text portions of this message have been removed]

30404. zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 00:52:32 UTC
From: kevin
Topic: 30404 Message: 30404

Can someone explain the concept of zero beat to a newbie? I am fooling with the crystal calibrator and don't fully understand what I am listening for. What I hear is a tone that goes from low to high in pitch as I go up the dial.
Kevin
KD0ILM

30405. Re: [TS-520_820_530_830] zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 00:58:27 UTC
From: Bob Macklin
Topic: 30404 Message: 30405

Tune it so it goes from high to low. When you can no longer hear it that's "ZERO BEAT". But tune SLOWLY!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: kevin
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 5:52 PM
Subject: [TS-520_820_530_830] zero beat

Can someone explain the concept of zero beat to a newbie? I am fooling with the crystal calibrator and don't fully understand what I am listening for. What I hear is a tone that goes from low to high in pitch as I go up the dial.
Kevin
KD0ILM

[Non-text portions of this message have been removed]

30406. Re: [TS-520_820_530_830] zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 03:17:11 UTC
From: Scott Litz
Topic: 30404 Message: 30406

kevin when the beat stops ,it is zero beat and dead on frequency , when the pitch stops that is the frequecy of the said crystal , have a great day scott KC0ROM

--- On Thu, 3/24/11, kevin <kmx888@...> wrote:

> From: kevin <kmx888@...>
> Subject: [TS-520_820_530_830] zero beat
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, March 24, 2011, 7:52 PM
> Can someone explain the concept of
> zero beat to a newbie? I am fooling with the crystal
> calibrator and don't fully understand what I am listening
> for. What I hear is a tone that goes from low to high in
> pitch as I go up the dial.
> Kevin
> KD0ILM
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

30407. Re: [TS-520_820_530_830] zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 03:35:28 UTC
From: Jim S
Topic: 30404 Message: 30407

If the crystal calibrator is a 100 Khz one, you should hear a tone every 100Khz up and down the band. If you are listening in SSB, the tone should go from a rather high pitch to a very low one, and then disappear. Depending on how much rejection of the other sideband your radio is capable of, you may hear the tone coming back up in pitch but at a very low volume, if you continue to rotate the dial in the same direction. Zero beat is that frequency below which the speaker cannot produce the tone. Actually with today's radios, almost anything below 300 hz is considered "zero beat".

If you were to zero beat the crystal calibrator with WWV, for instance, by tuning the trimmer cap across the crystal, you would hear a tone created by the calibrator frequency beating against WWV's carrier, and as you "tweak" the crystal's frequency, you should hear that tone get lower and lower, finally causing a pulsing of the carrier as the calibrator "beats" with it. If the levels are closely matched, you can actually watch the S meter pulse up and down, and the two carriers alternately reinforce and cancel one another out.

This is true zero beat.

Hope this helps. 73, Jim AG3Y

----- Original Message -----
From: kevin
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 8:52 PM
Subject: [TS-520_820_530_830] zero beat

Can someone explain the concept of zero beat to a newbie? I am fooling with the crystal calibrator and don't fully understand what I am listening for. What I hear is a tone that goes from low to high in pitch as I go up the dial.
Kevin
KD0ILM

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17180)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17190)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

30408. 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 04:01:54 UTC
From: yioutta_99
Topic: 30408 Message: 30408

Hi

Sorry if this subject has been hammered on before but...

I will be changing my 33 year old finals this weekend. It will be my first time. i have access to a scope but not an RF probe. I was thinking about looping a bit of coax to make a sniffer Antenna for the probe and seeing if i get a signal to neutralize that way. is this a good idea? Any other suggestions? I also will be able to bet another Kenwood to receive the 28 mhz signal and then tune for a dip. would this be better?

Thanks

steve

30409. Re: Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 12:22:09 UTC
From: Doug Fitts
Topic: 30401 Message: 30409

Hi Joe: I just Googled the info you provided and found at least three detailed articles of information to look over. Many thanks for the "tip".

Doug W7FDF

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Doug,
>
> "GOOGLE" the following: Kenwood TS-440S with dots on the display. It's funny...I was looking at a site yesterday about the same thing....right now I can not remember which one...but it was within the first 3 results. Good luck.....73' joe wb7uqu

30410. Re: Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 12:41:18 UTC
From: Doug Fitts
Topic: 30401 Message: 30410

'Morning Bob:
I just signed up on that website and awaiting approval for membership. I have at the moment three articles of technical information [from another source] on the issue with the TS-440S display. It appears that the problem stems from part of the PLL circuit and some kind of "glue" that was applied to a specific circuit during manufacturing of the radio.

This glue supposedly was installed to prevent vibration when the rig was operated in the mobile. However the one article states that over time the glue becomes electrically conductive and causes these strange dots in the digital display. Once I join the TS-440 Yahoo group I can then query other members to see what is the best approach to solving the problem.

The radio should be delivered sometime next week and the owner made me aware of the intermittent problem, which BTW only seems to happen randomly and not on every frequency or band. Nonetheless, thanks for your input on this.

Sometime in June the wife and I will be in your neck of the woods. Our daughter recently got tenured as an Associate Professor and teaches at a local college there in the Seattle area.

Doug W7FDF

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Try the Kenwood TS-440 group:
> http://groups.yahoo.com/group/TS-440/
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

30411. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 13:36:00 UTC
From: w5rkl
Topic: 30408 Message: 30411

Hello Steve,

The key is to adjust the neutralizing variable capacitor for the lowest indication on the RF Probe, scope, or separate receiver. If you follow the steps in the 520 manual you will do fine.

Just remember to set the rear panel SG switch to ON when the neutralizing adjustment is completed. If you forget this step you could easily think you did something wrong that broke your transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@...> wrote:
>
> Hi
>
> Sorry if this subject has been hammered on before but...
>
> I will be changing my 33 year old finals this weekend. It will be my first time. i have access to a scope but not an RF probe. I was thinking about looping a bit of coax to make a sniffer Antenna for the probe and seeing if i get a signal to neutralize that way. is this a good idea? Any other suggestions? I also will be able to bet another Kenwood to receive the 28 mhz signal and then tune for a dip. would this be better?
>
> Thanks
>
> steve
>

30412. Re: [TS-520_820_530_830] Re: Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 14:18:12 UTC
From: Bob Macklin
Topic: 30401 Message: 30412

Let me know how you make out with the TS-440. I'm thinking about buying one and this seems a common problem.

Maybe we can have lunch somewhere when you are here.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Doug Fitts
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 25, 2011 5:41 AM
Subject: [TS-520_820_530_830] Re: Repair Kit: TS-440S

'Morning Bob:
I just signed up on that website and awaiting approval for membership. I have at the moment three articles of technical information [from another source] on the issue with the TS-440S display. It appears that the problem stems from part of the PLL circuit and some kind of "glue" that was applied to a specific circuit during manufacturing of the radio.

This glue supposedly was installed to prevent vibration when the rig was operated in the mobile. However the one article states that over time the glue becomes electrically conductive and causes these strange dots in the digital display. Once I join the TS-440 Yahoo group I can then query other members to see what is the best approach to solving the problem.

The radio should be delivered sometime next week and the owner made me aware of the intermittent problem, which BTW only seems to happen randomly and not on every frequency or band. Nonetheless, thanks for your input on this.

Sometime in June the wife and I will be in your neck of the woods. Our daughter recently got tenured as an Associate Professor and teaches at a local college there in the Seattle area.

Doug W7FDF

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Try the Kenwood TS-440 group:
> http://groups.yahoo.com/group/TS-440/
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

[Non-text portions of this message have been removed]

30413. Re: zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 15:29:51 UTC
From: kd0fds
Topic: 30404 Message: 30413

KD0ILM:

Thanks for asking the question! I'm new to HF, Tubes and all this stuff too. Zero beat is something I didn't really understand until I started spinning knobs on my tech special TS-820s.

If you go spinnin' round the dial, you'll hear these squealing tones that drop in frequency if you spin the tuner the right direction. Right at the end of where you can hear the tone, you'll start hearing voices! Bam. Zero beat. You are now matching the frequency of the transmission.

KD0FDS
(total newbie)

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> Can someone explain the concept of zero beat to a newbie? I am fooling with the crystal calibrator and don't fully understand what I am listening for. What I hear is a tone that goes from low to high in pitch as I go up the dial.
> Kevin
> KD0ILM
>

30414. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 16:49:54 UTC
From: yioutta_99
Topic: 30408 Message: 30414

thanks mike

Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use on the scope? do you think that will work okay?

steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Steve,
>
> The key is to adjust the neutralizing variable capacitor for the lowest indication on the RF Probe, scope, or separate receiver. If you follow the steps in the 520 manual you will do fine.
>
> Just remember to set the rear panel SG switch to ON when the neutralizing adjustment is completed. If you forget this step you could easily think you did something wrong that broke your transmitter.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@> wrote:
> >
> > Hi
> >
> > Sorry if this subject has been hammered on before but...
> >
> > I will be changing my 33 year old finals this weekend. It will be my first time. i have access to a scope but not an RF probe. I was thinking about looping a bit of coax to make a sniffer Antenna for the probe and seeing if i get a signal to neutralize that way. is this a good idea? Any other suggestions? I also will be able to bet another Kenwood to receive the 28 mhz signal and then tune for a dip. would this be better?
> >
> > Thanks
> >
> > steve
> >
>

30415. Re: [TS-520_820_530_830] Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 17:31:29 UTC
From: Charles Coffee
Topic: 30408 Message: 30415

Steve;
I use a 10X probe on a 100MHz Tektronix scope with no problem right off the coaxial cable to the dummy load.
I connect a pin to the coaxial "T" pin and the scope probe ground to the outer shell of the "T" and take
the reading. If you set this up as per the manual, you should not have a problem - Remember that the
"SG" switch is off during this process.

Regards

Chuck, KJ4GU

On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@...> wrote:

> thanks mike
>
> Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> on the scope? do you think that will work okay?
>
> steve
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >
> > Hello Steve,
> >
> > The key is to adjust the neutralizing variable capacitor for the lowest
> indication on the RF Probe, scope, or separate receiver. If you follow the
> steps in the 520 manual you will do fine.
> >
> > Just remember to set the rear panel SG switch to ON when the neutralizing
> adjustment is completed. If you forget this step you could easily think you
> did something wrong that broke your transmitter.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> wrote:
> > >
> > > Hi
> > >
> > > Sorry if this subject has been hammered on before but...
> > >

> > > I will be changing my 33 year old finals this weekend. It will be my
> first time. i have access to a scope but not an RF probe. I was thinking
> about looping a bit of coax to make a sniffer Antenna for the probe and
> seeing if i get a signal to neutralize that way. is this a good idea? Any
> other suggestions? I also will be able to bet another Kenwood to receive
> the 28 mhz signal and then tune for a dip. would this be better?
> > >
> > > Thanks
> > >
> > > steve
> > >
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

30416. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 18:47:41 UTC
From: Bill
Topic: 30408 Message: 30416

Hi,

I have used a short length of coax directly from my transmitter antenna connector to the scope input. MAKE SURE THE FINALS ARE DISABLED FIRST!!! Do the adjustment for minimum output. On mine I can get to zero on the scopes most sensitive setting. After you are done, don't forget to turn the finals back on - the "sg" switch on yours.

--- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@...> wrote:
>
> thanks mike
>
> Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use on the scope? do you think that will work okay?
>
> steve
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Steve,
> >
> > The key is to adjust the neutralizing variable capacitor for the lowest indication on the RF Probe, scope, or separate receiver. If you follow the steps in the 520 manual you will do fine.
> >
> > Just remember to set the rear panel SG switch to ON when the neutralizing adjustment is completed. If you forget this step you could easily think you did something wrong that broke your transmitter.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@> wrote:
> > >
> > > Hi
> > >
> > > Sorry if this subject has been hammered on before but...
> > >
> > > I will be changing my 33 year old finals this weekend. It will be my first time. i have access to a scope but not an RF probe. I was thinking about looping a bit of coax to make a sniffer Antenna for the probe and seeing if i get a signal to neutralize that way. is this a good idea? Any other suggestions? I also will be able to bet another Kenwood to receive the 28 mhz signal and then tune for a dip. would this be better?
> > >

> > > Thanks
> > >
> > > steve
> > >
> >
>

30417. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 18:47:57 UTC
From: yioutta_99
Topic: 30408 Message: 30417

Hi chuck,

that was another way I thinging of going. I will be borrowing this scope and had concerns about blowing it up. I guss as long as the SG switch is off, I will have no problem with a 20X probe. I also have a 1X probe, but I I dont know what the freq response is on it. with any luck I will be going from 50 watts back to 100 after this is done

steve

--- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@...> wrote:
>
> Steve;
> I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
> coaxial cable to the dummy load.
> I connect a pin to the coaxial "T" pin and the scope probe ground to the
> outer shell of the "T" and take
> the reading. If you set this up as per the manual, you should not have a
> problem - Remember that the
> "SG" switch is off during this process.
>
> Regards
>
> Chuck, KJ4GU
>
> On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@...> wrote:
>
> > thanks mike
> >
> > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> > on the scope? do you think that will work okay?
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Steve,
> > >
> > > The key is to adjust the neutralizing variable capacitor for the lowest
> > indication on the RF Probe, scope, or separate receiver. If you follow the
> > steps in the 520 manual you will do fine.
> > >
> > > Just remember to set the rear panel SG switch to ON when the neutralizing
> > adjustment is completed. If you forget this step you could easily think you
> > did something wrong that broke your transmitter.
> > >
> > > 73s

> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > wrote:
> > > >
> > > > Hi
> > > >
> > > > Sorry if this subject has been hammered on before but...
> > > >
> > > > I will be changing my 33 year old finals this weekend. It will be my
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> > the 28 mhz signal and then tune for a dip. would this be better?
> > > >
> > > > Thanks
> > > >
> > > > steve
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

30418. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 19:03:25 UTC
From: w5rkl
Topic: 30408 Message: 30418

Sound advice Chuck!

The manuals show a lot of test equipment, some appear to be quite sophisticated. However, you don't need to spend a lot of money on test equipment just to satisfy the pictorial setups shown in the manual. Remember, the service manuals were written based on test equipment readily available at factory service departments. The average ham doesn't have all that test equipment.

Using common sense and simple test gear you can achieve the same results. You can build a simple RF probe using a blocking capacitor and a couple of diodes. An RF probe is not a sophisticated piece of test gear. It only "appears" to be. The following link will show you how simple an RF probe really is.

You can find used vacuum tube VTVMs on eBay. It doesn't matter which one you choose, vacuum tube or all solid state, they all do the same thing!

There isn't much to a vacuum tube VTVM, typically 2 tubes, a dual Triode such as a 12AU7 and a dual diode 6AL5, tubes that are readily available and "cheap". Most of the time the original tubes are still working rather well. Triode tubes such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep on working even after 40 years. In most cases you do not have to replace them, just align the VTVM using the simple instructions in the VTVM's manual. I have 2 vacuum tube VTVMs, one from Knightkit and the other from Eico and both have all the original components except for the old dried up half wave rectifier filter capacitor (typically only one cap to worry about).

Remember, this is "Amateur Radio" not "NASA Rocket Science". Therefore, you don't need expensive sophisticated test equipment to troubleshoot and repair ham gear. Many problems can be found rather quickly by simply taking voltage readings. Voltage readings can tell you a lot how a circuit is performing.

I built a simple RF probe inside a short piece of small diameter PVC pipe and a heavy piece of wire through a PVC pipe cap, a .01ufd 100VDC disc capacitor and a couple of 1N5711 diodes in series (I have quite a few 1N5711 diodes so I used them) plus a short piece of RG-174 coax cable. As you can see, you don't need to spend a lot of money for a simple VTVM and an RF probe.

http://www.io.com/~n5fc/rfprobe1.htm

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@...> wrote:
>
> Steve;
> I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
> coaxial cable to the dummy load.

> I connect a pin to the coaxial "T" pin and the scope probe ground to the
> outer shell of the "T" and take
> the reading. If you set this up as per the manual, you should not have a
> problem - Remember that the
> "SG" switch is off during this process.
>
> Regards
>
> Chuck, KJ4GU
>
> On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@...> wrote:
>
> > thanks mike
> >
> > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> > on the scope? do you think that will work okay?
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Steve,
> > >
> > > The key is to adjust the neutralizing variable capacitor for the lowest
> > indication on the RF Probe, scope, or separate receiver. If you follow the
> > steps in the 520 manual you will do fine.
> > >
> > > Just remember to set the rear panel SG switch to ON when the neutralizing
> > adjustment is completed. If you forget this step you could easily think you
> > did something wrong that broke your transmitter.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > wrote:
> > > >
> > > > Hi
> > > >
> > > > Sorry if this subject has been hammered on before but...
> > > >
> > > > I will be changing my 33 year old finals this weekend. It will be my
> > first time. i have access to a scope but not an RF probe. I was thinking
> > about looping a bit of coax to make a sniffer Antenna for the probe and
> > seeing if i get a signal to neutralize that way. is this a good idea? Any
> > other suggestions? I also will be able to bet another Kenwood to receive
> > the 28 mhz signal and then tune for a dip. would this be better?
> > > > >

> > > > Thanks
> > > >
> > > > steve
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
>

30419. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 19:10:23 UTC
From: w5rkl
Topic: 30408 Message: 30419

One more thing. The link I provided shows a resistor, 4.7Meg, in series to the VTVM. A much lower resistance will work, 2K or so will do fine. You want a much RF signal present at the input to the VTVM as possible.

NEVER attempt to measure the RF signal at the output of the final amplifier!! The signal level at that point will destroy the RF probe and could easily damage your VTVM.

I agree with the other response, made sure the "SG" switch is set to "OFF" when making the neutralization adjustment but also don't forget to set the SG switch back to ON when you have finished neutralizing the final amplifier.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Sound advice Chuck!
>
> The manuals show a lot of test equipment, some appear to be quite sophisticated. However, you don't need to spend a lot of money on test equipment just to satisfy the pictorial setups shown in the manual. Remember, the service manuals were written based on test equipment readily available at factory service departments. The average ham doesn't have all that test equipment.
>
> Using common sense and simple test gear you can achieve the same results. You can build a simple RF probe using a blocking capacitor and a couple of diodes. An RF probe is not a sophisticated piece of test gear. It only "appears" to be. The following link will show you how simple an RF probe really is.
>
> You can find used vacuum tube VTVMs on eBay. It doesn't matter which one you choose, vacuum tube or all solid state, they all do the same thing!
>
> There isn't much to a vacuum tube VTVM, typically 2 tubes, a dual Triode such as a 12AU7 and a dual diode 6AL5, tubes that are readily available and "cheap". Most of the time the original tubes are still working rather well. Triode tubes such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep on working even after 40 years. In most cases you do not have to replace them, just align the VTVM using the simple instructions in the VTVM's manual. I have 2 vacuum tube VTVMs, one from Knightkit and the other from Eico and both have all the original components except for the old dried up half wave rectifier filter capacitor (typically only one cap to worry about).
>
> Remember, this is "Amateur Radio" not "NASA Rocket Science". Therefore, you don't need expensive sophisticated test equipment to troubleshoot and repair ham gear. Many problems can be found rather quickly by simply taking voltage readings. Voltage readings can tell you a lot how a circuit is performing.

>
> I built a simple RF probe inside a short piece of small diameter PVC pipe and a heavy piece of wire through a PVC pipe cap, a .01ufd 100VDC disc capacitor and a couple of 1N5711 diodes in series (I have quite a few 1N5711 diodes so I used them) plus a short piece of RG-174 coax cable. As you can see, you don't need to spend a lot of money for a simple VTVM and an RF probe.
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> http://www.io.com/~n5fc/rfprobe1.htm
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@> wrote:
> >
> > Steve;
> > I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
> > coaxial cable to the dummy load.
> > I connect a pin to the coaxial "T" pin and the scope probe ground to the
> > outer shell of the "T" and take
> > the reading. If you set this up as per the manual, you should not have a
> > problem - Remember that the
> > "SG" switch is off during this process.
> >
> > Regards
> >
> > Chuck, KJ4GU
> >
> > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> >
> > > thanks mike
> > >
> > > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> > > on the scope? do you think that will work okay?
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> > > steve
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hello Steve,
> > > >
> > > > The key is to adjust the neutralizing variable capacitor for the lowest
> > > indication on the RF Probe, scope, or separate receiver. If you follow the
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> > > >
> > > > Just remember to set the rear panel SG switch to ON when the neutralizing
> > > adjustment is completed. If you forget this step you could easily think you
> > > did something wrong that broke your transmitter.
> > > >

> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > > wrote:
> > > > >
> > > > > Hi
> > > > >
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> > > > >
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> > > about looping a bit of coax to make a sniffer Antenna for the probe and
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> > > other suggestions? I also will be able to bet another Kenwood to receive
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> > > > >
> > > > > Thanks
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> > > > > steve
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> > > > Yahoo! Groups Links
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> > > [Non-text portions of this message have been removed]
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>

30420. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 19:14:59 UTC
From: andy_westcott2004
Topic: 30408 Message: 30420

Safety note:
Use an insulated shaft screwdriver when adjusting the neutralizing cap, as full HT will be present in the PA compartment. If you don't have one, wind several layers of insulating tape around the shaft leaving just the tip exposed.

A short to the case here would be exciting but possibly expensive.

I have tried to use a second radio to monitor leakage, but found the RF leakage altered so much as I touched the cap that I found the method useless.

I now use a 'scope connected directly to the antenna socket with a low wattage 12 volt lamp connected across it to present a low resistance load for any leakage present. I suppose a 47R load would be ideal.

30421. Re: [TS-520_820_530_830] Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 19:20:43 UTC
From: Bob Macklin
Topic: 30408 Message: 30421

The 4.7M resistor in the RF probe converts the peak reading of the probe to RMS displayed by the meter.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, March 25, 2011 12:10 PM
Subject: [TS-520_820_530_830] Re: 520s neutralization

One more thing. The link I provided shows a resistor, 4.7Meg, in series to the VTVM. A much lower resistance will work, 2K or so will do fine. You want a much RF signal present at the input to the VTVM as possible.

NEVER attempt to measure the RF signal at the output of the final amplifier!! The signal level at that point will destroy the RF probe and could easily damage your VTVM.

I agree with the other response, made sure the "SG" switch is set to "OFF" when making the neutralization adjustment but also don't forget to set the SG switch back to ON when you have finished neutralizing the final amplifier.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Sound advice Chuck!
>
> The manuals show a lot of test equipment, some appear to be quite sophisticated. However, you don't need to spend a lot of money on test equipment just to satisfy the pictorial setups shown in the manual. Remember, the service manuals were written based on test equipment readily available at factory service departments. The average ham doesn't have all that test equipment.
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> http://www.io.com/~n5fc/rfprobe1.htm
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@> wrote:
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> > Steve;
> > I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
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> > Regards
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> > Chuck, KJ4GU
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> > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> >
> > > thanks mike
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> > >
> > > steve

> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hello Steve,
> > > >
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> > > > 73s
> > > > Mike
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> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > > wrote:
> > > > >
> > > > > Hi
> > > > >
> > > > > Sorry if this subject has been hammered on before but...
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> > > first time. i have access to a scope but not an RF probe. I was thinking
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> > > > > Thanks
> > > > >
> > > > > steve
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> > [Non-text portions of this message have been removed]
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>

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30422. For Sale: TS830S Transceiver, Logikit CMOS-4 Keyer, DSP Audio Filter Module

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 19:57:04 UTC
From: SB
Topic: 30422 Message: 30422

Selling the following for a fellow Ham. Lincolnwood, Illinois.
Contact me for details!

sberger@...

Kenwood TS-830S HF Transceiver

This top-of-the-line 100w. rig works like new and has been pampered. All functions work well and includes extra CW filter for clear CW operations. Features 1.5 ☐ 30 MHz bands with lighted meter, digital frequency display, VOX, Speech Proc. etc. Exceptionally clean inside and out. Includes original manual. Will pack carefully at my cost. Shipping at your cost. Buy Now for $350 or best offer.

DSP Audio noise reduction Module
Hear-It DSP Module (under GAP name) cut down static and pulls out those weak stations you couldn't hear before. Sits between rig and external speaker for DSP noise reduction features only found in newer rigs. What a difference it makes! Buy now for only $125 or best offer.

LogicKit CMOS-4 Keyer
Plug in your paddles and away you go with superb CW keying. Adjustable weighting, keying speed and many other features. Even includes 4 memories for recorded messages such as CQ, etc. Great for contesting. Press a button and each message is sent automatically. Buy now for only $50 or best offer.

30423. Re: [TS-520_820_530_830] For Sale: TS830S Transceiver, Logikit CMOS-4 Keyer, DSP Audio Filter Module

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-25 21:05:33 UTC
From: Joseph Stiles
Topic: 30422 Message: 30423

If you have not sold the 830S....I'll take it! Let me know how to pay...PAYPAL, money order, or ....??

73's joe wb7uqu

From: SB <sberger@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 25, 2011 12:57:04 PM
Subject: [TS-520_820_530_830] For Sale: TS830S Transceiver, Logikit CMOS-4 Keyer, DSP Audio Filter Module

Selling the following for a fellow Ham. Lincolnwood, Illinois.
Contact me for details!

sberger@...

Kenwood TS-830S HF Transceiver

This top-of-the-line 100w. rig works like new and has been pampered. All functions work well and includes extra CW filter for clear CW operations. Features 1.5 – 30 MHz bands with lighted meter, digital frequency display, VOX, Speech Proc. etc. Exceptionally clean inside and out. Includes original manual. Will pack carefully at my cost. Shipping at your cost. Buy Now for $350 or best offer.

DSP Audio noise reduction Module
Hear-It DSP Module (under GAP name) cut down static and pulls out those weak stations you couldn't hear before. Sits between rig and external speaker for DSP noise reduction features only found in newer rigs. What a difference it makes! Buy now for only $125 or best offer.

LogicKit CMOS-4 Keyer
Plug in your paddles and away you go with superb CW keying. Adjustable weighting, keying speed and many other features. Even includes 4 memories for recorded messages such as CQ, etc. Great for contesting. Press a button and each message is sent automatically. Buy now for only $50 or best offer.

[Non-text portions of this message have been removed]

30424. Re: [TS-520_820_530_830] Re: Repair Kit: TS-440S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 01:29:21 UTC
From: John Davidson
Topic: 30401 Message: 30424

The dots indicate the PLL is "out of lock" usually because of this aging potting compound.
My TS440s has not quite gotten that far but above the 20 M band I have a terrible chirp on transmit due to this potting compound failure.

From: Doug Fitts <w7fdf@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, March 25, 2011 8:41:18 AM
Subject: [TS-520_820_530_830] Re: Repair Kit: TS-440S

'Morning Bob:
I just signed up on that website and awaiting approval for membership. I have at the moment three articles of technical information [from another source] on the issue with the TS-440S display. It appears that the problem stems from part of the PLL circuit and some kind of "glue" that was applied to a specific circuit during manufacturing of the radio.

This glue supposedly was installed to prevent vibration when the rig was operated in the mobile. However the one article states that over time the glue becomes electrically conductive and causes these strange dots in the digital display. Once I join the TS-440 Yahoo group I can then query other members to see what is the best approach to solving the problem.

The radio should be delivered sometime next week and the owner made me aware of the intermittent problem, which BTW only seems to happen randomly and not on every frequency or band. Nonetheless, thanks for your input on this.

Sometime in June the wife and I will be in your neck of the woods. Our daughter recently got tenured as an Associate Professor and teaches at a local college there in the Seattle area.

Doug W7FDF

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Try the Kenwood TS-440 group:
> http://groups.yahoo.com/group/TS-440/
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"

[Non-text portions of this message have been removed]

30425. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 02:52:22 UTC
From: yioutta_99
Topic: 30408 Message: 30425

I seem to having a problem now with my ALC not coming up on 10 meters. I had to crank up the car more than normal for it to show. I am about to change the driver tube to see if that cures that problem. I am seeing little on the scope, I have the watt meter in line, then the dummy then a some coax (about 2 feet) should i reove the meter and the 2 foot coax to the probe?

Thanks

steve

--- In TS-520_820_530_830@yahoogroups.com, "Bill" <w_r_cromwell@...> wrote:
>
> Hi,
>
> I have used a short length of coax directly from my transmitter antenna connector to the scope input. MAKE SURE THE FINALS ARE DISABLED FIRST!!! Do the adjustment for minimum output. On mine I can get to zero on the scopes most sensitive setting. After you are done, don't forget to turn the finals back on - the "sg" switch on yours.
>
> --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@> wrote:
> >
> > thanks mike
> >
> > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use on the scope? do you think that will work okay?
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Steve,
> > >
> > > The key is to adjust the neutralizing variable capacitor for the lowest indication on the RF Probe, scope, or separate receiver. If you follow the steps in the 520 manual you will do fine.
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> > > Just remember to set the rear panel SG switch to ON when the neutralizing adjustment is completed. If you forget this step you could easily think you did something wrong that broke your transmitter.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@> wrote:

> > > >
> > > > Hi
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> > > > Sorry if this subject has been hammered on before but...
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> > > > I will be changing my 33 year old finals this weekend. It will be my first time. i have access to a scope but not an RF probe. I was thinking about looping a bit of coax to make a sniffer Antenna for the probe and seeing if i get a signal to neutralize that way. is this a good idea? Any other suggestions? I also will be able to bet another Kenwood to receive the 28 mhz signal and then tune for a dip. would this be better?
> > > >
> > > > Thanks
> > > >
> > > > steve
> > > >
> > >
> >
>

30426. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 04:01:06 UTC
From: yioutta_99
Topic: 30408 Message: 30426

UPDATE: I changed the drive and the ALC was working on 10 meters. i got rid of the length of coax and i could see the signal on the scope FB I was able to tune down to min. i buttoned up the radio and i am putting out close to 100 watts...BUT I also relaozed i was not at 28.5 MHZ when i neutralized..it was more like 28.2 MHZ. Is that important? Should i redo it?

steve
--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> The 4.7M resistor in the RF probe converts the peak reading of the probe to RMS displayed by the meter.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, March 25, 2011 12:10 PM
> Subject: [TS-520_820_530_830] Re: 520s neutralization
>
>
>
> One more thing. The link I provided shows a resistor, 4.7Meg, in series to the VTVM. A much lower resistance will work, 2K or so will do fine. You want a much RF signal present at the input to the VTVM as possible.
>
> NEVER attempt to measure the RF signal at the output of the final amplifier!! The signal level at that point will destroy the RF probe and could easily damage your VTVM.
>
> I agree with the other response, made sure the "SG" switch is set to "OFF" when making the neutralization adjustment but also don't forget to set the SG switch back to ON when you have finished neutralizing the final amplifier.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Sound advice Chuck!
> >
> > The manuals show a lot of test equipment, some appear to be quite sophisticated. However, you don't need to spend a lot of money on test equipment just to satisfy the

pictorial setups shown in the manual. Remember, the service manuals were written based on test equipment readily available at factory service departments. The average ham doesn't have all that test equipment.
> >
> > Using common sense and simple test gear you can achieve the same results. You can build a simple RF probe using a blocking capacitor and a couple of diodes. An RF probe is not a sophisticated piece of test gear. It only "appears" to be. The following link will show you how simple an RF probe really is.
> >
> > You can find used vacuum tube VTVMs on eBay. It doesn't matter which one you choose, vacuum tube or all solid state, they all do the same thing!
> >
> > There isn't much to a vacuum tube VTVM, typically 2 tubes, a dual Triode such as a 12AU7 and a dual diode 6AL5, tubes that are readily available and "cheap". Most of the time the original tubes are still working rather well. Triode tubes such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep on working even after 40 years. In most cases you do not have to replace them, just align the VTVM using the simple instructions in the VTVM's manual. I have 2 vacuum tube VTVMs, one from Knightkit and the other from Eico and both have all the original components except for the old dried up half wave rectifier filter capacitor (typically only one cap to worry about).
> >
> > Remember, this is "Amateur Radio" not "NASA Rocket Science". Therefore, you don't need expensive sophisticated test equipment to troubleshoot and repair ham gear. Many problems can be found rather quickly by simply taking voltage readings. Voltage readings can tell you a lot how a circuit is performing.
> >
> > I built a simple RF probe inside a short piece of small diameter PVC pipe and a heavy piece of wire through a PVC pipe cap, a .01ufd 100VDC disc capacitor and a couple of 1N5711 diodes in series (I have quite a few 1N5711 diodes so I used them) plus a short piece of RG-174 coax cable. As you can see, you don't need to spend a lot of money for a simple VTVM and an RF probe.
> >
> > http://www.io.com/~n5fc/rfprobe1.htm
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@> wrote:
> > >
> > > Steve;
> > > I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
> > > coaxial cable to the dummy load.
> > > I connect a pin to the coaxial "T" pin and the scope probe ground to the
> > > outer shell of the "T" and take
> > > the reading. If you set this up as per the manual, you should not have a
> > > problem - Remember that the
> > > "SG" switch is off during this process.
> > >
> > > Regards

> > >
> > > Chuck, KJ4GU
> > >
> > > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> > >
> > > > thanks mike
> > > >
> > > > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> > > > on the scope? do you think that will work okay?
> > > >
> > > > steve
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Hello Steve,
> > > > >
> > > > > The key is to adjust the neutralizing variable capacitor for the lowest
> > > > indication on the RF Probe, scope, or separate receiver. If you follow the
> > > > steps in the 520 manual you will do fine.
> > > > >
> > > > > Just remember to set the rear panel SG switch to ON when the neutralizing
> > > > adjustment is completed. If you forget this step you could easily think you
> > > > did something wrong that broke your transmitter.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > > > wrote:
> > > > > >
> > > > > > Hi
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> > > > > > Sorry if this subject has been hammered on before but...
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> > > > > > I will be changing my 33 year old finals this weekend. It will be my
> > > > first time. i have access to a scope but not an RF probe. I was thinking
> > > > about looping a bit of coax to make a sniffer Antenna for the probe and
> > > > seeing if i get a signal to neutralize that way. is this a good idea? Any
> > > > other suggestions? I also will be able to bet another Kenwood to receive
> > > > the 28 mhz signal and then tune for a dip. would this be better?
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> > > > > > Thanks
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30427. Re: 520s neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 14:39:44 UTC
From: yioutta_99
Topic: 30408 Message: 30427

this worked perfect
--- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@...> wrote:
>
> Steve;
> I use a 10X probe on a 100MHz Tektronix scope with no problem right off the
> coaxial cable to the dummy load.
> I connect a pin to the coaxial "T" pin and the scope probe ground to the
> outer shell of the "T" and take
> the reading. If you set this up as per the manual, you should not have a
> problem - Remember that the
> "SG" switch is off during this process.
>
> Regards
>
> Chuck, KJ4GU
>
> On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@...> wrote:
>
> > thanks mike
> >
> > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to use
> > on the scope? do you think that will work okay?
> >
> > steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Steve,
> > >
> > > The key is to adjust the neutralizing variable capacitor for the lowest
> > indication on the RF Probe, scope, or separate receiver. If you follow the
> > steps in the 520 manual you will do fine.
> > >
> > > Just remember to set the rear panel SG switch to ON when the neutralizing
> > adjustment is completed. If you forget this step you could easily think you
> > did something wrong that broke your transmitter.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
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> > > > >

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> > > > > Thanks
> > > > >
> > > > > steve
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> > > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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30428. The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 16:46:26 UTC
From: John Davidson
Topic: 30408 Message: 30428

I recall the manual giving 14 MHz as the frequency to do the neutralization
procedure on. Not 10M !
I never got much ALC reading on 10M, even when my TS520 was new.

_99 <yioutta_99@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 26, 2011 12:01:06 AM
Subject: [TS-520_820_530_830] Re: 520s neutralization

UPDATE: I changed the drive and the ALC was working on 10 meters. i got rid of
the length of coax and i could see the signal on the scope FB I was able to tune
down to min. i buttoned up the radio and i am putting out close to 100
watts...BUT I also relaozed i was not at 28.5 MHZ when i neutralized..it was
more like 28.2 MHZ. Is that important? Should i redo it?

steve
--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> The 4.7M resistor in the RF probe converts the peak reading of the probe to RMS
>displayed by the meter.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, March 25, 2011 12:10 PM
> Subject: [TS-520_820_530_830] Re: 520s neutralization
>
>
>
> One more thing. The link I provided shows a resistor, 4.7Meg, in series to the
>VTVM. A much lower resistance will work, 2K or so will do fine. You want a much
>RF signal present at the input to the VTVM as possible.
>
> NEVER attempt to measure the RF signal at the output of the final amplifier!!
>The signal level at that point will destroy the RF probe and could easily damage
>your VTVM.
>
> I agree with the other response, made sure the "SG" switch is set to "OFF" when
>making the neutralization adjustment but also don't forget to set the SG switch
>back to ON when you have finished neutralizing the final amplifier.
>
> 73s

> Mike
> W5RKL
>
> --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> >
> > Sound advice Chuck!
> >
> > The manuals show a lot of test equipment, some appear to be quite
>sophisticated. However, you don't need to spend a lot of money on test equipment
>just to satisfy the pictorial setups shown in the manual. Remember, the service
>manuals were written based on test equipment readily available at factory
>service departments. The average ham doesn't have all that test equipment.
>
> >
> > Using common sense and simple test gear you can achieve the same results. You
>can build a simple RF probe using a blocking capacitor and a couple of diodes.
>An RF probe is not a sophisticated piece of test gear. It only "appears" to be.
>The following link will show you how simple an RF probe really is.
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> > You can find used vacuum tube VTVMs on eBay. It doesn't matter which one you
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> > There isn't much to a vacuum tube VTVM, typically 2 tubes, a dual Triode such
>as a 12AU7 and a dual diode 6AL5, tubes that are readily available and "cheap".
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>such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep on working
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>capacitor (typically only one cap to worry about).
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> > Remember, this is "Amateur Radio" not "NASA Rocket Science". Therefore, you
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> > > "SG" switch is off during this process.
> > >
> > > Regards
> > >
> > > Chuck, KJ4GU
> > >
> > > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> > >
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> > > > steve
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Hello Steve,
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> > > > steps in the 520 manual you will do fine.
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30429. Re: [TS-520_820_530_830] The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 16:55:02 UTC
From: n6wk@n6wk.com
Topic: 30408 Message: 30429

The TS-520 is Neutralized on 21.300

Gordon

On 3/26/2011 9:46 AM, John Davidson wrote:
>
> I recall the manual giving 14 MHz as the frequency to do the
> neutralization
> procedure on. Not 10M !
> I never got much ALC reading on 10M, even when my TS520 was new.
>
> _99 <yioutta_99@... <mailto:yioutta_99%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 26, 2011 12:01:06 AM
> Subject: [TS-520_820_530_830] Re: 520s neutralization
>
> ?
>
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> the length of coax and i could see the signal on the scope FB I was
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> >displayed by the meter.
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> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> > Sent: Friday, March 25, 2011 12:10 PM
> > Subject: [TS-520_820_530_830] Re: 520s neutralization
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> >
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> > One more thing. The link I provided shows a resistor, 4.7Meg, in
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> > NEVER attempt to measure the RF signal at the output of the final
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> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
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30430. Re: [TS-520_820_530_830] The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 18:06:24 UTC
From: Terry Wagoner
Topic: 30408 Message: 30430

For the newer folks who are interested in understanding why and what we are doing when we neutralize an RF amplifier, Tom W8JI has a really good "white paper" on neutralizing RF amplifiers. His section on neutralizing Grid Driven Tetrodes is very interesting and an easy read. It amazes me that almost every thing we do with these Hybrids goes back to basic fundamental electronic theory. In this case understanding what a capacitor is and the internal construction of a vacuum tube is where this understanding starts.

I have always neutralized (any rig with pair of 6146 finals) around 21.5 just because the null is typically easier to see and then I move up to around 28.5 to fine tune. Probably an extra step that is not necessary. Maybe one of those "Truths and Myths" ? For the newer folks just be careful and use insulated tuning tool. Lots of fire works possible here and dont want anyone to get hurt. Terry K9TW

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 26, 2011 12:55:02 PM
Subject: Re: [TS-520_820_530_830] The puppet show has been cancelled. Ciao.

The TS-520 is Neutralized on 21.300

Gordon

On 3/26/2011 9:46 AM, John Davidson wrote:
>
> I recall the manual giving 14 MHz as the frequency to do the
> neutralization
> procedure on. Not 10M !
> I never got much ALC reading on 10M, even when my TS520 was new.
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> _99 <yioutta_99@... <mailto:yioutta_99%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Sat, March 26, 2011 12:01:06 AM
> Subject: [TS-520_820_530_830] Re: 520s neutralization
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> steve
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Bob Macklin
> <macklinbob@...> wrote:
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> > The 4.7M resistor in the RF probe converts the peak reading of the
> probe to RMS
> >displayed by the meter.
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> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, March 25, 2011 12:10 PM
> > Subject: [TS-520_820_530_830] Re: 520s neutralization
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> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
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> > > Sound advice Chuck!
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> > > The manuals show a lot of test equipment, some appear to be quite
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> > > > Chuck, KJ4GU
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> > > > > > Yahoo! Groups Links
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Yahoo! Groups Links

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30431. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 19:03:34 UTC
From: w5rkl
Topic: 30408 Message: 30431

Yep, I agree 100%! Without the basic knowledge, troubleshooting and repair becomes a "guessing game".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
It amazes me that almost every thing we do with these Hybrids goes
back to basic fundamental electronic theory. In this case
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30432. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 20:21:40 UTC
From: yioutta_99
Topic: 30408 Message: 30432

my manual states 28.5

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, March 26, 2011 12:01:06 AM
> Subject: [TS-520_820_530_830] Re: 520s neutralization
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> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Friday, March 25, 2011 12:10 PM
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30433. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 20:27:27 UTC
From: yioutta_99
Topic: 30408 Message: 30433

As I dig into this..I find now that the CAl signal is at s7 to 9 on 40 and 80, but goes down as i go up in freq. at 28.5 mhz it is down to about 4, what is this telling me?

I guess all is good with neutralization so far. i manage to get a quick report from russia during today concert and a better report from a local. 100 watts now with a dipole.
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> > > > --- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@>
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> > > > >
> > > > > Steve;
> > > > > I use a 10X probe on a 100MHz Tektronix scope with no problem right off
> > the
> > > > > coaxial cable to the dummy load.
> > > > > I connect a pin to the coaxial "T" pin and the scope probe ground to the
> > > > > outer shell of the "T" and take
> > > > > the reading. If you set this up as per the manual, you should not have a
> > > > > problem - Remember that the
> > > > > "SG" switch is off during this process.
> > > > >
> > > > > Regards
> > > > >
> > > > > Chuck, KJ4GU
> > > > >
> > > > > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> > > > >
> > > > > > thanks mike
> > > > > >
> > > > > > Any thoughts on using a coil of shorted coax on a 20X 500 MHZ probe to
> > >use
> > > > > > on the scope? do you think that will work okay?
> > > > > >
> > > > > > steve
> > > > > >
> > > > > > --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > > Hello Steve,
> > > > > > >
> > > > > > > The key is to adjust the neutralizing variable capacitor for the
> > lowest
> > > > > > > indication on the RF Probe, scope, or separate receiver. If you follow

> > >the
> > > > > > steps in the 520 manual you will do fine.
> > > > > > >
> > > > > > > Just remember to set the rear panel SG switch to ON when the
> > >neutralizing
> > > > > > adjustment is completed. If you forget this step you could easily think
> > >you
> > > > > > did something wrong that broke your transmitter.
> > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, "yioutta_99" <yioutta_99@>
> > > > > > wrote:
> > > > > > > >
> > > > > > > Hi
> > > > > > > >
> > > > > > > Sorry if this subject has been hammered on before but...
> > > > > > > >
> > > > > > > I will be changing my 33 year old finals this weekend. It will be my
> > > > > > first time. i have access to a scope but not an RF probe. I was thinking
> > > > > > about looping a bit of coax to make a sniffer Antenna for the probe and
> > > > > > seeing if i get a signal to neutralize that way. is this a good idea?
> > Any
> > > > > > other suggestions? I also will be able to bet another Kenwood to receive
> > > > > > the 28 mhz signal and then tune for a dip. would this be better?
> > > > > > > >
> > > > > > > Thanks
> > > > > > > >
> > > > > > > steve
> > > > > > > >
> > > > > > >
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> > > > > > Yahoo! Groups Links
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30434. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 20:36:50 UTC
From: pmarkavage@juno.com
Topic: 30408 Message: 30434

I always do my rig final neutralizations on 10 meters. If you do it on 20
or 15 meters, there's no guarantee that the final tank circuitry will be
"clean" on 10 meters.
Pete, wa2cwa

On Sat, 26 Mar 2011 20:21:40 -0000 "yioutta_99" <yioutta_99@...>
writes:
> my manual states 28.5
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...>
> wrote:
> >
> > I recall the manual giving 14 MHz as the frequency to do the
> neutralization
> > procedure on. Not 10M !
> > I never got much ALC reading on 10M, even when my TS520 was new.
> >
> >
> >
> > _99 <yioutta_99@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, March 26, 2011 12:01:06 AM
> > Subject: [TS-520_820_530_830] Re: 520s neutralization
> >
> > ?
> >
> > UPDATE: I changed the drive and the ALC was working on 10 meters.
> i got rid of
> > the length of coax and i could see the signal on the scope FB I
> was able to tune
> > down to min. i buttoned up the radio and i am putting out close to
> 100
> > watts...BUT I also relaozed i was not at 28.5 MHZ when i
> neutralized..it was
> > more like 28.2 MHZ. Is that important? Should i redo it?
> >
> > steve
> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin
> <macklinbob@> wrote:
> > >
> > > The 4.7M resistor in the RF probe converts the peak reading of
> the probe to RMS
> > >displayed by the meter.
> > >

> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.

30435. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 22:03:32 UTC
From: n6wk@n6wk.com
Topic: 30408 Message: 30435

My TS-520S Service manual says 21.5 mhz

On 3/26/2011 1:21 PM, yioutta_99 wrote:
>
> my manual states 28.5
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> <k8jd@...> wrote:
> >
> > I recall the manual giving 14 MHz as the frequency to do the
> neutralization
> > procedure on. Not 10M !
> > I never got much ALC reading on 10M, even when my TS520 was new.
> >
> >
> >
> > _99 <yioutta_99@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sat, March 26, 2011 12:01:06 AM
> > Subject: [TS-520_820_530_830] Re: 520s neutralization
> >
> > ?
> >
> > UPDATE: I changed the drive and the ALC was working on 10 meters. i
> got rid of
> > the length of coax and i could see the signal on the scope FB I was
> able to tune
> > down to min. i buttoned up the radio and i am putting out close to 100
> > watts...BUT I also relaozed i was not at 28.5 MHZ when i
> neutralized..it was
> > more like 28.2 MHZ. Is that important? Should i redo it?
> >
> > steve
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Bob Macklin
> <macklinbob@> wrote:
> > >
> > > The 4.7M resistor in the RF probe converts the peak reading of the
> probe to RMS
> > >displayed by the meter.
> > >
> > > Bob Macklin

> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: w5rkl
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, March 25, 2011 12:10 PM
> > > Subject: [TS-520_820_530_830] Re: 520s neutralization
> > >
> > >
> > >
> > > One more thing. The link I provided shows a resistor, 4.7Meg, in
> series to the
> > >VTVM. A much lower resistance will work, 2K or so will do fine. You
> want a much
> > >RF signal present at the input to the VTVM as possible.
> > >
> > > NEVER attempt to measure the RF signal at the output of the final
> amplifier!!
> > >The signal level at that point will destroy the RF probe and could
> easily damage
> > >your VTVM.
> > >
> > > I agree with the other response, made sure the "SG" switch is set
> to "OFF" when
> > >making the neutralization adjustment but also don't forget to set
> the SG switch
> > >back to ON when you have finished neutralizing the final amplifier.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Sound advice Chuck!
> > > >
> > > > The manuals show a lot of test equipment, some appear to be quite
> > >sophisticated. However, you don't need to spend a lot of money on
> test equipment
> > >just to satisfy the pictorial setups shown in the manual. Remember,
> the service
> > >manuals were written based on test equipment readily available at
> factory
> > >service departments. The average ham doesn't have all that test
> equipment.
> > >
> > > > >

> > > > Using common sense and simple test gear you can achieve the same
> results. You
> > > >can build a simple RF probe using a blocking capacitor and a couple
> of diodes.
> > > >An RF probe is not a sophisticated piece of test gear. It only
> "appears" to be.
> > > >The following link will show you how simple an RF probe really is.
> > > > >
> > > > > You can find used vacuum tube VTVMs on eBay. It doesn't matter
> which one you
> > > >choose, vacuum tube or all solid state, they all do the same thing!
> > > > >
> > > > > There isn't much to a vacuum tube VTVM, typically 2 tubes, a
> dual Triode such
> > > >as a 12AU7 and a dual diode 6AL5, tubes that are readily available
> and "cheap".
> > > >Most of the time the original tubes are still working rather well.
> Triode tubes
> > > >such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep
> on working
> > > >even after 40 years. In most cases you do not have to replace them,
> just align
> > > >the VTVM using the simple instructions in the VTVM's manual. I have
> 2 vacuum
> > > >tube VTVMs, one from Knightkit and the other from Eico and both
> have all the
> > > >original components except for the old dried up half wave rectifier
> filter
> > > >capacitor (typically only one cap to worry about).
> > > > >
> > > > > Remember, this is "Amateur Radio" not "NASA Rocket Science".
> Therefore, you
> > > >don't need expensive sophisticated test equipment to troubleshoot
> and repair ham
> > > >gear. Many problems can be found rather quickly by simply taking
> voltage
> > > >readings. Voltage readings can tell you a lot how a circuit is
> performing.
> > > > >
> > > > > I built a simple RF probe inside a short piece of small diameter
> PVC pipe and
> > > >a heavy piece of wire through a PVC pipe cap, a .01ufd 100VDC disc
> capacitor and
> > > >a couple of 1N5711 diodes in series (I have quite a few 1N5711
> diodes so I used
> > > >them) plus a short piece of RG-174 coax cable. As you can see, you
> don't need to
> > > >spend a lot of money for a simple VTVM and an RF probe.
> > > > >
> > > > > http://www.io.com/~n5fc/rfprobe1.htm

> <http://www.io.com/%7En5fc/rfprobe1.htm>
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Charles Coffee
> <chascoffee@>
> > >wrote:
> > > > > >
> > > > > > Steve;
> > > > > > I use a 10X probe on a 100MHz Tektronix scope with no problem
> right off
> > the
> > > > > > coaxial cable to the dummy load.
> > > > > > I connect a pin to the coaxial "T" pin and the scope probe
> ground to the
> > > > > > outer shell of the "T" and take
> > > > > > the reading. If you set this up as per the manual, you should
> not have a
> > > > > > problem - Remember that the
> > > > > > "SG" switch is off during this process.
> > > > > >
> > > > > > Regards
> > > > > >
> > > > > > Chuck, KJ4GU
> > > > > >
> > > > > > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> > > > > >
> > > > > > > thanks mike
> > > > > > >
> > > > > > > Any thoughts on using a coil of shorted coax on a 20X 500
> MHZ probe to
> > > >use
> > > > > > > on the scope? do you think that will work okay?
> > > > > > >
> > > > > > > steve
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > > > > > >
> > > > > > > > Hello Steve,
> > > > > > > >
> > > > > > > > The key is to adjust the neutralizing variable capacitor
> for the
> > > lowest
> > > > > > > > indication on the RF Probe, scope, or separate receiver. If
> you follow

> > >the
> > > > > > steps in the 520 manual you will do fine.
> > > > > > >
> > > > > > > Just remember to set the rear panel SG switch to ON when the
> > >neutralizing
> > > > > > adjustment is completed. If you forget this step you could
> easily think
> > >you
> > > > > > did something wrong that broke your transmitter.
> > > > > > > >
> > > > > > > 73s
> > > > > > > Mike
> > > > > > > W5RKL
> > > > > > > >
> > > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99" <yioutta_99@>
> > > > > > wrote:
> > > > > > > > >
> > > > > > > > Hi
> > > > > > > > >
> > > > > > > > Sorry if this subject has been hammered on before but...
> > > > > > > > >
> > > > > > > > I will be changing my 33 year old finals this weekend.
> It will be my
> > > > > > first time. i have access to a scope but not an RF probe. I
> was thinking
> > > > > > about looping a bit of coax to make a sniffer Antenna for
> the probe and
> > > > > > seeing if i get a signal to neutralize that way. is this a
> good idea?
> > Any
> > > > > > other suggestions? I also will be able to bet another
> Kenwood to receive
> > > > > > the 28 mhz signal and then tune for a dip. would this be better?
> > > > > > > > >
> > > > > > > > Thanks
> > > > > > > > >
> > > > > > > > steve
> > > > > > > > >
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30436. 820 filter mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 21:09:47 UTC
From: taylor.frank14
Topic: 30436 Message: 30436

Ron,
Just got and old 820s with cw filter. Did your mod from 2007.
Worked like a charm.
Thanks!!!
Frank aa4ex franktaylor13@...

30437. TS 520SE lack of drive in the tune position 10m and 15m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-26 18:55:45 UTC
From: k4ynd
Topic: 30437 Message: 30437

I have had a TS 520SE for over a year now has always worked great on 80,40,20 and 15.. When I got it. I could not get any drive on 10 meters (in the tune position.) Today I tried to tune up on a dummy load on 15 in the tune position. When I try to adjust the drive knob the needle (ALC position) barely shows anything.

Im hoping this points to a very soft drive tube (still tunes on 40)

What do you think

K4YND

30438. TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 01:00:09 UTC
From: Lou Blasco
Topic: 28156 Message: 30438

Hi All,

I have a TS520S that give a burst of RF when I switch to TX on LSB. It is band independent, doesn't matter if it's hot or cold, doesn't happen on USB. Also happens with no mic connected using the send switch. On air reports are great, no one can hear anything but I know it's there and I don't like it.

Tubes are neutralized, I've run an alignment and found nothing unusual, AVR volts are good, supply volts on the carrier board 8.3V and crystal switching looks ok.

Has anyone come across this or have an idea where to start?

Lou
VK3ALB

30439. Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 01:52:00 UTC
From: Bob Macklin
Topic: 28156 Message: 30439

It does not do it on USB because the carrier is fully balanced on USB. You cannot fully null the carrier for both USB and LSB. You will find that if you set the null on LSB then USB will be off.

You are supposed to set the null so you have the same amount of leakage on both USB and LSB. It will take you some FIDDLING to figure out how to get the best balance.

Bob Macklin
SAM8
Seattle, Wa
----- Original Message -----
From: Lou Blasco
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 26, 2011 6:00 PM
Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX

Hi All,

I have a TS520S that give a burst of RF when I switch to TX on LSB.
It is band independent, doesn't matter if it's hot or cold, doesn't
happen on USB. Also happens with no mic connected using the send
switch. On air reports are great, no one can hear anything but I know
it's there and I don't like it.

Tubes are neutralized, I've run an alignment and found nothing
unusual, AVR volts are good, supply volts on the carrier board 8.3V
and crystal switching looks ok.

Has anyone come across this or have an idea where to start?

Lou
VK3ALB

[Non-text portions of this message have been removed]

30440. RE: [TS-520_820_530_830] TS 520SE lack of drive in the tune position 10m and 15m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 02:26:45 UTC
From: Rick Hicks
Topic: 30437 Message: 30440

My 530SP is the same way. For 10 M I have to tune in the CW position. It took me the longest time to figure it out, but sometimes when I put the band switch at that indent it does not make good contact. I have learned that when 10M just won't tune, wiggle the band selector switch just a little and watch the needles jump (still in CW).

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of k4ynd
Sent: Saturday, March 26, 2011 11:56 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS 520SE lack of drive in the tune position 10m and 15m

I have had a TS 520SE for over a year now has always worked great on 80,40,20 and 15.. When I got it. I could not get any drive on 10 meters (in the tune position.) Today I tried to tune up on a dummy load on 15 in the tune position. When I try to adjust the drive knob the needle (ALC position) barely shows anything.

Im hoping this points to a very soft drive tube (still tunes on 40)

What do you think

K4YND

[Non-text portions of this message have been removed]

30441. Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 03:00:41 UTC
From: Lou Blasco
Topic: 28156 Message: 30441

Thanks Bob,

I paid particular attention to the Balanced Modulator adjustment as it makes sense that it would come from there if anywhere. I couldn't get a complete null on LSB and trying to balance between the LSB & USB I couldn't find a setting for VR1 and TC1 that would give me equally low leakage for both and found LSB particularly touchy to adjust. Since I work the low bands only with this rig I opted in favour of minimum carrier leakage on LSB. That gave me less than a milliwatt of leakage on LSB and less than I could measure on USB. I think that's more than good enough.

However the burst or spike remains on LSB TX. As soon as I go to TX I get a spike of maybe 250mS or less and on a peak reading watt meter it shows about 20W PEP. After that the radio can stay in SSB TX and the power meter reads zero. I can see this spike on several different power meters but listening on a comms receiver I can't hear it on frequency which explains why I haven't had bad reports on air.

Lou
VK3ALB

At 12:52 27/03/2011, you wrote:
>It does not do it on USB because the carrier is fully balanced on
>USB. You cannot fully null the carrier for both USB and LSB. You
>will find that if you set the null on LSB then USB will be off.
>
>You are supposed to set the null so you have the same amount of
>leakage on both USB and LSB. It will take you some FIDDLING to
>figure out how to get the best balance.
>
>Bob Macklin
>SAM8
>Seattle, Wa
> ----- Original Message -----
> From: Lou Blasco
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, March 26, 2011 6:00 PM
> Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
>
>
>
> Hi All,
>
> I have a TS520S that give a burst of RF when I switch to TX on LSB.
> It is band independent, doesn't matter if it's hot or cold, doesn't

> happen on USB. Also happens with no mic connected using the send
> switch. On air reports are great, no one can hear anything but I know
> it's there and I don't like it.
>
> Tubes are neutralized, I've run an alignment and found nothing
> unusual, AVR volts are good, supply volts on the carrier board 8.3V
> and crystal switching looks ok.
>
> Has anyone come across this or have an idea where to start?
>
> Lou
> VK3ALB
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30442. Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 03:32:02 UTC
From: Bob Macklin
Topic: 28156 Message: 30442

Mine does the same exact thing. I need to find the time to really check it out. I believe it is a spike getting in the modulator and momentarily unbalancing it.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Lou Blasco
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 26, 2011 8:00 PM
Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX

Thanks Bob,

I paid particular attention to the Balanced Modulator adjustment as it makes sense that it would come from there if anywhere. I couldn't get a complete null on LSB and trying to balance between the LSB & USB I couldn't find a setting for VR1 and TC1 that would give me equally low leakage for both and found LSB particularly touchy to adjust. Since I work the low bands only with this rig I opted in favour of minimum carrier leakage on LSB. That gave me less than a milliwatt of leakage on LSB and less than I could measure on USB. I think that's more than good enough.

However the burst or spike remains on LSB TX. As soon as I go to TX I get a spike of maybe 250mS or less and on a peak reading watt meter it shows about 20W PEP. After that the radio can stay in SSB TX and the power meter reads zero. I can see this spike on several different power meters but listening on a comms receiver I can't hear it on frequency which explains why I haven't had bad reports on air.

Lou
VK3ALB

At 12:52 27/03/2011, you wrote:
>It does not do it on USB because the carrier is fully balanced on
>USB. You cannot fully null the carrier for both USB and LSB. You
>will find that if you set the null on LSB then USB will be off.
>
>You are supposed to set the null so you have the same amount of
>leakage on both USB and LSB. It will take you some FIDDLING to
>figure out how to get the best balance.
>
>Bob Macklin
>SAM8

>Seattle, Wa
> ----- Original Message -----
> From: Lou Blasco
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, March 26, 2011 6:00 PM
> Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
>
>
>
> Hi All,
>
> I have a TS520S that give a burst of RF when I switch to TX on LSB.
> It is band independent, doesn't matter if it's hot or cold, doesn't
> happen on USB. Also happens with no mic connected using the send
> switch. On air reports are great, no one can hear anything but I know
> it's there and I don't like it.
>
> Tubes are neutralized, I've run an alignment and found nothing
> unusual, AVR volts are good, supply volts on the carrier board 8.3V
> and crystal switching looks ok.
>
> Has anyone come across this or have an idea where to start?
>
> Lou
> VK3ALB
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>Yahoo! Groups Links
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30443. Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 03:49:34 UTC
From: w5rkl
Topic: 28156 Message: 30443

What position is the meter switch set to when this happens? Do you see the ALC meter setting "jump" when you switch from receive to transmit? Do you actually see RF output on an external watt meter when this occurs?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi All,
>
> I have a TS520S that give a burst of RF when I switch to TX on LSB.
> It is band independent, doesn't matter if it's hot or cold, doesn't
> happen on USB. Also happens with no mic connected using the send
> switch. On air reports are great, no one can hear anything but I know
> it's there and I don't like it.
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> Tubes are neutralized, I've run an alignment and found nothing
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> and crystal switching looks ok.
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> Has anyone come across this or have an idea where to start?
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> Lou
> VK3ALB
>

30444. Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 03:51:37 UTC
From: w5rkl
Topic: 28156 Message: 30444

I missed where you said there is an indication on an external watt meter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> What position is the meter switch set to when this happens? Do you see the ALC meter setting "jump" when you switch from receive to transmit? Do you actually see RF output on an external watt meter when this occurs?
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@> wrote:
> >
> > Hi All,
> >
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> > It is band independent, doesn't matter if it's hot or cold, doesn't
> > happen on USB. Also happens with no mic connected using the send
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> > and crystal switching looks ok.
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> > Has anyone come across this or have an idea where to start?
> >
> > Lou
> > VK3ALB
> >
>

30445. Re: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 04:03:30 UTC
From: Lou Blasco
Topic: 28156 Message: 30445

Hi Mike,

This radio has been unused for the last year or so while I
concentrated on microwave field operation and when I fired it up
yesterday I wasn't sure if I was seeing things and couldn't remember
if this was normal - I hope it isn't. Bob confirms he sees a similar
thing on his radio. I forgot to mention that I can also see a surge
in tube current at the same time. It's hard to get exact readings
with something that occurs so quickly but I'm convinced there's RF there.

Lou
VK3ALB

At 14:51 27/03/2011, you wrote:
>I missed where you said there is an indication on an external watt meter.
>
>73s
>Mike
>W5RKL
>
>
>--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >
> > What position is the meter switch set to when this happens? Do
> you see the ALC meter setting "jump" when you switch from receive
> to transmit? Do you actually see RF output on an external watt
> meter when this occurs?
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@> wrote:
> > >
> > > Hi All,
> > >
> > > I have a TS520S that give a burst of RF when I switch to TX on LSB.
> > > It is band independent, doesn't matter if it's hot or cold, doesn't
> > > happen on USB. Also happens with no mic connected using the send
> > > switch. On air reports are great, no one can hear anything but I know
> > > it's there and I don't like it.
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> > > Tubes are neutralized, I've run an alignment and found nothing
> > > unusual, AVR volts are good, supply volts on the carrier board 8.3V
> > > and crystal switching looks ok.

> > >
> > > Has anyone come across this or have an idea where to start?
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> > > VK3ALB
> > >
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>Yahoo! Groups Links
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30446. Re: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 04:18:29 UTC
From: Bob Macklin
Topic: 28156 Message: 30446

There is RF there . It shows on the SWR/PWR meter.

Mine is new to me and I have not made an effort to find the problem yet.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Lou Blasco
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, March 26, 2011 9:03 PM
Subject: Re: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Hi Mike,

This radio has been unused for the last year or so while I
concentrated on microwave field operation and when I fired it up
yesterday I wasn't sure if I was seeing things and couldn't remember
if this was normal - I hope it isn't. Bob confirms he sees a similar
thing on his radio. I forgot to mention that I can also see a surge
in tube current at the same time. It's hard to get exact readings
with something that occurs so quickly but I'm convinced there's RF there.

Lou
VK3ALB

At 14:51 27/03/2011, you wrote:
>I missed where you said there is an indication on an external watt meter.
>
>73s
>Mike
>W5RKL
>
>
>--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >
> > What position is the meter switch set to when this happens? Do
> you see the ALC meter setting "jump" when you switch from receive
> to transmit? Do you actually see RF output on an external watt
> meter when this occurs?
> >
> > 73s
> > Mike
> > W5RKL
> >

> >
> > --- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@> wrote:
> > >
> > > Hi All,
> > >
> > > I have a TS520S that give a burst of RF when I switch to TX on LSB.
> > > It is band independent, doesn't matter if it's hot or cold, doesn't
> > > happen on USB. Also happens with no mic connected using the send
> > > switch. On air reports are great, no one can hear anything but I know
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> > > VK3ALB
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>Yahoo! Groups Links
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[Non-text portions of this message have been removed]

30447. Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 11:46:36 UTC
From: w5rkl
Topic: 28156 Message: 30447

Hello Bob and Lou,

Lou, this problem didn't occur when you shut the 530 down for a couple of years.

I'm not sure the problem is a carrier null/balance adjustment between USB and LSB. The problem could be caused by RL1 relay on the IF board.

I wouldn't rule out the relay RL1 on the IF Unit.

The problem could be caused by a spike generated by RL1 relay terminals that control "RLR" and "RLT" on the AF Unit. These relay terminals switch 9VDC between "RLR" and "RLT". Note on the schematic that the 9VDC these relay terminals switch also powers the speech amplifier and associated support circuits such as Q15, Q16, and Q17. A spike on the 9VDC can result in a momentarily unbalance condition in the BM.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Mine does the same exact thing. I need to find the time to really check it out. I believe it is a spike getting in the modulator and momentarily unbalancing it.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Lou Blasco
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, March 26, 2011 8:00 PM
> Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX
>
>
>
> Thanks Bob,
>
> I paid particular attention to the Balanced Modulator adjustment as
> it makes sense that it would come from there if anywhere. I couldn't
> get a complete null on LSB and trying to balance between the LSB &
> USB I couldn't find a setting for VR1 and TC1 that would give me
> equally low leakage for both and found LSB particularly touchy to
> adjust. Since I work the low bands only with this rig I opted in
> favour of minimum carrier leakage on LSB. That gave me less than a
> milliwatt of leakage on LSB and less than I could measure on USB. I

> think that's more than good enough.
>
> However the burst or spike remains on LSB TX. As soon as I go to TX I
> get a spike of maybe 250mS or less and on a peak reading watt meter
> it shows about 20W PEP. After that the radio can stay in SSB TX and
> the power meter reads zero. I can see this spike on several different
> power meters but listening on a comms receiver I can't hear it on
> frequency which explains why I haven't had bad reports on air.
>
> Lou
> VK3ALB
>
> At 12:52 27/03/2011, you wrote:
> >It does not do it on USB because the carrier is fully balanced on
> >USB. You cannot fully null the carrier for both USB and LSB. You
> >will find that if you set the null on LSB then USB will be off.
> >
> >You are supposed to set the null so you have the same amount of
> >leakage on both USB and LSB. It will take you some FIDDLING to
> >figure out how to get the best balance.
> >
> >Bob Macklin
> >SAM8
> >Seattle, Wa
> > ----- Original Message -----
> > From: Lou Blasco
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, March 26, 2011 6:00 PM
> > Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> >
> >
> >
> > Hi All,
> >
> > I have a TS520S that give a burst of RF when I switch to TX on LSB.
> > It is band independent, doesn't matter if it's hot or cold, doesn't
> > happen on USB. Also happens with no mic connected using the send
> > switch. On air reports are great, no one can hear anything but I know
> > it's there and I don't like it.
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> > Tubes are neutralized, I've run an alignment and found nothing
> > unusual, AVR volts are good, supply volts on the carrier board 8.3V
> > and crystal switching looks ok.
> >
> > Has anyone come across this or have an idea where to start?
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> > Lou
> > VK3ALB
> >
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> >Yahoo! Groups Links
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30448. Re: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 12:18:35 UTC
From: Lou Blasco
Topic: 28156 Message: 30448

Hi Mike,

I follow your reasoning re a spike on the 9V rail causing problems
including an unbalance in the BM but I wonder why it would only occur
on LSB? It's late Sunday here and with me back at work tomorrow I
won't get a chance to look at the radio for a few days but I will follow up.

Lou
VK3ALB

At 22:46 27/03/2011, you wrote:
>Hello Bob and Lou,
>
>Lou, this problem didn't occur when you shut the 530 down for a
>couple of years.
>
>I'm not sure the problem is a carrier null/balance adjustment
>between USB and LSB. The problem could be caused by RL1 relay on the IF board.
>
>I wouldn't rule out the relay RL1 on the IF Unit.
>
>The problem could be caused by a spike generated by RL1 relay
>terminals that control "RLR" and "RLT" on the AF Unit. These relay
>terminals switch 9VDC between "RLR" and "RLT". Note on the schematic
>that the 9VDC these relay terminals switch also powers the speech
>amplifier and associated support circuits such as Q15, Q16, and Q17.
>A spike on the 9VDC can result in a momentarily unbalance condition in the BM.
>
>73s
>Mike
>W5RKL
>
>
>
>--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
> >
> > Mine does the same exact thing. I need to find the time to really
> check it out. I believe it is a spike getting in the modulator and
> momentarily unbalancing it.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Lou Blasco

> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, March 26, 2011 8:00 PM
> > Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> >
> >
> >
> > Thanks Bob,
> >
> > I paid particular attention to the Balanced Modulator adjustment as
> > it makes sense that it would come from there if anywhere. I couldn't
> > get a complete null on LSB and trying to balance between the LSB &
> > USB I couldn't find a setting for VR1 and TC1 that would give me
> > equally low leakage for both and found LSB particularly touchy to
> > adjust. Since I work the low bands only with this rig I opted in
> > favour of minimum carrier leakage on LSB. That gave me less than a
> > milliwatt of leakage on LSB and less than I could measure on USB. I
> > think that's more than good enough.
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> > However the burst or spike remains on LSB TX. As soon as I go to TX I
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> > the power meter reads zero. I can see this spike on several different
> > power meters but listening on a comms receiver I can't hear it on
> > frequency which explains why I haven't had bad reports on air.
> >
> > Lou
> > VK3ALB
> >
> > At 12:52 27/03/2011, you wrote:
> > >It does not do it on USB because the carrier is fully balanced on
> > >USB. You cannot fully null the carrier for both USB and LSB. You
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> > >Bob Macklin
> > >SAM8
> > >Seattle, Wa
> > > ----- Original Message -----
> > > From: Lou Blasco
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Saturday, March 26, 2011 6:00 PM
> > > Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> > >
> > >
> > >
> > > Hi All,
> > >

> > > I have a TS520S that give a burst of RF when I switch to TX on LSB.
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30449. Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 13:10:54 UTC
From: w5rkl
Topic: 28156 Message: 30449

Evening Lou,

I guess I should have said I'm not sure the carrier null adjustment is the sole source of the problem. It's quite possible that the carrier null adjustment and the relay on the IF unit are both contributing to the problem.

That relay, same relay on the AF board in the 830 and the IF and Filter boards in the TS-120 and TS-130, has a history of causing quite a few problems.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Mike,
>
> I follow your reasoning re a spike on the 9V rail causing problems
> including an unbalance in the BM but I wonder why it would only occur
> on LSB? It's late Sunday here and with me back at work tomorrow I
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> Lou
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> >Mike

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> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: Lou Blasco
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Saturday, March 26, 2011 8:00 PM
> > > Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX
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> > > adjust. Since I work the low bands only with this rig I opted in
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> > > think that's more than good enough.
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> > > However the burst or spike remains on LSB TX. As soon as I go to TX I
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> > > Lou
> > > VK3ALB
> > >
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> > > >figure out how to get the best balance.
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> > > >Bob Macklin
> > > >SAM8
> > > >Seattle, Wa
> > > > ----- Original Message -----
> > > > From: Lou Blasco
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Saturday, March 26, 2011 6:00 PM
> > > > Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> > > >
> > > >
> > > >
> > > > Hi All,
> > > >
> > > > I have a TS520S that give a burst of RF when I switch to TX on LSB.
> > > > It is band independent, doesn't matter if it's hot or cold, doesn't
> > > > happen on USB. Also happens with no mic connected using the send
> > > > switch. On air reports are great, no one can hear anything but I know
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> > > > Lou
> > > > VK3ALB
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30450. Re: [TS-520_820_530_830] TS 520SE lack of drive in the tune position 10m and 15m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 13:11:40 UTC
From: John Davidson
Topic: 30437 Message: 30450

New out of the box, My TS520 had a slight bump on the ALC meter when peaking the drive capacitor in TUNE on 10M. The lower bands were always high on the meter when tuning.
Now the same 520 has to be drive tuned for a peak of plate current and then the plate tuning dipped, ONLY ON 10m. (On my 2nd set of 6146 tubes the last 20 years)I have never seen more than 70 W out on 10M. I have never tried to tune for more than 200 mA. The lower bands always gave me 100 Watts out.

From: k4ynd <k4ynd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 26, 2011 2:55:45 PM
Subject: [TS-520_820_530_830] TS 520SE lack of drive in the tune position 10m and 15m

I have had a TS 520SE for over a year now has always worked great on 80,40,20 and 15.. When I got it. I could not get any drive on 10 meters (in the tune position.) Today I tried to tune up on a dummy load on 15 in the tune position. When I try to adjust the drive knob the needle (ALC position) barely shows anything.

Im hoping this points to a very soft drive tube (still tunes on 40)

What do you think

K4YND

[Non-text portions of this message have been removed]

30451. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 13:15:55 UTC
From: John Davidson
Topic: 30408 Message: 30451

0h well, it has been about 7 years since I had to do any repair work on the old
TS520 workhorse and read thru the book.
I had a relay driver transistor fail.

----- Original Message ----
From: "n6wk@..." <n6wk@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, March 26, 2011 6:03:32 PM
Subject: Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

My TS-520S Service manual says 21.5 mhz

On 3/26/2011 1:21 PM, yioutta_99 wrote:
>
> my manual states 28.5
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, John Davidson
> <k8jd@...> wrote:
> >
> > I recall the manual giving 14 MHz as the frequency to do the
> neutralization
> > procedure on. Not 10M !
> > I never got much ALC reading on 10M, even when my TS520 was new.
> >
> >
> >
> > _99 <yioutta_99@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Sat, March 26, 2011 12:01:06 AM
> > Subject: [TS-520_820_530_830] Re: 520s neutralization
> >
> > Â
> >
> > UPDATE: I changed the drive and the ALC was working on 10 meters. i
> got rid of
> > the length of coax and i could see the signal on the scope FB I was
> able to tune
> > down to min. i buttoned up the radio and i am putting out close to 100
> > watts...BUT I also relaozed i was not at 28.5 MHZ when i
> neutralized..it was
> > more like 28.2 MHZ. Is that important? Should i redo it?
> >

> > steve
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Bob Macklin
> <macklinbob@> wrote:
> > >
> > > The 4.7M resistor in the RF probe converts the peak reading of the
> probe to RMS
> > >displayed by the meter.
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: w5rkl
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Friday, March 25, 2011 12:10 PM
> > > Subject: [TS-520_820_530_830] Re: 520s neutralization
> > >
> > >
> > >
> > > One more thing. The link I provided shows a resistor, 4.7Meg, in
> series to the
> > >VTVM. A much lower resistance will work, 2K or so will do fine. You
> want a much
> > >RF signal present at the input to the VTVM as possible.
> > >
> > > NEVER attempt to measure the RF signal at the output of the final
> amplifier!!
> > >The signal level at that point will destroy the RF probe and could
> easily damage
> > >your VTVM.
> > >
> > > I agree with the other response, made sure the "SG" switch is set
> to "OFF" when
> > >making the neutralization adjustment but also don't forget to set
> the SG switch
> > >back to ON when you have finished neutralizing the final amplifier.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Sound advice Chuck!
> > > >
> > > > The manuals show a lot of test equipment, some appear to be quite

> > >sophisticated. However, you don't need to spend a lot of money on
> test equipment
> > >just to satisfy the pictorial setups shown in the manual. Remember,
> the service
> > >manuals were written based on test equipment readily available at
> factory
> > >service departments. The average ham doesn't have all that test
> equipment.
> > >
> > > >
> > > > Using common sense and simple test gear you can achieve the same
> results. You
> > >can build a simple RF probe using a blocking capacitor and a couple
> of diodes.
> > >An RF probe is not a sophisticated piece of test gear. It only
> "appears" to be.
> > >The following link will show you how simple an RF probe really is.
> > > >
> > > > You can find used vacuum tube VTVMs on eBay. It doesn't matter
> which one you
> > >choose, vacuum tube or all solid state, they all do the same thing!
> > > >
> > > > There isn't much to a vacuum tube VTVM, typically 2 tubes, a
> dual Triode such
> > >as a 12AU7 and a dual diode 6AL5, tubes that are readily available
> and "cheap".
> > >Most of the time the original tubes are still working rather well.
> Triode tubes
> > >such as 12AU7s and diode tubes such as 6AL5s don't fail, they keep
> on working
> > >even after 40 years. In most cases you do not have to replace them,
> just align
> > >the VTVM using the simple instructions in the VTVM's manual. I have
> 2 vacuum
> > >tube VTVMs, one from Knightkit and the other from Eico and both
> have all the
> > >original components except for the old dried up half wave rectifier
> filter
> > >capacitor (typically only one cap to worry about).
> > > >
> > > > Remember, this is "Amateur Radio" not "NASA Rocket Science".
> Therefore, you
> > >don't need expensive sophisticated test equipment to troubleshoot
> and repair ham
> > >gear. Many problems can be found rather quickly by simply taking
> voltage
> > >readings. Voltage readings can tell you a lot how a circuit is
> performing.
> > > >
> > > > I built a simple RF probe inside a short piece of small diameter

> PVC pipe and
> > >a heavy piece of wire through a PVC pipe cap, a .01ufd 100VDC disc
> capacitor and
> > >a couple of 1N5711 diodes in series (I have quite a few 1N5711
> diodes so I used
> > >them) plus a short piece of RG-174 coax cable. As you can see, you
> don't need to
> > >spend a lot of money for a simple VTVM and an RF probe.
> > > >
> > > > http://www.io.com/~n5fc/rfprobe1.htm
> <http://www.io.com/%7En5fc/rfprobe1.htm>
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Charles Coffee
> <chascoffee@>
> > >wrote:
> > > > >
> > > > > Steve;
> > > > > I use a 10X probe on a 100MHz Tektronix scope with no problem
> right off
> > the
> > > > > coaxial cable to the dummy load.
> > > > > I connect a pin to the coaxial "T" pin and the scope probe
> ground to the
> > > > > outer shell of the "T" and take
> > > > > the reading. If you set this up as per the manual, you should
> not have a
> > > > > problem - Remember that the
> > > > > "SG" switch is off during this process.
> > > > >
> > > > > Regards
> > > > >
> > > > > Chuck, KJ4GU
> > > > >
> > > > > On Fri, Mar 25, 2011 at 12:49 PM, yioutta_99 <yioutta_99@> wrote:
> > > > >
> > > > > > thanks mike
> > > > > >
> > > > > > Any thoughts on using a coil of shorted coax on a 20X 500
> MHZ probe to
> > > >use
> > > > > > on the scope? do you think that will work okay?
> > > > > >
> > > > > > steve
> > > > > >

> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > > > > >
> > > > > > > > Hello Steve,
> > > > > > > > >
> > > > > > > > > The key is to adjust the neutralizing variable capacitor
> for the
> > lowest
> > > > > > > > indication on the RF Probe, scope, or separate receiver. If
> you follow
> > > >the
> > > > > > > > steps in the 520 manual you will do fine.
> > > > > > > > >
> > > > > > > > > Just remember to set the rear panel SG switch to ON when the
> > > >neutralizing
> > > > > > > > adjustment is completed. If you forget this step you could
> easily think
> > > >you
> > > > > > > > did something wrong that broke your transmitter.
> > > > > > > > >
> > > > > > > > > 73s
> > > > > > > > > Mike
> > > > > > > > > W5RKL
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "yioutta_99" <yioutta_99@>
> > > > > > > wrote:
> > > > > > > > >
> > > > > > > > > Hi
> > > > > > > > >
> > > > > > > > > Sorry if this subject has been hammered on before but...
> > > > > > > > >
> > > > > > > > > I will be changing my 33 year old finals this weekend.
> It will be my
> > > > > > > first time. i have access to a scope but not an RF probe. I
> was thinking
> > > > > > > about looping a bit of coax to make a sniffer Antenna for
> the probe and
> > > > > > > seeing if i get a signal to neutralize that way. is this a
> good idea?
> > Any
> > > > > > > other suggestions? I also will be able to bet another
> Kenwood to receive
> > > > > > > the 28 mhz signal and then tune for a dip. would this be better?
> > > > > > > > >
> > > > > > > > > Thanks
> > > > > > > > >
> > > > > > > > > steve
> > > > > > > > >

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Yahoo! Groups Links

30452. Re: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 13:32:55 UTC
From: Bob Macklin
Topic: 28156 Message: 30452

This is what I believe the problem probably is.

The person I bought my TS-520 from was trying to fix it with the carrier null. But the problem only occurs when the relay activates.

Thanks for telling me where to look.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 27, 2011 4:46 AM
Subject: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX

Hello Bob and Lou,

Lou, this problem didn't occur when you shut the 530 down for a couple of years.

I'm not sure the problem is a carrier null/balance adjustment between USB and LSB. The problem could be caused by RL1 relay on the IF board.

I wouldn't rule out the relay RL1 on the IF Unit.

The problem could be caused by a spike generated by RL1 relay terminals that control "RLR" and "RLT" on the AF Unit. These relay terminals switch 9VDC between "RLR" and "RLT". Note on the schematic that the 9VDC these relay terminals switch also powers the speech amplifier and associated support circuits such as Q15, Q16, and Q17. A spike on the 9VDC can result in a momentarily unbalance condition in the BM.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Mine does the same exact thing. I need to find the time to really check it out. I believe it is a spike getting in the modulator and momentarily unbalancing it.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Lou Blasco

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, March 26, 2011 8:00 PM
> Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX
>
>
>
> Thanks Bob,
>
> I paid particular attention to the Balanced Modulator adjustment as
> it makes sense that it would come from there if anywhere. I couldn't
> get a complete null on LSB and trying to balance between the LSB &
> USB I couldn't find a setting for VR1 and TC1 that would give me
> equally low leakage for both and found LSB particularly touchy to
> adjust. Since I work the low bands only with this rig I opted in
> favour of minimum carrier leakage on LSB. That gave me less than a
> milliwatt of leakage on LSB and less than I could measure on USB. I
> think that's more than good enough.
>
> However the burst or spike remains on LSB TX. As soon as I go to TX I
> get a spike of maybe 250mS or less and on a peak reading watt meter
> it shows about 20W PEP. After that the radio can stay in SSB TX and
> the power meter reads zero. I can see this spike on several different
> power meters but listening on a comms receiver I can't hear it on
> frequency which explains why I haven't had bad reports on air.
>
> Lou
> VK3ALB
>
> At 12:52 27/03/2011, you wrote:
> >It does not do it on USB because the carrier is fully balanced on
> >USB. You cannot fully null the carrier for both USB and LSB. You
> >will find that if you set the null on LSB then USB will be off.
> >
> >You are supposed to set the null so you have the same amount of
> >leakage on both USB and LSB. It will take you some FIDDLING to
> >figure out how to get the best balance.
> >
> >Bob Macklin
> >SAM8
> >Seattle, Wa
> > ----- Original Message -----
> > From: Lou Blasco
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, March 26, 2011 6:00 PM
> > Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> >
> >
> >
> > Hi All,
> >

> > I have a TS520S that give a burst of RF when I switch to TX on LSB.
> > It is band independent, doesn't matter if it's hot or cold, doesn't
> > happen on USB. Also happens with no mic connected using the send
> > switch. On air reports are great, no one can hear anything but I know
> > it's there and I don't like it.
> >
> > Tubes are neutralized, I've run an alignment and found nothing
> > unusual, AVR volts are good, supply volts on the carrier board 8.3V
> > and crystal switching looks ok.
> >
> > Has anyone come across this or have an idea where to start?
> >
> > Lou
> > VK3ALB
> >
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> >Yahoo! Groups Links
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30453. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 14:13:02 UTC
From: w5rkl
Topic: 30408 Message: 30453

Neutralizing on 28.2 verses 28.5 is not a problem so don't worry about that.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> 0h well, it has been about 7 years since I had to do any repair work on the old
> TS520 workhorse and read thru the book.
> I had a relay driver transistor fail.
>

30454. Re: TS520S - RF spike on LSB TX

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 14:21:18 UTC
From: w5rkl
Topic: 28156 Message: 30454

This is similar to how the transceiver can switch momentarily from receive to transmit if the VOX switch is set to ON when changing modes (moving the Mode switch from CW, USB, or LSB).

A voltage spike is created when switching the mode switch with VOX turned ON. The spike creates noise that appears at the input to the VOX Unit. The noise causes the VOX Relay amplifier to momentarily conduct energizing the relays which causes the transceiver to switch from receive to transmit then back to receive.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> This is what I believe the problem probably is.
>
> The person I bought my TS-520 from was trying to fix it with the carrier null. But the problem only occurs when the relay activates.
>
> Thanks for telling me where to look.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, March 27, 2011 4:46 AM
> Subject: [TS-520_820_530_830] Re: TS520S - RF spike on LSB TX
>
>
>
>
> Hello Bob and Lou,
>
> Lou, this problem didn't occur when you shut the 530 down for a couple of years.
>
> I'm not sure the problem is a carrier null/balance adjustment between USB and LSB. The problem could be caused by RL1 relay on the IF board.
>
> I wouldn't rule out the relay RL1 on the IF Unit.
>
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amplifier and associated support circuits such as Q15, Q16, and Q17. A spike on the 9VDC can result in a momentarily unbalance condition in the BM.
>
> 73s
> Mike
> W5RKL
>
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> > Bob Macklin
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> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Lou Blasco
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Saturday, March 26, 2011 8:00 PM
> > Subject: Re: [TS-520_820_530_830] TS520S - RF spike on LSB TX
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> >
> >
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> > However the burst or spike remains on LSB TX. As soon as I go to TX I
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> > the power meter reads zero. I can see this spike on several different
> > power meters but listening on a comms receiver I can't hear it on
> > frequency which explains why I haven't had bad reports on air.
> >
> > Lou
> > VK3ALB
> >
> > At 12:52 27/03/2011, you wrote:
> > >It does not do it on USB because the carrier is fully balanced on
> > >USB. You cannot fully null the carrier for both USB and LSB. You
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> > >

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> > >SAM8
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> > > Subject: [TS-520_820_530_830] TS520S - RF spike on LSB TX
> > >
> > >
> > >
> > > Hi All,
> > >
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> > > Tubes are neutralized, I've run an alignment and found nothing
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> > >
> > > Has anyone come across this or have an idea where to start?
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> > > Lou
> > > VK3ALB
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> > >Yahoo! Groups Links
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30455. A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 19:44:19 UTC
From: Alan Nicholson (ADHB)
Topic: 30349 Message: 30455

Hi Jim,

I'm glad I am not the only one confused:-)

Just to clarify - I am ONLY using the rig to receive as I am not yet licenced. I believe from information given here and elsewhere that a random length of wire is OK to receive(but not for tx) but I am in the process of making up my first Dipole. Poor weather put that on hold this weekend! Also we live in a dip and the reception for cellphones is marginal so I assume that the reception for a random wire antenna probably leaves a lot to be desired.

I assumed the S meter would fluctuate with the signal but also thought that it needed to be around the S9 mark and that when it shot off the dial I should tune it back. The problem I have is that although the manual covers each dial and button it does not explain in words I can understand what the actual effect is or why it is used. I intend to try and get someone at the local Ham Club to help me here - and also maybe run the rig in their shack so that I can be sure that it is operating correctly as it appears to have had a less than sympathetic life - unlike the 520S that I have but have not used yet.

As long as members here can put up with my basic questions I am actually learning something and at least my interest is being maintained.

73

Alan Nicholson

----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, March 24, 2011 2:20 PM
Subject: Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Your remarks are confusing me, concerning the RF gain and the "calibration". Are you expecting the S-meter to hover at some pre-determined value ? You know, don't you that you turn the RF gain all the way clockwise, and the S-meter should rise and fall with the strength of the signals coming in.

If you turn it counter-clockwise, the S-meter probably will go up scale (that is the way most radios work, anyway) and the signals will get weaker and weaker, because you are forcing your radio to act as if a very strong signal is coming in, when in fact there is nothing much there!

Also, remember that these types of radios are meant to work with a 50 ohm antenna. That means, a resonant dipole working through 50 ohm coax cable, such as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is no wonder that you are not getting much performance out of the receiver.

If you insist on using a random piece of wire, please get an "antenna tuner" which will match the impedance of the random wire (probably very high) to the radio (50 ohms, as

stated)

Please clarify if that is how you are trying to operate the rig.

73, Jim AG3Y

##
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Download a free evaluation of MailMarshal at www.marshal.com
##

30456. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 19:57:23 UTC
From: Bob Macklin
Topic: 30349 Message: 30456

First about the S-Meter. It shows the signal and noise. Disconnect the antenna and it should be very low. and the noise in the speaker should be very low. Reconnect the antenna and the noise should increase as well as the reading on the S-Meter.

Good received signals will show on the S-Meter above the noise level. But for SSB they will be bouncy.

On very strong signals turn down (CCW) the RF Gain control. But when you do this the S-Meter will move CW.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: Alan Nicholson (ADHB)
To: 'TS-520_820_530_830@yahoogroups.com'
Sent: Sunday, March 27, 2011 12:44 PM
Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Hi Jim,

I'm glad I am not the only one confused:-)

Just to clarify - I am ONLY using the rig to receive as I am not yet licenced. I believe from information given here and elsewhere that a random length of wire is OK to receive(but not for tx) but I am in the process of making up my first Dipole. Poor weather put that on hold this weekend! Also we live in a dip and the reception for cellphones is marginal so I assume that the reception for a random wire antenna probably leaves a lot to be desired.

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As long as members here can put up with my basic questions I am actually learning something and at least my interest is being maintained.

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Alan Nicholson

----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com

Sent: Thursday, March 24, 2011 2:20 PM
Subject: Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Your remarks are confusing me, concerning the RF gain and the "calibration". Are you expecting the S-meter to hover at some pre-determined value ? You know, don't you that you turn the RF gain all the way clockwise, and the S-meter should rise and fall with the strength of the signals coming in.

If you turn it counter-clockwise, the S-meter probably will go up scale (that is the way most radios work, anyway) and the signals will get weaker and weaker, because you are forcing your radio to act as if a very strong signal is coming in, when in fact there is nothing much there!

Also, remember that these types of radios are meant to work with a 50 ohm antenna. That means, a resonant dipole working through 50 ohm coax cable, such as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is no wonder that you are not getting much performance out of the receiver.

If you insist on using a random piece of wire, please get an "antenna tuner" which will match the impedance of the random wire (probably very high) to the radio (50 ohms, as stated)

Please clarify if that is how you are trying to operate the rig.

73, Jim AG3Y

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30457. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 21:42:21 UTC
From: jeffrey lord
Topic: 30349 Message: 30457

Allan,
 You do not have to TURN the S Meter down!!!!
This meter in receive only shows the strength of the incoming signal.

FOR TRANSMIT YOU MUST TUNE THE SET TO THE BAND!!!!!

When TUNNING The SET for TRANSMIT, you do the following:
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TUNNING should be done into a DUMMY LOAD of at least 50watts, If you don't have one , buy or build one they are not expensive to build.

Jeff
VK4FNRS

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From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, 27 March, 2011 11:57:23 AM
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Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
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Yahoo! Groups Links

30458. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 21:55:02 UTC
From: Terry Wagoner
Topic: 30349 Message: 30458

Folks--The S-meter business is my fault. I was trying to tell him how to maximize the receiver front end sensitivity by ensuring that the driver control was peaked. I was trying to explain to him how to do that using the Xtal Calibrator. That is where he is coming up with the S9 business. I didnt want him tuning into a dummy load when he was having trouble understanding the operating manual instructions for receiver operation. You cant hurt anything peaking the driver control in receive mode. Apparently communication and teaching is not my strong suit. I will butt out at this time. He truly needs a local ham to demo for him. Terry K9TW

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Sent: Sun, March 27, 2011 5:42:21 PM
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

30459. Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 22:02:14 UTC
From: yioutta_99
Topic: 30349 Message: 30459

I just replaced my tubes. In doing this i found out that you can peak the cal sig using the drive to preset it for transmit tune. i have always done it by ear. i now tried it using the cal. But when i tune up for transmit, I find I am not at peak with the drive. Is this a symptom of something needing an alignment?

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
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> maximize the receiver front end sensitivity by ensuring that the driver control
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> Yahoo! Groups Links
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30460. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 22:04:53 UTC
From: Lou Blasco
Topic: 30349 Message: 30460

Hi Allan,

In the case of strong received signals it's quite ok to "turn the s
meter down". Sometimes running a receiver wide open (maximum gain) is
not necessary. If I'm chatting with a local group on 80m and the QRN
is coming up I'll use the attenuator and RF gain to drop the
background noise enough so it doesn't annoy me. A much more pleasant
listening experience for sure. Alan says he is using his radio on
receive only so I think Bob's advice is good.

Lou
VK3ALB

At 08:42 28/03/2011, you wrote:
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30461. Re: [TS-520_820_530_830] Re: zero beat

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 22:13:34 UTC
From: John Becker
Topic: 30404 Message: 30461

Some time ago there was one of those videos of "how to zero beat"
on you tube. It's been so long since I have been on that site since
moving to the rural area (stuck on dial up) I really cant say if it is
still there.

But if was very good at showing the "how to"

John, W0JAB

30462. Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 23:17:08 UTC
From: Joseph Stiles
Topic: 30349 Message: 30462

yioutta_99,

If you have replaced ALL the tubes...driver, both final amp tubes, you should: 1. do the "basic" alignment steps in the operators manual for the ANT, MIX, and DRIVE coils. Also, especially if you have changed the finals...neutralize them. Good luck.................

73's joe wb7uqu

From: yioutta_99 <yioutta_99@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 27, 2011 3:02:14 PM
Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S

I just replaced my tubes. In doing this i found out that you can peak the cal sig using the drive to preset it for transmit tune. i have always done it by ear. i now tried it using the cal. But when i tune up for transmit, I find I am not at peak with the drive. Is this a symptom of something needing an alignment?

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Folks--The S-meter business is my fault. I was trying to tell him how to
> maximize the receiver front end sensitivity by ensuring that the driver control
>
> was peaked. I was trying to explain to him how to do that using the Xtal
> Calibrator. That is where he is coming up with the S9 business. I didnt want
>him
>
> tuning into a dummy load when he was having trouble understanding the operating
>
> manual instructions for receiver operation. You cant hurt anything peaking the

> driver control in receive mode. Apparently communication and teaching is not
>my
>
> strong suit. I will butt out at this time. He truly needs a local ham to demo
> for him. Terry K9TW
>
>
>
> ---
> From: jeffrey lord <jc_2aussie@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, March 27, 2011 5:42:21 PM

> Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
>
>
> Allan,
> You do not have to TURN the S Meter down!!!!
> This meter in receive only shows the strength of the incoming signal.
>
> FOR TRANSMIT YOU MUST TUNE THE SET TO THE BAND!!!!!
>
> When TUNNING The SET for TRANSMIT, you do the following:
> 1. set the BIAS for 60MA (once this is set , this step does not have to be
> repeated on each tune up)
> BIAS CONTROL is in the access panel on the left hand side of the set.
> 2 METER SWITCH to ALC & MODE switch to TUN, ADJUST the DRIVE to give MAX
> DEFLECTION on METER.
> 3, MODE SWITCH to IP ADJUST PLATE CONTROL to DIP /LOWEST reading on METER
> 4. MODE SWITCH to CW ,METER SWITCH TO RF & ADJUST PLATE & LOAD CONTROLS to MAX
>
> DEFLECTION on METER
>
> This is a quick tune -up for the set & must be done each time you change BAND ,
>
> This also tunes the set for best rec in each BAND.
>
> TUNNING should be done into a DUMMY LOAD of at least 50watts, If you don't have
>
> one , buy or build one they are not expensive to build.
>
> Jeff
> VK4FNRS
>
> ----- Original Message ----
> From: Bob Macklin <macklinbob@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, 27 March, 2011 11:57:23 AM
> Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
>
> First about the S-Meter. It shows the signal and noise. Disconnect the antenna

> and it should be very low. and the noise in the speaker should be very low.
> Reconnect the antenna and the noise should increase as well as the reading on
> the S-Meter.
>
> Good received signals will show on the S-Meter above the noise level. But for
> SSB they will be bouncy.
>
> On very strong signals turn down (CCW) the RF Gain control. But when you do
>this
>
>

> the S-Meter will move CW.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: Alan Nicholson (ADHB)
> To: 'TS-520_820_530_830@yahoogroups.com'
> Sent: Sunday, March 27, 2011 12:44 PM
> Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
>
>
> Hi Jim,
>
> I'm glad I am not the only one confused:-)
>
> Just to clarify - I am ONLY using the rig to receive as I am not yet
>licenced.
>
>
> I believe from information given here and elsewhere that a random length of
>wire
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>
> is OK to receive(but not for tx) but I am in the process of making up my first

> Dipole. Poor weather put that on hold this weekend! Also we live in a dip and
> the reception for cellphones is marginal so I assume that the reception for a
> random wire antenna probably leaves a lot to be desired.
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> I assumed the S meter would fluctuate with the signal but also thought that
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> needed to be around the S9 mark and that when it shot off the dial I should
>tune
>
>
> it back. The problem I have is that although the manual covers each dial and
> button it does not explain in words I can understand what the actual effect is

> or why it is used. I intend to try and get someone at the local Ham Club to
>help
>
>
> me here - and also maybe run the rig in their shack so that I can be sure that

> it is operating correctly as it appears to have had a less than sympathetic
>life
>

>
> - unlike the 520S that I have but have not used yet.
>
> As long as members here can put up with my basic questions I am actually
> learning something and at least my interest is being maintained.
>
> 73
>
> Alan Nicholson
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, March 24, 2011 2:20 PM
> Subject: Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S
>
> Your remarks are confusing me, concerning the RF gain and the "calibration".

> Are you expecting the S-meter to hover at some pre-determined value ? You know,
>
> don't you that you turn the RF gain all the way clockwise, and the S-meter
> should rise and fall with the strength of the signals coming in.
>
> If you turn it counter-clockwise, the S-meter probably will go up scale (
>that
>
>
> is the way most radios work, anyway) and the signals will get weaker and
> weaker, because you are forcing your radio to act as if a very strong signal is
>
> coming in, when in fact there is nothing much there!
>
> Also, remember that these types of radios are meant to work with a 50 ohm
> antenna. That means, a resonant dipole working through 50 ohm coax cable, such

> as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is

> no wonder that you are not getting much performance out of the receiver.
>
> If you insist on using a random piece of wire, please get an "antenna tuner"

> which will match the impedance of the random wire (probably very high) to the
>
> radio (50 ohms, as stated)
>
> Please clarify if that is how you are trying to operate the rig.
>
> 73, Jim AG3Y
>
>
>###

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>
> Scanned by MailMarshal - Marshal8e6's comprehensive email content security
> solution.
>
> Download a free evaluation of MailMarshal at www.marshal.com
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> Yahoo! Groups Links
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30463. Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-27 23:53:20 UTC
From: yioutta_99
Topic: 30349 Message: 30463

I did replace all tubes and they are neutralized. And will do the basics as you suggest

thanks

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> yioutta_99,
>
> If you have replaced ALL the tubes...driver, both final amp tubes, you
> should: 1. do the "basic" alignment steps in the operators manual for the ANT,
> MIX, and DRIVE coils. Also, especially if you have changed the
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> Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S
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> > Jeff
> > VK4FNRS
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> > From: Bob Macklin <macklinbob@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, 27 March, 2011 11:57:23 AM
> > Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
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> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
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> > To: 'TS-520_820_530_830@yahoogroups.com'
> > Sent: Sunday, March 27, 2011 12:44 PM
> > Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
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> > Download a free evaluation of MailMarshal at www.marshal.com
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> > Yahoo! Groups Links
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30464. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 02:34:23 UTC
From: yioutta_99
Topic: 30408 Message: 30464

thanks.
I redid it anyway and there was no difference
I am happ to reportI I am getting answers from my CQs from Japan to Chile and Various states. next will be the basic alignments

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Neutralizing on 28.2 verses 28.5 is not a problem so don't worry about that.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > 0h well, it has been about 7 years since I had to do any repair work on the old
> > TS520 workhorse and read thru the book.
> > I had a relay driver transistor fail.
> >
>

30465. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 02:47:11 UTC
From: Bob Macklin
Topic: 30408 Message: 30465

Don't adjust the small coils in the driver section unless you really have to. As old as the units are many of the slugs are stuck and you risk a chance of breaking one.

If you really do have to adjust these coils use a proper tuning tool. DO NOT USE A SCREWDRIVER!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: yioutta_99
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, March 27, 2011 7:34 PM
Subject: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

thanks.
I redid it anyway and there was no difference
I am happ to reportI I am getting answers from my CQs from Japan to Chile and Various states. next will be the basic alignments

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
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> Mike
> W5RKL
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> > I had a relay driver transistor fail.
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[Non-text portions of this message have been removed]

30466. 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 03:25:16 UTC
From: Joseph Stiles
Topic: 30466 Message: 30466

Greetings group,

Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on sideband. The send/rcv switch has to be in SEND to use CW, but no side tone is heard..but there is full output. Voltage are on spec on the AF unit. Ideas??

73's joe wb7uqu

[Non-text portions of this message have been removed]

30467. Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 03:54:38 UTC
From: w5rkl
Topic: 30466 Message: 30467

Hi Joe,

It appears the CW side tone oscillator, Q12, on the FIX VOX Unit board is not working. A failure in the CW side tone oscillator will cause loss of CW Break-in. CW will still work, SEND switch OR PTT microphone button pressed in CW mode, and the 820 will still produce RF output as your 820 is doing but you will not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board and CW Break-in will return.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on
> sideband. The send/rcv switch has to be in SEND to use CW, but no side tone is
> heard..but there is full output. Voltage are on spec on the AF unit. Ideas??
>
>
> 73's joe wb7uqu
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30468. DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 05:14:32 UTC
From: Bryan
Topic: 20533 Message: 30468

I currently have a TS520, and would like to add the dg-5 for it. These units seem to be hard to come by. If one cannot be found or in my case a little out of my price range, what would be a good digital readout that could be substituted? All the ones that I have seen for sale were package deals included in the radio.

Thanks and 73,
Bryan-K8BEC

30469. Re: [TS-520_820_530_830] DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 06:07:31 UTC
From: Lou Blasco
Topic: 20533 Message: 30469

Hi Bryan,

I've used one of these on a TS520 and it works well.

http://www.aade.com/applications/C520.htm

Lou
VK3ALB

At 16:14 28/03/2011, you wrote:
>I currently have a TS520, and would like to add the dg-5 for
>it. These units seem to be hard to come by. If one cannot be found
>or in my case a little out of my price range, what would be a good
>digital readout that could be substituted? All the ones that I have
>seen for sale were package deals included in the radio.
>
>Thanks and 73,
>Bryan-K8BEC
>
>
>
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>
>Yahoo! Groups Links
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30470. Re: [TS-520_820_530_830] Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 15:14:12 UTC
From: Joseph Stiles
Topic: 30466 Message: 30470

Mike,

Tnx fer the answer. I should have check the model # before sending. I was looking for the FIX-VOX unit...and could not find it..then found out that I had stated the wrong model #. The model is an 830S not 820S. So...possibly Q-1 on AF unit?

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 27, 2011 8:54:38 PM
Subject: [TS-520_820_530_830] Re: 820S CW problem

Hi Joe,

It appears the CW side tone oscillator, Q12, on the FIX VOX Unit board is not working. A failure in the CW side tone oscillator will cause loss of CW Break-in. CW will still work, SEND switch OR PTT microphone button pressed in CW mode, and the 820 will still produce RF output as your 820 is doing but you will not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board and CW Break-in will return.

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> [Non-text portions of this message have been removed]
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30471. Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 15:47:34 UTC
From: w5rkl
Topic: 30466 Message: 30471

Morning Joe,

Yes, if Q1 fails then there will be no CW side tone which results in no CW Break-in even with VOX turned ON.

Q1 on the AF Unit board is a simple NPN transistor. I don't have a direct replacement, maybe someone else does, but a 2N3904 will work as a replacement. There is a difference in the pins between the 2SC945 and the 2N3904.

Looking at the bottom of the 2SC945 with the transistor's body flat spot up, leads towards you, the pins are labeled;

Emitter Collector Base

Look at the bottom of the 2N3904 with the transistor's body flat spot up, leads toward you, the pins are labeled;

Emitter Base Collector

Notice how the Base and Collector leads are reversed in the 2N3904 when compared to the 2SC945.

I have used 2N3904 NPN transistors to replace Japanese NPN transistors with very good result. I recently replaced a Japanese NPN transistor that had failed in a TS-120 CAR oscillator with a 2N3904 and the oscillator started working. If you go this route you have to arrange the 2N3904 Base, Emitter, and Collector leads so the correct leads are inserted into the correct holes in the PC board. But, if someone else has a direct replacement then I would go that route instead.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
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> working. A failure in the CW side tone oscillator will cause loss of CW
> Break-in. CW will still work, SEND switch OR PTT microphone button pressed in CW
> mode, and the 820 will still produce RF output as your 820 is doing but you will
> not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board and
> CW Break-in will return.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Greetings group,
> >
> > Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on
> > sideband. The send/rcv switch has to be in SEND to use CW, but no side tone is
>
> > heard..but there is full output. Voltage are on spec on the AF unit. Ideas??
> > >
> > >
> > > 73's joe wb7uqu
> > >
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30472. Re: [TS-520_820_530_830] Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 17:05:02 UTC
From: Joseph Stiles
Topic: 30466 Message: 30472

Mike,

Agn...tnx fer the info. I was looking at a prior thread regarding this problem. I do have a spare AF-AVR board. It'll give me some practice doing some R & R. I'll keep the group up on "what's up." TNX AGN!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 8:47:34 AM
Subject: [TS-520_820_530_830] Re: 820S CW problem

Morning Joe,

Yes, if Q1 fails then there will be no CW side tone which results in no CW Break-in even with VOX turned ON.

Q1 on the AF Unit board is a simple NPN transistor. I don't have a direct replacement, maybe someone else does, but a 2N3904 will work as a replacement. There is a difference in the pins between the 2SC945 and the 2N3904.

Looking at the bottom of the 2SC945 with the transistor's body flat spot up, leads towards you, the pins are labeled;

Emitter Collector Base

Look at the bottom of the 2N3904 with the transistor's body flat spot up, leads toward you, the pins are labeled;

Emitter Base Collector

Notice how the Base and Collector leads are reversed in the 2N3904 when compared to the 2SC945.

I have used 2N3904 NPN transistors to replace Japanese NPN transistors with very good result. I recently replaced a Japanese NPN transistor that had failed in a TS-120 CAR oscillator with a 2N3904 and the oscillator started working. If you go this route you have to arrange the 2N3904 Base, Emitter, and Collector leads so the correct leads are inserted into the correct holes in the PC board. But, if someone else has a direct replacement then I would go that route instead.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Mike,
>
> Tnx fer the answer. I should have check the model # before sending. I was

> looking for the FIX-VOX unit...and could not find it..then found out that I had
>
> stated the wrong model #. The model is an 830S not 820S. So...possibly Q-1 on

> AF unit?
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, March 27, 2011 8:54:38 PM
> Subject: [TS-520_820_530_830] Re: 820S CW problem
>
>
> Hi Joe,
>
> It appears the CW side tone oscillator, Q12, on the FIX VOX Unit board is not
> working. A failure in the CW side tone oscillator will cause loss of CW
> Break-in. CW will still work, SEND switch OR PTT microphone button pressed in
>CW
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> mode, and the 820 will still produce RF output as your 820 is doing but you
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> not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board
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> wrote:
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> > Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on
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30473. Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 17:25:55 UTC
From: w5rkl
Topic: 30466 Message: 30473

It's strange that you are having this problem. A ham on qrz.com is having a similar loss of CW side tone in his TS-130. I've been helping him with his loss of CW side tone which causes the TS-130, just like the TS-830 and other transceivers, loss of CW Break-in but does not result in loss of CW transmit in general.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Agn...tnx fer the info. I was looking at a prior thread regarding this
> problem. I do have a spare AF-AVR board. It'll give me some practice doing some
> R & R. I'll keep the group up on "what's up." TNX AGN!
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, March 28, 2011 8:47:34 AM
> Subject: [TS-520_820_530_830] Re: 820S CW problem
>
>
> Morning Joe,
>
> Yes, if Q1 fails then there will be no CW side tone which results in no CW
> Break-in even with VOX turned ON.
>
> Q1 on the AF Unit board is a simple NPN transistor. I don't have a direct
> replacement, maybe someone else does, but a 2N3904 will work as a replacement.
> There is a difference in the pins between the 2SC945 and the 2N3904.
>
> Looking at the bottom of the 2SC945 with the transistor's body flat spot up,
> leads towards you, the pins are labeled;
>
>
> Emitter Collector Base
>
> Look at the bottom of the 2N3904 with the transistor's body flat spot up, leads

> toward you, the pins are labeled;
>
> Emitter Base Collector
>
> Notice how the Base and Collector leads are reversed in the 2N3904 when compared
> to the 2SC945.
>
> I have used 2N3904 NPN transistors to replace Japanese NPN transistors with very
> good result. I recently replaced a Japanese NPN transistor that had failed in a
> TS-120 CAR oscillator with a 2N3904 and the oscillator started working. If you
> go this route you have to arrange the 2N3904 Base, Emitter, and Collector leads
> so the correct leads are inserted into the correct holes in the PC board. But,
> if someone else has a direct replacement then I would go that route instead.
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> 73s
> Mike
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> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Mike,
> >
> > Tnx fer the answer. I should have check the model # before sending. I was
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> > looking for the FIX-VOX unit...and could not find it..then found out that I had
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> > stated the wrong model #. The model is an 830S not 820S. So...possibly Q-1 on
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> > AF unit?
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> > 73's joe wb7uqu
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> >
> > _________________________________
> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, March 27, 2011 8:54:38 PM
> > Subject: [TS-520_820_530_830] Re: 820S CW problem
> >
> >
> > Hi Joe,
> >
> > It appears the CW side tone oscillator, Q12, on the FIX VOX Unit board is not
> > working. A failure in the CW side tone oscillator will cause loss of CW
> > Break-in. CW will still work, SEND switch OR PTT microphone button pressed in
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> >
> > mode, and the 820 will still produce RF output as your 820 is doing but you
> >will
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> > not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board
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> > CW Break-in will return.
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> > 73s
> > Mike
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> > > Greetings group,
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30474. TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 17:41:51 UTC
From: andy_westcott2004
Topic: 30474 Message: 30474

Hi Guys.
Just a quick question for those more in the know than me:
I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?

It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.

Power output seems fine, by the way with no excessive plate current.

30475. Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 17:43:23 UTC
From: Bob
Topic: 20533 Message: 30475

A DG-5 will plug into a TS-520S, if you have the 520 then you will need an adapter which is hard to find...
Bob

--- In TS-520_820_530_830@yahoogroups.com, "Bryan" <flyfshn76@...> wrote:
>
> I currently have a TS520, and would like to add the dg-5 for it. These units seem to be hard to come by. If one cannot be found or in my case a little out of my price range, what would be a good digital readout that could be substituted? All the ones that I have seen for sale were package deals included in the radio.
>
> Thanks and 73,
> Bryan-K8BEC
>

30476. Re: [TS-520_820_530_830] Re: TS830S _ QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 18:32:11 UTC
From: Will Beattie
Topic: 30249 Message: 30476

Hi Marksorry for the delay in getting back to you. Yes, the information you provided was pointed out to me and I have actually tried this. It works great. Thanks again Mark and every good wish to you and yours

72/73
Will / GM0HKS
--- On Fri, 18/3/11, Mark <n5syr@...> wrote:

From: Mark <n5syr@...>
Subject: [TS-520_820_530_830] Re: TS830S _ QRP ops
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, 18 March, 2011, 21:23

Will,

One other way to reduce the 830 to QRP levels is contained on page 20 of the TS-830 survival guide. In it, section 7.11 deals with one way to reduce power out to QRP levels. The text is, and I quote,"On SSB, turning down the mike gain is a poor way to reduce output power because doing so defeats the transmitter's ALC system. Thus, when you turn down the mic gain, you cannot assure any particular peak output level, and you're also turning down only the voice modulation content of your signal; the original carrier supression, unwanted sideband supression, misc transmitted noise, spurious and so forth are not adjusted "down" @ all, but remain as they were. As such, signal quality suffers. The best way to "turn down" the power of a TS830S.......is via the external ALC port onthe rig's rear panel. Providing an *djustable bias level to that port, ranging from 0 V DC to -10 V DC, will allow full-range power adjustment, down to zero output. This is accomplished with a 9 V transistor radio battery(POSATIVE terminal to chassis ground-ALC voltage supplies is negative) and a 1K ohm pot as wired as a voltage divider.

Tune up normally with poy adjusted for zero voltage @ ALC terminal, and should have about 100 watts out. With key down, adjust the pot until the power falls off to whatever power output you desire. Then, switch to SSB and your output will be that reduced level. DO NOT RETUNE anything on your rig, it's tuning will be just fine."

It closes by stating that the author(WB2WIK/6)had ran his rig that way for years and had no detrimental effects. It would provide all the audio punch and clarity, but @ reduced QRP levels. I have not tried it, but just thought I wouldf pass it along.

73's

Mark

N5SYR

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:

>

> Guys, pre suppose I wanted to do some QRP operating utilising my 830s;

> My questions would be: is it better to tune and load the rig, as normal, and then reduce the output power by screwing back the output power by use of the carrier control switch or, tune and load the rig to full output power and, using the ALC minus voltage feature (minus alc via the skt on the back of the rig) reduce power that way. I know the rig is not designed for this type of operating at large, but I am trying to understand if it will shorten bottle life or have any impact at all on the final output stage running QRP for a period of time. The ultimate answer is run an 817 or similar but you work with what you've got !!

>

> Kind regards.....Will

>

[Non-text portions of this message have been removed]

30477. Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 18:32:33 UTC
From: w5rkl
Topic: 30474 Message: 30477

The LOAD control setting at maximum RF output is at full CCW. Is this a bad thing?
Absolutely NOT. This simply means the load being presented to the transmitter's PI Network output is very close to 50 ohms.

However, having said that, I suspect the LOAD control is not exactly at full CCW but at some point CW from full CCW.

The "LOAD" control provides a means of providing as close of an impedance match, within the limited impedance range of the PI Network, to the load presented to the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Hi Guys.
> Just a quick question for those more in the know than me:
> I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?
>
> It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.
>
> Power output seems fine, by the way with no excessive plate current.
>

30478. Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 18:34:14 UTC
From: w5rkl
Topic: 20533 Message: 30478

The adaptor may be difficult to find but one can build one. Simply duplicate the adaptor from the schematic and connect it accordingly.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
>
> A DG-5 will plug into a TS-520S, if you have the 520 then you will need an adapter which is hard to find...
> Bob
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bryan" <flyfshn76@> wrote:
> >
> > I currently have a TS520, and would like to add the dg-5 for it. These units seem to be hard to come by. If one cannot be found or in my case a little out of my price range, what would be a good digital readout that could be substituted? All the ones that I have seen for sale were package deals included in the radio.
> >
> > Thanks and 73,
> > Bryan-K8BEC
> >
>

30479. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 19:10:40 UTC
From: n6wk@n6wk.com
Topic: 20533 Message: 30479

I have built a few of them. Not that hard to do !
Information and a step by step is on my website to build and install
your own in the TS-520

Gordon
N6WK

On 3/28/2011 11:34 AM, w5rkl wrote:
>
> The adaptor may be difficult to find but one can build one. Simply
> duplicate the adaptor from the schematic and connect it accordingly.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob" <ke5ftf@...> wrote:
> >
> >
> > A DG-5 will plug into a TS-520S, if you have the 520 then you will
> need an adapter which is hard to find...
> > Bob
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan" <flyfshn76@> wrote:
> > >
> > > I currently have a TS520, and would like to add the dg-5 for it.
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> readout that could be substituted? All the ones that I have seen for
> sale were package deals included in the radio.
> > >
> > > Thanks and 73,
> > > Bryan-K8BEC
> > >
> >
>
>

30480. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 20:27:49 UTC
From: van wd8aam
Topic: 20533 Message: 30480

I looked on your website, but cannot find the
instructions for building the dk-520........
Please give the URL......

wd8aam
van

PlAt 19:10 3/28/2011, you wrote:
>I have built a few of them. Not that hard to do !
>Information and a step by step is on my website to build and install
>your own in the TS-520
>
>Gordon
>N6WK
>
>
>On 3/28/2011 11:34 AM, w5rkl wrote:
> >
> > The adaptor may be difficult to find but one can build one. Simply
> > duplicate the adaptor from the schematic and connect it accordingly.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob" <ke5ftf@...> wrote:
> > >
> > >
> > > A DG-5 will plug into a TS-520S, if you have the 520 then you will
> > need an adapter which is hard to find...
> > > Bob
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan" <flyfshn76@> wrote:
> > > >
> > > > I currently have a TS520, and would like to add the dg-5 for it.
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> > my case a little out of my price range, what would be a good digital
> > readout that could be substituted? All the ones that I have seen for
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> > > > Thanks and 73,
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30481. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 20:46:35 UTC
From: n6wk@n6wk.com
Topic: 20533 Message: 30481

http://www.n6wk.com/kenwood/DK-520-Project.pdf

It's a big PDF so takes a minute to load

On 3/28/2011 1:27 PM, van wd8aam wrote:
>
> I looked on your website, but cannot find the
> instructions for building the dk-520........
> Please give the URL......
>
> wd8aam
> van
>
> PlAt 19:10 3/28/2011, you wrote:
> >I have built a few of them. Not that hard to do !
> >Information and a step by step is on my website to build and install
> >your own in the TS-520
> >
> >Gordon
> >N6WK
> >
> >
> >On 3/28/2011 11:34 AM, w5rkl wrote:
> > >
> > > The adaptor may be difficult to find but one can build one. Simply
> > > duplicate the adaptor from the schematic and connect it accordingly.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob" <ke5ftf@...>
> wrote:
> > > >
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> > > > A DG-5 will plug into a TS-520S, if you have the 520 then you will
> > > need an adapter which is hard to find...
> > > > Bob
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"

> <flyfshn76@> wrote:
> > > > >
> > > > > I currently have a TS520, and would like to add the dg-5 for it.
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30482. Re: TS-520 Start-Up?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 20:53:05 UTC
From: Leslie Zwiebel
Topic: 30474 Message: 30482

Have one here which worked great when covered, indoors, in a moderate climate 16 years ago. Besides eye balling components, and loosening and tightening chassis mounted grounds, and working the controls, anything else I should do before putting AC to it? Prayers? Thanks. (((73)))
Les
-----Original Message-----
From: "w5rkl" <w5rkl@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 28 Mar 2011 18:32:33
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

The LOAD control setting at maximum RF output is at full CCW. Is this a bad thing? Absolutely NOT. This simply means the load being presented to the transmitter's PI Network output is very close to 50 ohms.

However, having said that, I suspect the LOAD control is not exactly at full CCW but at some point CW from full CCW.

The "LOAD" control provides a means of providing as close of an impedance match, within the limited impedance range of the PI Network, to the load presented to the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Hi Guys.
> Just a quick question for those more in the know than me:
> I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?
>
> It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.
>
> Power output seems fine, by the way with no excessive plate current.
>

[Non-text portions of this message have been removed]

30483. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 20:55:02 UTC
From: van wd8aam
Topic: 20533 Message: 30483

I've seen that, it shows how to install the box, but
NOT how to build it.

How/what parts/schematic do you use, to BUILD the DK-520,
and where are it's instructions?
wd8aam
van

Please give the URL for the DK-520 Build process.

==========

At 20:46 3/28/2011, you wrote:
>http://www.n6wk.com/kenwood/DK-520-Project.pdf
>
>It's a big PDF so takes a minute to load
>
>
>On 3/28/2011 1:27 PM, van wd8aam wrote:
> >
> > I looked on your website, but cannot find the
> > instructions for building the dk-520........
> > Please give the URL......
> >
> > wd8aam
> > van
> >
> > PlAt 19:10 3/28/2011, you wrote:
> > >I have built a few of them. Not that hard to do !
> > >Information and a step by step is on my website to build and install
> > >your own in the TS-520
> > >
> > >Gordon
> > >N6WK
> > >
> > >
> > >On 3/28/2011 11:34 AM, w5rkl wrote:
> > > >
> > > > The adaptor may be difficult to find but one can build one. Simply
> > > > duplicate the adaptor from the schematic and connect it accordingly.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com

> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob" <ke5ftf@...>
> > wrote:
> > > > >
> > > > > >
> > > > > > A DG-5 will plug into a TS-520S, if you have the 520 then you will
> > > > > need an adapter which is hard to find...
> > > > > > Bob
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> > <flyfshn76@> wrote:
> > > > > > >
> > > > > > > I currently have a TS520, and would like to add the dg-5 for it.
> > > > > These units seem to be hard to come by. If one cannot be found or in
> > > > > my case a little out of my price range, what would be a good digital
> > > > > readout that could be substituted? All the ones that I have seen for
> > > > > sale were package deals included in the radio.
> > > > > > >
> > > > > > > Thanks and 73,
> > > > > > > Bryan-K8BEC
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> >Yahoo! Groups Links
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30484. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:00:15 UTC
From: n6wk@n6wk.com
Topic: 20533 Message: 30484

You also need this file
http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf

On 3/28/2011 1:46 PM, n6wk@... wrote:
> http://www.n6wk.com/kenwood/DK-520-Project.pdf
>
> It's a big PDF so takes a minute to load
>
>
> On 3/28/2011 1:27 PM, van wd8aam wrote:
>> I looked on your website, but cannot find the
>> instructions for building the dk-520........
>> Please give the URL......
>>
>> wd8aam
>> van
>>
>> PlAt 19:10 3/28/2011, you wrote:
>>> I have built a few of them. Not that hard to do !
>>> Information and a step by step is on my website to build and install
>>> your own in the TS-520
>>>
>>> Gordon
>>> N6WK
>>>
>>>
>>> On 3/28/2011 11:34 AM, w5rkl wrote:
>>>> The adaptor may be difficult to find but one can build one. Simply
>>>> duplicate the adaptor from the schematic and connect it accordingly.
>>>>
>>>> 73s
>>>> Mike
>>>> W5RKL
>>>>
>>>> --- In TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob"<ke5ftf@...>
>> wrote:
>>>>>
>>>>> A DG-5 will plug into a TS-520S, if you have the 520 then you will
>>>> need an adapter which is hard to find...
>>>>> Bob
>>>>>
>>>>>
>>>>> --- In TS-520_820_530_830@yahoogroups.com

>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
>> <flyfshn76@> wrote:
>>>>>> I currently have a TS520, and would like to add the dg-5 for it.
>>>> These units seem to be hard to come by. If one cannot be found or in
>>>> my case a little out of my price range, what would be a good digital
>>>> readout that could be substituted? All the ones that I have seen for
>>>> sale were package deals included in the radio.
>>>>>> Thanks and 73,
>>>>>> Bryan-K8BEC
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>>> Yahoo! Groups Links
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> Yahoo! Groups Links
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30485. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:13:43 UTC
From: van wd8aam
Topic: 20533 Message: 30485

Ok, thank you, that is what I was looking for.
Instead of "install instructions" it should be identified
as "how to build a DK-520 box"
thanks again
wd8aam
van

At 21:00 3/28/2011, you wrote:
>
>
>You also need this file
><http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf>http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
>
>On 3/28/2011 1:46 PM, <mailto:n6wk%40n6wk.com>n6wk@... wrote:
> >
> <http://www.n6wk.com/kenwood/DK-520-Project.pdf>http://www.n6wk.com/kenwood/DK-520-Project.pdf
> >
> > It's a big PDF so takes a minute to load
> >
> >
> > On 3/28/2011 1:27 PM, van wd8aam wrote:
> >> I looked on your website, but cannot find the
> >> instructions for building the dk-520........
> >> Please give the URL......
> >>
> >> wd8aam
> >> van
> >>
> >> PlAt 19:10 3/28/2011, you wrote:
> >>> I have built a few of them. Not that hard to do !
> >>> Information and a step by step is on my website to build and install
> >>> your own in the TS-520
> >>>
> >>> Gordon
> >>> N6WK
> >>>
> >>>
> >>> On 3/28/2011 11:34 AM, w5rkl wrote:
> >>>> The adaptor may be difficult to find but one can build one. Simply
> >>>> duplicate the adaptor from the schematic and connect it accordingly.
> >>>>
> >>>> 73s
> >>>> Mike

> >>>> W5RKL
> >>>>
> >>>> --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob"<ke5ftf@...>
> >> wrote:
> >>>>>
> >>>>> A DG-5 will plug into a TS-520S, if you have the 520 then you will
> >>>> need an adapter which is hard to find...
> >>>>> Bob
> >>>>>
> >>>>>
> >>>>> --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> >> <flyfshn76@> wrote:
> >>>>>> I currently have a TS520, and would like to add the dg-5 for it.
> >>>> These units seem to be hard to come by. If one cannot be found or in
> >>>> my case a little out of my price range, what would be a good digital
> >>>> readout that could be substituted? All the ones that I have seen for
> >>>> sale were package deals included in the radio.
> >>>>>> Thanks and 73,
> >>>>>> Bryan-K8BEC
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> >>> Yahoo! Groups Links
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> > Yahoo! Groups Links
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[Non-text portions of this message have been removed]

30486. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:18:45 UTC
From: Lou Blasco
Topic: 20533 Message: 30486

Hi Van,

The titles on the web page is "DK-520 Install and Service
Instructions" and just below that "Building the DK-520 for the TS520
instructions"

Lou
VK3ALB

At 08:13 29/03/2011, you wrote:
>Ok, thank you, that is what I was looking for.
>Instead of "install instructions" it should be identified
>as "how to build a DK-520 box"
>thanks again
>wd8aam
>van
>
>At 21:00 3/28/2011, you wrote:
> >
> >
> >You also need this file
> ><http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf>http:/
> /www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
> >
> >On 3/28/2011 1:46 PM, <mailto:n6wk%40n6wk.com>n6wk@... wrote:
> > >
> >
> <http://www.n6wk.com/kenwood/DK-520-Project.pdf>http://www.n6wk.com/kenwood/DK-520-Proje
ct.pdf
> > >
> > > It's a big PDF so takes a minute to load
> > >
> > >
> > > On 3/28/2011 1:27 PM, van wd8aam wrote:
> > >> I looked on your website, but cannot find the
> > >> instructions for building the dk-520........
> > >> Please give the URL......
> > >>
> > >> wd8aam
> > >> van
> > >>
> > >> PlAt 19:10 3/28/2011, you wrote:
> > >>> I have built a few of them. Not that hard to do !
> > >>> Information and a step by step is on my website to build and install
> > >>> your own in the TS-520
> > >>>

> > >>> Gordon
> > >>> N6WK
> > >>>
> > >>>
> > >>> On 3/28/2011 11:34 AM, w5rkl wrote:
> > >>>> The adaptor may be difficult to find but one can build one. Simply
> > >>>> duplicate the adaptor from the schematic and connect it accordingly.
> > >>>>
> > >>>> 73s
> > >>>> Mike
> > >>>> W5RKL
> > >>>>
> > >>>> --- In
> >
<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob"<ke5ftf@...>
> > >> wrote:
> > >>>>>
> > >>>>> A DG-5 will plug into a TS-520S, if you have the 520 then you will
> > >>>> need an adapter which is hard to find...
> > >>>>> Bob
> > >>>>>
> > >>>>>
> > >>>>> --- In
> >
<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> > >> <flyfshn76@> wrote:
> > >>>>>> I currently have a TS520, and would like to add the dg-5 for it.
> > >>>> These units seem to be hard to come by. If one cannot be found or in
> > >>>> my case a little out of my price range, what would be a good digital
> > >>>> readout that could be substituted? All the ones that I have seen for
> > >>>> sale were package deals included in the radio.
> > >>>>>> Thanks and 73,
> > >>>>>> Bryan-K8BEC
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>
>Yahoo! Groups Links
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30487. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:37:10 UTC
From: van wd8aam
Topic: 20533 Message: 30487

I don't see what you're saying YOU see,,
so I am sending a pdf file to you to show
what I saw.
wd8aam
van

At 21:18 3/28/2011, you wrote:
>Hi Van,
>The titles on the web page is "DK-520 Install and Service
>Instructions" and just below that "Building the DK-520 for the TS520
>instructions"
>Lou
>VK3ALB
>
>At 08:13 29/03/2011, you wrote:
> >Ok, thank you, that is what I was looking for.
> >Instead of "install instructions" it should be identified
> >as "how to build a DK-520 box"
> >thanks again
> >wd8aam
> >van
> >
> >At 21:00 3/28/2011, you wrote:
> > >
> > >
> > > >You also need this file
> > > ><<http://www.n6wk.com/kenwood/DK-520-Install-
> Instructions.pdf>http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf>http:/
>
> > /www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
> > >
> > > >On 3/28/2011 1:46 PM,
> <mailto:n6wk%40n6wk.com><mailto:n6wk%40n6wk.com>n6wk@... wrote:
> > > > >
> > > >
> > >
> <<http://www.n6wk.com/kenwood/DK-520-Project.pdf>http://www.n6wk.com/kenwood/DK-520-Proj
ect.pdf>http://www.n6wk.com/kenwood/DK-520-Project.pdf
> > > > >
> > > > > It's a big PDF so takes a minute to load
> > > > >
> > > > >
> > > > > On 3/28/2011 1:27 PM, van wd8aam wrote:
> > > > >> I looked on your website, but cannot find the
> > > > >> instructions for building the dk-520........

> > > >> Please give the URL......
> > > >>
> > > >> wd8aam
> > > >> van
> > > >>
> > > >> PlAt 19:10 3/28/2011, you wrote:
> > > >>> I have built a few of them. Not that hard to do !
> > > >>> Information and a step by step is on my website to build and install
> > > >>> your own in the TS-520
> > > >>>
> > > >>> Gordon
> > > >>> N6WK
> > > >>>
> > > >>>
> > > >>> On 3/28/2011 11:34 AM, w5rkl wrote:
> > > >>>> The adaptor may be difficult to find but one can build one. Simply
> > > >>>> duplicate the adaptor from the schematic and connect it accordingly.
> > > >>>>
> > > >>>> 73s
> > > >>>> Mike
> > > >>>> W5RKL
> > > >>>>
> > > >>>> --- In
> > > >
> > >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob"<ke5ftf@...>
> > > >> wrote:
> > > >>>>>
> > > >>>>> A DG-5 will plug into a TS-520S, if you have the 520 then you will
> > > >>>> need an adapter which is hard to find...
> > > >>>>> Bob
> > > >>>>>
> > > >>>>>
> > > >>>>> --- In
> > > >
> > >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> > > >> <flyfshn76@> wrote:
> > > >>>>>> I currently have a TS520, and would like to add the dg-5 for it.
> > > >>>> These units seem to be hard to come by. If one cannot be found or in
> > > >>>> my case a little out of my price range, what would be a good digital
> > > >>>> readout that could be substituted? All the ones that I have seen for
> > > >>>> sale were package deals included in the radio.
> > > >>>>>> Thanks and 73,

> > > >>>>>> Bryan-K8BEC
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> >Yahoo! Groups Links
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30488. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:49:29 UTC
From: n6wk@n6wk.com
Topic: 20533 Message: 30488

http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
The Above file tells how to wire it up.
This file tells how to build and install it.
I built the little power supply board on a small Perf board and mounted
it inside the metal box.
The Buffer board was also made from a small Perf Board and mounted as
shown in the below file
http://www.n6wk.com/kenwood/DK-520-Project.pdf
If there is enough interest, I might start making the boxes/Buffer
boards again and then it might make it easier for the 520 owners to
install the internal board and the Box

Gordon

On 3/28/2011 2:37 PM, van wd8aam wrote:
>
> I don't see what you're saying YOU see,,
> so I am sending a pdf file to you to show
> what I saw.
> wd8aam
> van
>
> At 21:18 3/28/2011, you wrote:
> >Hi Van,
> >The titles on the web page is "DK-520 Install and Service
> >Instructions" and just below that "Building the DK-520 for the TS520
> >instructions"
> >Lou
> >VK3ALB
> >
> >At 08:13 29/03/2011, you wrote:
> > >Ok, thank you, that is what I was looking for.
> > >Instead of "install instructions" it should be identified
> > >as "how to build a DK-520 box"
> > >thanks again
> > >wd8aam
> > >van
> > >
> > >At 21:00 3/28/2011, you wrote:
> > > >
> > > >
> > > >You also need this file
> > > ><<http://www.n6wk.com/kenwood/DK-520-Install-
> >
> Instructions.pdf>http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf>http:/

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> > > /www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
> > > >
> > > >On 3/28/2011 1:46 PM,
> > <mailto:n6wk%40n6wk.com><mailto:n6wk%40n6wk.com>n6wk@...
> <mailto:n6wk%40n6wk.com> wrote:
> > > > > >
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> <<http://www.n6wk.com/kenwood/DK-520-Project.pdf>http://www.n6wk.com/kenwood/DK-520-Proj
ect.pdf>http://www.n6wk.com/kenwood/DK-520-Project.pdf
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> > > > > > It's a big PDF so takes a minute to load
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> > > > > >
> > > > > > On 3/28/2011 1:27 PM, van wd8aam wrote:
> > > > > >> I looked on your website, but cannot find the
> > > > > >> instructions for building the dk-520........
> > > > > >> Please give the URL......
> > > > > >>
> > > > > >> wd8aam
> > > > > >> van
> > > > > >>
> > > > > >> PlAt 19:10 3/28/2011, you wrote:
> > > > > >>> I have built a few of them. Not that hard to do !
> > > > > >>> Information and a step by step is on my website to build and
> install
> > > > > >>> your own in the TS-520
> > > > > >>>
> > > > > >>> Gordon
> > > > > >>> N6WK
> > > > > >>>
> > > > > >>>
> > > > > >>> On 3/28/2011 11:34 AM, w5rkl wrote:
> > > > > >>>> The adaptor may be difficult to find but one can build one.
> Simply
> > > > > >>>> duplicate the adaptor from the schematic and connect it
> accordingly.
> > > > > >>>>
> > > > > >>>> 73s
> > > > > >>>> Mike
> > > > > >>>> W5RKL
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> > > > > >>>> --- In
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> > > >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co

m>TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>,
> "Bob"<ke5ftf@...>
> > > > >> wrote:
> > > > >>>>>
> > > > >>>>> A DG-5 will plug into a TS-520S, if you have the 520 then
> you will
> > > > >>>> need an adapter which is hard to find...
> > > > >>>>> Bob
> > > > >>>>>
> > > > >>>>>
> > > > >>>>> --- In
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> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> > > > >> <flyfshn76@> wrote:
> > > > >>>>>> I currently have a TS520, and would like to add the dg-5
> for it.
> > > > >>>> These units seem to be hard to come by. If one cannot be
> found or in
> > > > >>>> my case a little out of my price range, what would be a
> good digital
> > > > >>>> readout that could be substituted? All the ones that I have
> seen for
> > > > >>>> sale were package deals included in the radio.
> > > > >>>>>> Thanks and 73,
> > > > >>>>>> Bryan-K8BEC
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> > > > > Yahoo! Groups Links
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> > >Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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30489. A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 22:01:28 UTC
From: Alan Nicholson (ADHB)
Topic: 30349 Message: 30489

Thanks Bob..and all the others who have provided guidance.

As I mentioned I am learning and the information provided has helped immensely. Rest assured I will be seeking some local one on one tuition and John Swarbrick in Hamilton has been a big help in clarifying some issues by email. Local club night is next Monday so hopefully I can take another step forward!

I am building a simple Dipole and hope to have it erected one night this week. Meanwhile last night, thanks to info provided here and from John I managed to pick up a few signals of varying strength and quality on 40 metres.

Terry K9TW- you do yourself a disservice. Without the advice you provided I would not be where I am now. It gave me the basics to start and the confidence that I would not blow up the rig in the process :-)

Thanks for your patience and willingness to suffer though my learning process- hopefully one day I will be able to give rather than take from the group.

73

Alan Nicholson

##
Scanned by MailMarshal - Marshal8e6's comprehensive email content security solution.
Download a free evaluation of MailMarshal at www.marshal.com
##

30490. Re: [TS-520_820_530_830] Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 22:01:14 UTC
From: Lou Blasco
Topic: 20533 Message: 30490

Hi Van,

You sent me a PDF and at the top of the third page I can see the two documents. BTW, once you've downloaded the two articles check where the board is installed inside the radio. One 520 I worked on had a preamp board already installed. You never know, you might be lucky.

Lou
VK3ALB

At 08:37 29/03/2011, you wrote:
>I don't see what you're saying YOU see,,
>so I am sending a pdf file to you to show
>what I saw.
>wd8aam
>van
>
>At 21:18 3/28/2011, you wrote:
> >Hi Van,
> >The titles on the web page is "DK-520 Install and Service
> >Instructions" and just below that "Building the DK-520 for the TS520
> >instructions"
> >Lou
> >VK3ALB
> >
> >At 08:13 29/03/2011, you wrote:
> > >Ok, thank you, that is what I was looking for.
> > >Instead of "install instructions" it should be identified
> > >as "how to build a DK-520 box"
> > >thanks again
> > >wd8aam
> > >van
> > >
> > >At 21:00 3/28/2011, you wrote:
> > > >
> > > >
> > > >You also need this file
> > > ><<http://www.n6wk.com/kenwood/DK-520-Install- >
> Instructions.pdf>http://www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf>http:/
>
> >
> > > /www.n6wk.com/kenwood/DK-520-Install-Instructions.pdf
> > > >
> > > >On 3/28/2011 1:46 PM,
> > <mailto:n6wk%40n6wk.com><mailto:n6wk%40n6wk.com>n6wk@... wrote:
> > > > > >

> > > >
> > >
> >
> <<http://www.n6wk.com/kenwood/DK-520-Project.pdf>http://www.n6wk.com/kenwood/DK-520-Proj
ect.pdf>http://www.n6wk.com/kenwood/DK-520-Project.pdf
> > > > >
> > > > > It's a big PDF so takes a minute to load
> > > > >
> > > > >
> > > > > On 3/28/2011 1:27 PM, van wd8aam wrote:
> > > > >> I looked on your website, but cannot find the
> > > > >> instructions for building the dk-520........
> > > > >> Please give the URL......
> > > > >>
> > > > >> wd8aam
> > > > >> van
> > > > >>
> > > > >> PlAt 19:10 3/28/2011, you wrote:
> > > > >>> I have built a few of them. Not that hard to do !
> > > > >>> Information and a step by step is on my website to build
> and install
> > > > >>> your own in the TS-520
> > > > >>>
> > > > >>> Gordon
> > > > >>> N6WK
> > > > >>>
> > > > >>>
> > > > >>> On 3/28/2011 11:34 AM, w5rkl wrote:
> > > > >>>> The adaptor may be difficult to find but one can build one. Simply
> > > > >>>> duplicate the adaptor from the schematic and connect it
> accordingly.
> > > > >>>>
> > > > >>>> 73s
> > > > >>>> Mike
> > > > >>>> W5RKL
> > > > >>>>
> > > > >>>> --- In
> > > > >
> > >
> >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> > > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bob"<ke5ftf@...>
> > > > > >> wrote:
> > > > > >>
> > > > > >>> A DG-5 will plug into a TS-520S, if you have the 520
> then you will
> > > > > >>> need an adapter which is hard to find...
> > > > > >>> Bob

> > > > >>>>>
> > > > >>>>>
> > > > >>>>> --- In
> > > > >
> > >
> >
> <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%40yahoogroups.co
m>TS-520_820_530_830@yahoogroups.com
> > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > >>>> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Bryan"
> > > > >> <flyfshn76@> wrote:
> > > > >>>>>> I currently have a TS520, and would like to add the dg-5 for it.
> > > > >>>> These units seem to be hard to come by. If one cannot be
> found or in
> > > > >>>> my case a little out of my price range, what would be a
> good digital
> > > > >>>> readout that could be substituted? All the ones that I
> have seen for
> > > > >>>> sale were package deals included in the radio.
> > > > >>>>>> Thanks and 73,
> > > > >>>>>> Bryan-K8BEC
> > > > >>>>>>
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30491. Re: TS-830S for PSK31

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 21:43:28 UTC
From: scortesi1
Topic: 26914 Message: 30491

I would like to recognize the fine post by Mike (W5RKL) concerning adding the phone patch interface to the TS830 (message # 26923). I use the phone patch connections on my TS820 for a PSK 31 interface, it works very well.

I recently acquired a TS830 from a friend, and wanted to use a similar interface. Although I could build a cable to do this, I just don't like connecting to the front of the rig every time I want to do PSK31. Mike's very accurate instructions of where to connect on the IF board saved me hours of research had I done this on my own. I started on the TS830 Saturday morning and had it completed by early evening. My first contact was a station in Australia on 40M, said my signal was very clean.

A warning for anyone else who does this: Be sure you discharge all the HV caps before you remove the IF board. I remembered to do this for the final HV caps, but forgot about the plate voltage to the driver. The caps that supply this voltage have no bleeder resistors. I received a nice little reminder that I will not forget when I lifted the IF board out of the unit. Fortunatly I only received a small jolt, I then discharged the caps with a 10W 100 ohm resistor.

Thanks again Mike for all the contibutions you make to this group, they are very helpful.

73's

Scott A Cortesi

KD7YQT

30492. TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 22:48:19 UTC
From: n6wk_skcc3
Topic: 30492 Message: 30492

Anyone seen the radio described in this ad ?
http://www.universal-radio.com/catalog/hamhf/ts520.html

30493. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 23:44:41 UTC
From: Bryan Sanders
Topic: 30492 Message: 30493

Yes I have one, see it every night I go back to my desk. :)

On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3 <n6wk@...> wrote:

>
>
> Anyone seen the radio described in this ad ?
> http://www.universal-radio.com/catalog/hamhf/ts520.html
>
>
>

--
Bryan

[Non-text portions of this message have been removed]

30494. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 23:45:48 UTC
From: n6wk@n6wk.com
Topic: 30492 Message: 30494

with 3 6146 tubes and 2 12by7 tubes??

On 3/28/2011 4:44 PM, Bryan Sanders wrote:
> Yes I have one, see it every night I go back to my desk. :)
>
> On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3<n6wk@...> wrote:
>
>>
>> Anyone seen the radio described in this ad ?
>> http://www.universal-radio.com/catalog/hamhf/ts520.html
>>
>>
>>
>
>

30495. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 23:47:11 UTC
From: Lou Blasco
Topic: 30492 Message: 30495

Really,

It has 3 x 6146B's and 2 x 12BY7's?

Lou
VK3ALB

At 10:44 29/03/2011, you wrote:
>Yes I have one, see it every night I go back to my desk. :)
>
>On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3 <n6wk@...> wrote:
>
> >
> >
> > Anyone seen the radio described in this ad ?
> > http://www.universal-radio.com/catalog/hamhf/ts520.html
> >
> >
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>
>
>--
>Bryan
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30496. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 23:51:13 UTC
From: Bob Macklin
Topic: 30492 Message: 30496

And only 120W PEP with the 3 6164's! My SB-401 shows 180W PEP with only 2 6146's.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, March 28, 2011 4:45 PM
Subject: Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

with 3 6146 tubes and 2 12by7 tubes??

On 3/28/2011 4:44 PM, Bryan Sanders wrote:
> Yes I have one, see it every night I go back to my desk. :)
>
> On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3<n6wk@...> wrote:
>
>>
>> Anyone seen the radio described in this ad ?
>> http://www.universal-radio.com/catalog/hamhf/ts520.html
>>
>>
>>
>
>

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30497. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-28 23:54:09 UTC
From: Adam Liette
Topic: 30492 Message: 30497

I think I got shorted. Afaik I have 2 finals, 1 driver.

-----Original Message-----
From: Lou Blasco <radio@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Tue, 29 Mar 2011 10:47:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Really,

It has 3 x 6146B's and 2 x 12BY7's?

Lou
VK3ALB

At 10:44 29/03/2011, you wrote:
>Yes I have one, see it every night I go back to my desk. :)
>
>On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3 <n6wk@...> wrote:
>
> >
> >
> > Anyone seen the radio described in this ad ?
> > http://www.universal-radio.com/catalog/hamhf/ts520.html
> >
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>Bryan
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30498. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 00:00:34 UTC
From: Bob
Topic: 30492 Message: 30498

APRIL FOOLS!!! (Uh, just a l'il early)

--- On Mon, 3/28/11, Adam Liette <aliette@...> wrote:

From: Adam Liette <aliette@centurylink.net>
Subject: Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, March 28, 2011, 5:54 PM

I think I got shorted. Afaik I have 2 finals, 1 driver.

-----Original Message-----
From: Lou Blasco <radio@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Tue, 29 Mar 2011 10:47:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO
12by7's

Really,

It has 3 x 6146B's and 2 x 12BY7's?

Lou
VK3ALB

At 10:44 29/03/2011, you wrote:
>Yes I have one, see it every night I go back to my desk. :)
>
>On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3 <n6wk@...> wrote:
>
> >
> >
> > Anyone seen the radio described in this ad ?
> > http://www.universal-radio.com/catalog/hamhf/ts520.html
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>--
>Bryan
>

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30499. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 00:22:39 UTC
From: Bryan Sanders
Topic: 30492 Message: 30499

Nope,j/k...:)..I wanted to throw that out there to see how many people would reply,unless the 3rd one is hiding from me somewhere.hihi. I must have a good set of tubes in mine. Into the dummy load on 40 and 80m it will load up to 150 watts. I usually will peak it out and then back it off a bit. No need to overdrive it.

On Mon, Mar 28, 2011 at 8:45 PM, <n6wk@...> wrote:

>
>
> with 3 6146 tubes and 2 12by7 tubes??
>
>
> On 3/28/2011 4:44 PM, Bryan Sanders wrote:
> > Yes I have one, see it every night I go back to my desk. :)
> >
> > On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3<n6wk@n6wk.com> wrote:
> >
> >>
> >> Anyone seen the radio described in this ad ?
> >> http://www.universal-radio.com/catalog/hamhf/ts520.html
> >>
> >>
> >>
> > >
> > >
>
>

--
Bryan

[Non-text portions of this message have been removed]

30500. FS: TS511S, matching VFO/Speaker

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 00:43:46 UTC
From: john
Topic: 30500 Message: 30500

I hope this is appropriate for this forum... i

I have a nice condition TS11S with its matching VFO and speaker for sale. It has all interconnecting cables and while a brief test did not show any function with its internal VFO, I was copying stations switched to the external VFO (this may have been operator error, but no guarantees). I have copies of the manuals. All knobs are original and I see no modifications.

This is an unusual station and I'd keep it if I didn't have many lbs of "unusual stations" . I will have it available for pick up at the Raleigh NC Hamfest in April, if not sold before then. I'd like to get $395 plus actual shipping charges, and I will pack carefully to make sure it gets to you intact.

Pictures aren't ready yet, but will be shortly...write if you'd like them.

Thanks for the read!
John k5MO

30501. Re: TS-830S QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 01:54:48 UTC
From: rkersey tds.net
Topic: 30501 Message: 30501

Hi All,

I am planning to cut the output of my TS-830S by using the voltage divider at the rear ALC port as described today, so I can get 2-5 watts for my TenTec 6M transverter. I am worried about the 9 volt battery going bad, letting the power increase and burning up the transverter. I thought I might use a 9 volt wall wart instead as a power source, but even that could go bad, so what's the alternative? Use a line fuse going into the transverter? What value would I use, then?

73,
Roy
KI4HAG

[Non-text portions of this message have been removed]

30502. Re: [TS-520_820_530_830] Re: TS-520 Start-Up?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 01:45:35 UTC
From: Prof. Arnaldo Coro Antich
Topic: 30474 Message: 30502

Dear amigo:
My advice... find yourself a Variac, that is a variable autotransformer, and connect your
transceiver to the Variac set to 10 volts... If possible for you, insert an AC ammeter
in series between the transceiver and the Variac...
Gradually increase the voltage to about 25 volts and watch the current reading.
Keep it at 25 volts for about 12 hours.
Next step: Move to 50 volts, and watch the current reading...
Calculate the power drawn from the Variac...
Then, disconnect the radio, open up the two covers and do a very careful visual
inspection around each and every electrolytic capacitors, especially the big high voltage ones...
Next step: Reset the Variac to 10 volts and gradually increase the voltage to
50 volts, leave it there for about 5 minutes and increase the voltage to 75 volts, carefull monitoring the current drawn that shows up on the AC ammeter.
Leave it there for about 12 more hours.
Next step: Do a second round of careful visual inspections , again especially around
electrolytics for any signs of leaks or of inflating capacitors.
Next step: Start slowly at 10 volts and climb up to 100 volts, and at this voltage
setting try the receive functions of the transceiver...
Almost the last step: IF the receive functions work OK, then give a short try to
the transmit function at a low power setting
Finally ... set the Variac to 115 volts , place the rig in receive mode, and monitor
the AC current shown on the ammeter.
Start to transmit , adjusting the rig for about 50 Watts output on 40 meters
and again measure the AC current shown on the ammeter.
If all goes well, your transceiver has REVIVED , because among other things the electrolytics were properly reformed...
This procedure is lengthy , tedious but it does avoid possible damages, especially
within the high voltage areas of any hybrid transceivers like our Kenwoods !!!

73 and DX
Arnie Coro

CO2KK

On 03/28/11 16:53, Leslie Zwiebel wrote:
>
> Have one here which worked great when covered, indoors, in a moderate
> climate 16 years ago. Besides eye balling components, and loosening
> and tightening chassis mounted grounds, and working the controls,
> anything else I should do before putting AC to it? Prayers? Thanks.
> (((73)))
> Les
> -----Original Message-----
> From: "w5rkl" <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> Sender: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Mon, 28 Mar 2011 18:32:33
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always
> fully anti-clockwise. Problem?
>
> The LOAD control setting at maximum RF output is at full CCW. Is this
> a bad thing? Absolutely NOT. This simply means the load being
> presented to the transmitter's PI Network output is very close to 50
> ohms.
>
> However, having said that, I suspect the LOAD control is not exactly
> at full CCW but at some point CW from full CCW.
>
> The "LOAD" control provides a means of providing as close of an
> impedance match, within the limited impedance range of the PI Network,
> to the load presented to the transmitter.
>
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "andy_westcott2004"
> <andywestcottpublic@...> wrote:
> >
> > Hi Guys.
> > Just a quick question for those more in the know than me:
> > I find that the load control always needs to be fully anti-clockwise
> for best output (on 80m and 40m, the only bands I use with it) - is
> this fairly mormal for these rigs or could it be indicative of a fixed

> parallel capacitor across the load control having failed open circuit?
> >
> > It isn't a problem but it would be nice to see a peak before the
> control reaches the end of its travel, I'd be more confident the radio
> was operating at best efficiency.
> >
> > Power output seems fine, by the way with no excessive plate current.
> >
>
>
>
>
> [Non-text portions of this message have been removed]
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>

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30503. Re: [TS-520_820_530_830] Re: TS-830S QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 02:16:42 UTC
From: Lou Blasco
Topic: 30501 Message: 30503

Hi Roy,

Most wallwarts have poor regulation and if you use one you might end up with unexpected power fluctuation perhaps even at 60Hz - not good. The current drain on a 9V battery is really low - so low that the battery will probably last it's shelf life. If you are really concerned about the battery going bad you could always go to the store and buy a new one every other month or so depending on how often you use it.

Lou
VK3ALB

P.S. Have you tested your TenTec transverter with the transverter output from the 830? It might just work OK for you then you can forget the whole 9V battery idea.

At 12:54 29/03/2011, you wrote:
>Hi All,
>
>I am planning to cut the output of my TS-830S by using the voltage divider
>at the rear ALC port as described today, so I can get 2-5 watts for my
>TenTec 6M transverter. I am worried about the 9 volt battery going bad,
>letting the power increase and burning up the transverter. I thought I
>might use a 9 volt wall wart instead as a power source, but even that could
>go bad, so what's the alternative? Use a line fuse going into the
>transverter? What value would I use, then?
>
>73,
>Roy
>KI4HAG
>
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30504. Re: [TS-520_820_530_830] Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 04:00:58 UTC
From: Joseph Stiles
Topic: 30466 Message: 30504

Mike,

When I am around radios...I consider anything that goes wrong..normal...hihi. Another question: you stated that a 2N3904 to be a replacement..just the pins are different arrangement. I looked at the NTE cross ref. on the 2SC945 and came up with an NTE85, and also checked the cross on the 2N3904 and got an NTE123AP. the '85 is listed as audio amp, the 123AP listed as audio amp/switch. Would it make much of a difference between the two? I can not find the spare AF board I thought I had to swap.

73's joe wb7uqu

_____
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 10:25:55 AM
Subject: [TS-520_820_530_830] Re: 820S CW problem

It's strange that you are having this problem. A ham on qrz.com is having a similar loss of CW side tone in his TS-130. I've been helping him with his loss of CW side tone which causes the TS-130, just like the TS-830 and other transceivers, loss of CW Break-in but does not result in loss of CW transmit in general.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Agn...tnx fer the info. I was looking at a prior thread regarding this
> problem. I do have a spare AF-AVR board. It'll give me some practice doing some
>
> R & R. I'll keep the group up on "what's up." TNX AGN!
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Mon, March 28, 2011 8:47:34 AM
> Subject: [TS-520_820_530_830] Re: 820S CW problem
>
>
> Morning Joe,
>
> Yes, if Q1 fails then there will be no CW side tone which results in no CW
> Break-in even with VOX turned ON.
>
> Q1 on the AF Unit board is a simple NPN transistor. I don't have a direct
> replacement, maybe someone else does, but a 2N3904 will work as a replacement.

> There is a difference in the pins between the 2SC945 and the 2N3904.
>
> Looking at the bottom of the 2SC945 with the transistor's body flat spot up,
> leads towards you, the pins are labeled;
>
>
> Emitter Collector Base
>
> Look at the bottom of the 2N3904 with the transistor's body flat spot up, leads
>
> toward you, the pins are labeled;
>
> Emitter Base Collector
>
> Notice how the Base and Collector leads are reversed in the 2N3904 when
>compared
>
> to the 2SC945.
>
> I have used 2N3904 NPN transistors to replace Japanese NPN transistors with
>very
>
> good result. I recently replaced a Japanese NPN transistor that had failed in a
>
> TS-120 CAR oscillator with a 2N3904 and the oscillator started working. If you

> go this route you have to arrange the 2N3904 Base, Emitter, and Collector leads
>
> so the correct leads are inserted into the correct holes in the PC board. But,

> if someone else has a direct replacement then I would go that route instead.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >

> > Mike,
> >
> > Tnx fer the answer. I should have check the model # before sending. I
>was
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> > looking for the FIX-VOX unit...and could not find it..then found out that I
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> >
> > stated the wrong model #. The model is an 830S not 820S. So...possibly Q-1
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>
> > AF unit?
> >
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> >
> >
> >
> >
> >
> > _____
> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, March 27, 2011 8:54:38 PM
> > Subject: [TS-520_820_530_830] Re: 820S CW problem
> >
> >
> > Hi Joe,
> >
> > It appears the CW side tone oscillator, Q12, on the FIX VOX Unit board is not
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> > working. A failure in the CW side tone oscillator will cause loss of CW
> > Break-in. CW will still work, SEND switch OR PTT microphone button pressed in
>
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> >
> > mode, and the 820 will still produce RF output as your 820 is doing but you
> >will
> >
> > not have CW Break-in. Fix the side tone oscillator on the FIX VOX Unit board

> >and
> >
> > CW Break-in will return.
> >
> > 73s
> > Mike
> > W5RKL

> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> > wrote:
> > >
> > > Greetings group,
> > >
> > > Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on
> > > sideband. The send/rcv switch has to be in SEND to use CW, but no side tone
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> > >
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30505. Re: [TS-520_820_530_830] Re: TS-830S QRP ops

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 06:42:09 UTC
From: pmarkavage@juno.com
Topic: 30501 Message: 30505

Change the battery every time you change the batteries in your smoke
detectors.
Pete, wa2cwa

On Mon, 28 Mar 2011 21:54:48 -0400 "rkersey tds.net" <rkersey@...>
writes:
> Hi All,
>
> I am planning to cut the output of my TS-830S by using the voltage
> divider
> at the rear ALC port as described today, so I can get 2-5 watts for
> my
> TenTec 6M transverter. I am worried about the 9 volt battery going
> bad,
> letting the power increase and burning up the transverter. I
> thought I
> might use a 9 volt wall wart instead as a power source, but even
> that could
> go bad, so what's the alternative? Use a line fuse going into the
> transverter? What value would I use, then?
>
> 73,
> Roy
> KI4HAG

30506. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 06:55:43 UTC
From: pmarkavage@juno.com
Topic: 30492 Message: 30506

This was obviously Kenwood's Super TS-520, dubbed in closed manufacturing discussions as the STS-520, with push-pull 12BY7's driving the three 6146's in ultra-linear fashion with a specially designed hypersil power transformer to prevent RF output saturation and internal auroral radiation. Truly a marvelous piece of equipment to own if one can one to procure.

Pete, wa2cwa

On Mon, 28 Mar 2011 16:45:48 -0700 n6wk@... writes:
> with 3 6146 tubes and 2 12by7 tubes??
>
>
>
> On 3/28/2011 4:44 PM, Bryan Sanders wrote:
> > Yes I have one, see it every night I go back to my desk. :)
> >
> > On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3<n6wk@...>
> wrote:
> >
> >>
> >> Anyone seen the radio described in this ad ?
> >> http://www.universal-radio.com/catalog/hamhf/ts520.html

30507. Re: 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 12:38:04 UTC
From: w5rkl
Topic: 30466 Message: 30507

Hi Joe,

Yes I did say I used a 2N3904 as a replacement for a failed carrier oscillator in a TS-120. However, I also said if someone came up with a direct replacement to use the direct replacement. Therefore, if a direct cross reference replacement for a 2SC945 appears to be an NTE85 then I would use that. Pay close attention to the leads, Base, Emitter, and Collector to ensure they are the same as the 2SC945. It's easy to install the leads incorrectly.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> When I am around radios...I consider anything that goes
> wrong..normal...hihi. Another question: you stated that a 2N3904 to be a
> replacement..just the pins are different arrangement. I looked at the NTE cross
> ref. on the 2SC945 and came up with an NTE85, and also checked the cross on the
> 2N3904 and got an NTE123AP. the '85 is listed as audio amp, the 123AP listed as
> audio amp/switch. Would it make much of a difference between the two? I can not
> find the spare AF board I thought I had to swap.
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, March 28, 2011 10:25:55 AM
> Subject: [TS-520_820_530_830] Re: 820S CW problem
>
>
>
> It's strange that you are having this problem. A ham on qrz.com is having a
> similar loss of CW side tone in his TS-130. I've been helping him with his loss
> of CW side tone which causes the TS-130, just like the TS-830 and other
> transceivers, loss of CW Break-in but does not result in loss of CW transmit in
> general.
>
> 73s
> Mike

> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Mike,
> >
> > Agn...tnx fer the info. I was looking at a prior thread regarding this
> > problem. I do have a spare AF-AVR board. It'll give me some practice doing some
> >
> > R & R. I'll keep the group up on "what's up." TNX AGN!
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> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
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> > Subject: [TS-520_820_530_830] Re: 820S CW problem
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> > Yes, if Q1 fails then there will be no CW side tone which results in no CW
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> > There is a difference in the pins between the 2SC945 and the 2N3904.
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> > leads towards you, the pins are labeled;
> >
> >
> > Emitter Collector Base
> >
> > Look at the bottom of the 2N3904 with the transistor's body flat spot up, leads
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> > toward you, the pins are labeled;
> >
> > Emitter Base Collector
> >
> > Notice how the Base and Collector leads are reversed in the 2N3904 when
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> >
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> >
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> > so the correct leads are inserted into the correct holes in the PC board. But,
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> > if someone else has a direct replacement then I would go that route instead.
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> > Mike
> > W5RKL
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> > > Hi Joe,
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> > >and
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> > > CW Break-in will return.
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> > > 73s
> > > Mike
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> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
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> > > > Greetings group,
> > > >
> > > > Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on
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30508. Re: TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 12:46:55 UTC
From: w5rkl
Topic: 30492 Message: 30508

All this and only 120 watt PEP "INPUT" on side band and 100 watts DC "INPUT" on CW.

As "Josephine" said in the movie Tombstone, as she gazed at Wyatt Earp in the distance on Allen Street, "I want one!".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> This was obviously Kenwood's Super TS-520, dubbed in closed manufacturing
> discussions as the STS-520, with push-pull 12BY7's driving the three
> 6146's in ultra-linear fashion with a specially designed hypersil power
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> On Mon, 28 Mar 2011 16:45:48 -0700 n6wk@... writes:
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> >
> > On 3/28/2011 4:44 PM, Bryan Sanders wrote:
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> > >> Anyone seen the radio described in this ad ?
> > >> http://www.universal-radio.com/catalog/hamhf/ts520.html
>

30509. Re: TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 14:33:06 UTC
From: kd8hmo
Topic: 30492 Message: 30509

Could this be an 11m special to compete with the Yaesu FT-101's that all the CBers were buying?

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> Anyone seen the radio described in this ad ?
> http://www.universal-radio.com/catalog/hamhf/ts520.html
>

30510. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 20:28:40 UTC
From: John Davidson
Topic: 30349 Message: 30510

From: Alan Nicholson (ADHB) anicholson@...
[TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Cellphone and Shortwave (HF) reception are cojmpletely different phenomonons, apples and oarnges. You can live in a valley and have HF signals loud and clear from long distances away..
Hi Jim,

I'm glad I am not the only one confused:-)

Just to clarify - I am ONLY using the rig to receive as I am not yet licenced. I believe from information given here and elsewhere that a random length of wire is OK to receive(but not for tx) but I am in the process of making up my first Dipole. Poor weather put that on hold this weekend! Also we live in a dip and the reception for cellphones is marginal so I assume that the reception for a random wire antenna probably leaves a lot to be desired.

.

[Non-text portions of this message have been removed]

30511. Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 20:46:32 UTC
From: andy_westcott2004
Topic: 30474 Message: 30511

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:

> The "LOAD" control provides a means of providing as close of an impedance match, within the limited impedance range of the PI Network, to the load presented to the transmitter.

Precisely, which is why I was becoming slightly concerned that the best match I could achieve was with the LOAD control fully anti-clockwise. Not nearly so, but fully so.

I know the LOAD cap is padded out a bit and I was wondering if maybe one of the padding caps had failed, meaning I could not get enough 'C' to properly match the pi network. Essentially though, I was wondering if anyone else's 520 did the same thing - if not, this would point to a fault with mine.

I'll have a peep sometime and see if any of the caps are physically disconnected.

30512. Re: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 20:52:57 UTC
From: Bob Macklin
Topic: 30474 Message: 30512

Is this on a dummy load or on an antenna?

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: andy_westcott2004
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 1:46 PM
Subject: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:

> The "LOAD" control provides a means of providing as close of an impedance match, within the limited impedance range of the PI Network, to the load presented to the transmitter.

Precisely, which is why I was becoming slightly concerned that the best match I could achieve was with the LOAD control fully anti-clockwise. Not nearly so, but fully so.

I know the LOAD cap is padded out a bit and I was wondering if maybe one of the padding caps had failed, meaning I could not get enough 'C' to properly match the pi network. Essentially though, I was wondering if anyone else's 520 did the same thing - if not, this would point to a fault with mine.

I'll have a peep sometime and see if any of the caps are physically disconnected.

[Non-text portions of this message have been removed]

30513. Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 20:53:26 UTC
From: Jim S
Topic: 30349 Message: 30513

Unless you have a serious problem due to some other condition, I would like to emphasize that your lack of sensitivity is very likely due to an impedance mismatch between your random length wire, and the input of your radio.

A dipole antenna is only going to give you the proper 50 ohm match on a single frequency or an odd multiple of that frequency. In the ham bands, a dipole cut for 40 meters (7 Mhz) will work quite well on 15 meters (21 Mhz) because 15 is an odd multiple frequency of the 40 meter band. That has been the traditional relationship of the old (pre WARC) amateur bands.

One way to get around this, is , as I believe I mentioned before, by using a antenna tuner, which is , in realilty, an impedance matching device, that will convert the highly reactive, high impedance source (the random wire) to a level that the radio can operate with satisfactorily.

The reason such an antenna is NOT a good idea for transmitting, is that RF will radiate from the wire, EVERYWHERE that the wire is exposed. This commonly results in a situation called "RF in the shack" which is exactly what it sounds like, and generally wreaks all kinds of havock on equpment. (computers resetting, lips and fingertips getting burned on metal objects such as microphones and knobs, etc.)

Hope this helps. 73, Jim AG3Y

----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 4:28 PM
Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

From: Alan Nicholson (ADHB) anicholson@...
[TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S

Cellphone and Shortwave (HF) reception are cojmpletely different phenomonons, apples and oarnges. You can live in a valley and have HF signals loud and clear from long distances away..
Hi Jim,

I'm glad I am not the only one confused:-)

Just to clarify - I am ONLY using the rig to receive as I am not yet licenced. I believe from information given here and elsewhere that a random length of wire is OK to receive(but not for tx) but I am in the process of making up my first Dipole. Poor weather put that on hold this weekend! Also we live in a dip and the reception for cellphones is marginal so I assume that the reception for a random wire antenna probably leaves a lot to be desired.

..

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=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17210)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17210)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

30514. Kenwood TS-511S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 21:12:08 UTC
From: kevin
Topic: 30514 Message: 30514

Is this a true Hybrid?

Kenwood TS-511S

30515. Re: [TS-520_820_530_830] Kenwood TS-511S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 21:48:31 UTC
From: Bob Macklin
Topic: 30514 Message: 30515

Looks like it. You can get the manual from Kenwood.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: kevin
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 2:12 PM
Subject: [TS-520_820_530_830] Kenwood TS-511S

Is this a true Hybrid?

Kenwood TS-511S

[Non-text portions of this message have been removed]

30516. Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 22:05:04 UTC
From: w5rkl
Topic: 30474 Message: 30516

What is, as you said, is "best output"? In other words, what is the power output on 80 and 40 meters into a dummy load watt meter? "Best output" can be any level of power output from 5 watts to 100 watts, especially if there is a problem with your 520SE.

Do you achieve a good dip in IP current after peaking ALC with the DRIVE control in TUNE mode?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Hi Guys.
> Just a quick question for those more in the know than me:
> I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?
>
> It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.
>
> Power output seems fine, by the way with no excessive plate current.
>

30517. Re: [TS-520_820_530_830] 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-29 23:15:22 UTC
From: John Davidson
Topic: 30466 Message: 30517

do you have a key plugged into the key jack??

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 27, 2011 11:25:16 PM
Subject: [TS-520_820_530_830] 820S CW problem

Greetings group,

Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on sideband. The send/rcv switch has to be in SEND to use CW, but no side tone is heard..but there is full output. Voltage are on spec on the AF unit. Ideas??

73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30518. Full ALC deflection when tuning

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:00:01 UTC
From: Chris Parnell
Topic: 30518 Message: 30518

Hi all,

I have my 830 working again after some time, but think I may have an issue with tubes... and would like guidance.
The issue is that when I flick to the send button (TX) I get full ALC deflection, regardless of mode, regardless of whether the heater is on or off on the front panel.

I can tune the rig to around 50W output on 20 meters, but the ALC full deflection is still there.

Is this an issue with the two 6146 tubes? any ideas?

Thanks
Chris Parnell, ZL1CDP

30519. Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:07:48 UTC
From: John Davidson
Topic: 30474 Message: 30519

I had that fixed cap on the 80M bandswitch position blow out on me.
It caused me to have max setting on the load (CCW) and not get near the full 100 W on the lower part of the band (where the good stuff is).

In the useless part of the band (phone region) I could get full output with less then full CCW but nobody up there knows Morse !
It is not easy to get to on the TS520 but I managed to change it.

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 1:41:51 PM
Subject: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Hi Guys.
Just a quick question for those more in the know than me:
I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?

It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.

Power output seems fine, by the way with no excessive plate current.

[Non-text portions of this message have been removed]

30520. Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:14:53 UTC
From: John Davidson
Topic: 30492 Message: 30520

I checked it out and they misquoted the power rating also , DC input stated is actually RF output ! My TS520 runs about 167 W of DC input on CW !

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 7:45:48 PM
Subject: Re: [TS-520_820_530_830] TS-520 with 3 6146B tubes and TWO 12by7's

with 3 6146 tubes and 2 12by7 tubes??

On 3/28/2011 4:44 PM, Bryan Sanders wrote:
> Yes I have one, see it every night I go back to my desk. :)
>
> On Mon, Mar 28, 2011 at 7:48 PM, n6wk_skcc3<n6wk@...> wrote:
>

[Non-text portions of this message have been removed]

30521. Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:29:12 UTC
From: Bob Macklin
Topic: 30474 Message: 30521

If one of the capacitors in the output of the Pi-Network opens you can add a capacitor by installing a "T" connector on the back of the rig and connect the replacement capacitor to one side of the "T".

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 5:07 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

I had that fixed cap on the 80M bandswitch position blow out on me.
It caused me to have max setting on the load (CCW) and not get near the full 100 W on the lower part of the band (where the good stuff is).

In the useless part of the band (phone region) I could get full output with less then full CCW but nobody up there knows Morse !
It is not easy to get to on the TS520 but I managed to change it.

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 1:41:51 PM
Subject: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Hi Guys.
Just a quick question for those more in the know than me:
I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?

It isn't a problem but it would be nice to see a peak before the control reaches the end of its travel, I'd be more confident the radio was operating at best efficiency.

Power output seems fine, by the way with no excessive plate current.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30522. Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:32:23 UTC
From: John Davidson
Topic: 30474 Message: 30522

That would certainly mess up the tuning on the higher bands !!!!!!!!!
:D

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 29, 2011 8:29:12 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

If one of the capacitors in the output of the Pi-Network opens you can add a capacitor by installing a "T" connector on the back of the rig and connect the replacement capacitor to one side of the "T".

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 5:07 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

I had that fixed cap on the 80M bandswitch position blow out on me.
It is not easy to get to on the TS520 but I managed to change it.

From: andy_westcott2004 <andywestcottpublic@....uk>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, March 28, 2011 1:41:51 PM
Subject: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Hi Guys.
Just a quick question for those more in the know than me:
I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?

It isn't a problem but it would be nice to see a peak before the control reaches

the end of its travel, I'd be more confident the radio was operating at best efficiency.

Power output seems fine, by the way with no excessive plate current.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30523. Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:41:11 UTC
From: Bob Macklin
Topic: 30474 Message: 30523

You can pull it off for the higher bands. It's just a way to operate on the lower bands until you can fix it properly. It will also tell you if it is the problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 5:32 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

That would certainly mess up the tuning on the higher bands !!!!!!!!!
:D

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 29, 2011 8:29:12 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

If one of the capacitors in the output of the Pi-Network opens you can add a capacitor by installing a "T" connector on the back of the rig and connect the replacement capacitor to one side of the "T".

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Davidson
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, March 29, 2011 5:07 PM
Subject: Re: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

I had that fixed cap on the 80M bandswitch position blow out on me.
It is not easy to get to on the TS520 but I managed to change it.

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com

Sent: Mon, March 28, 2011 1:41:51 PM
Subject: [TS-520_820_530_830] TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Hi Guys.
Just a quick question for those more in the know than me:
I find that the load control always needs to be fully anti-clockwise for best output (on 80m and 40m, the only bands I use with it) - is this fairly mormal for these rigs or could it be indicative of a fixed parallel capacitor across the load control having failed open circuit?

It isn't a problem but it would be nice to see a peak before the control reaches

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Power output seems fine, by the way with no excessive plate current.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30524. Re: [TS-520_820_530_830] 820S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 00:53:30 UTC
From: Joseph Stiles
Topic: 30466 Message: 30524

Of course...as I stated...rigs works in CW IF SEND/RCV switch put to SEND...it will not work "semi-break-in," and there is no side tone

---
From: John Davidson <k8jd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 29, 2011 4:15:22 PM
Subject: Re: [TS-520_820_530_830] 820S CW problem

do you have a key plugged into the key jack??

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, March 27, 2011 11:25:16 PM
Subject: [TS-520_820_530_830] 820S CW problem

Greetings group,

Problem: Rig will not "key-up" in CW with VOX "ON." Vox operates fine on sideband. The send/rcv switch has to be in SEND to use CW, but no side tone is heard..but there is full output. Voltage are on spec on the AF unit. Ideas??

73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30525. TS 520 station for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 03:01:01 UTC
From: Chris
Topic: 30525 Message: 30525

Selling the complete station as a whole or willing to part out.

TS-520
MC-50
AT-200
VFO-520
SP-520

All are in good physical and operational condition.

450.00 takes the whole setup plus shipping.

Chris
VE3ZO

30526. Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 21:20:22 UTC
From: andy_westcott2004
Topic: 30474 Message: 30526

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> You can pull it off for the higher bands. It's just a way to operate on the lower bands until you can fix it properly. It will also tell you if it is the problem.
>

That's a good diagnostic experiment, I'll have a mess about. I'll probably attatch a 100pF or so variable across the LOAD cap to see what happens, if anything - that'd be simpler for me to lash up as I have no T connector.

Thanks for the answers so far - I'll try to address some questions:
I get the same result whether using a dummy load or an antenna, but then my antennae exhibit a near unity match. (variable antenna base tuning)

The max power I get seems about 100 or possibly even higher using full carrier and peaked drive, (coarsly measured using an SWR meter - relative only of course) so if there is any matching error, it's small.

I only get the 'problem' on 80 and 40 (not tried 160), 20m peaks just prior to fully anti clock-wise.

I'll post any results of my messing once I've had the rig apart.

30527. Re: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 21:58:58 UTC
From: Bob Macklin
Topic: 30474 Message: 30527

If you have the problem on both 40M and 80M that sounds like the 40M load capacitor since it is used on all lower bands.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: andy_westcott2004
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 30, 2011 2:20 PM
Subject: [TS-520_820_530_830] Re: TS-520SE: 'Load' control always fully anti-clockwise. Problem?

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> You can pull it off for the higher bands. It's just a way to operate on the lower bands until you can fix it properly. It will also tell you if it is the problem.
>

That's a good diagnostic experiment, I'll have a mess about. I'll probably attatch a 100pF or so variable across the LOAD cap to see what happens, if anything - that'd be simpler for me to lash up as I have no T connector.

Thanks for the answers so far - I'll try to address some questions:
I get the same result whether using a dummy load or an antenna, but then my antennae exhibit a near unity match. (variable antenna base tuning)

The max power I get seems about 100 or possibly even higher using full carrier and peaked drive, (coarsly measured using an SWR meter - relative only of course) so if there is any matching error, it's small.

I only get the 'problem' on 80 and 40 (not tried 160), 20m peaks just prior to fully anti clock-wise.

I'll post any results of my messing once I've had the rig apart.

[Non-text portions of this message have been removed]

30528. Re: [TS-520_820_530_830] TS 520 station for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-30 23:53:46 UTC
From: John Davidson
Topic: 30525 Message: 30528

Not a complete station without a key !

From: Chris <cpitre_01@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, March 29, 2011 11:01:01 PM
Subject: [TS-520_820_530_830] TS 520 station for sale

Selling the complete station as a whole or willing to part out.

TS-520
MC-50
AT-200
VFO-520
SP-520

All are in good physical and operational condition.

450.00 takes the whole setup plus shipping.

Chris
VE3ZO

[Non-text portions of this message have been removed]

30529. T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 01:48:22 UTC
From: Bill
Topic: 30529 Message: 30529

So now,

I replaced the 12BY7 driver tube with one from the stache and now I have stable output as well as usable output from the transverter connector! While I was in it I made a small, more fussy tweak to the neutralizing adjustment and the old tx is getting happy.

In the next couple of days I will go over the coil packs. When I installed the new finals last year I didn't do that and now I also have a new driver. The power out on the various bands is not even. I need a new set of screwdrivers so I'll break those in on the coil adjustments.

April Fool. No screwdrivers going near those coils!

As time permits I am going to build an outboard QRP final amp and use that instead of the ALC trick to reduce power. I expect to use a 5763 tube as the final. I will try to build that accessory so that it can be used with other low level "exciters".

73,

Bill KU8H

Michigan QRP Club M-1778

30530. Re: TS 520 station for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 02:09:48 UTC
From: Chris
Topic: 30525 Message: 30530

The key is on my ts-850. The sp-520 is sold. Other items still available.
--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Not a complete station without a key !
>
>
>
>
> _____
> From: Chris <cpitre_01@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, March 29, 2011 11:01:01 PM
> Subject: [TS-520_820_530_830] TS 520 station for sale
>
> Â
> Selling the complete station as a whole or willing to part out.
>
> TS-520
> MC-50
> AT-200
> VFO-520
> SP-520
>
> All are in good physical and operational condition.
>
> 450.00 takes the whole setup plus shipping.
>
> Chris
> VE3ZO
>
>
>
>
> [Non-text portions of this message have been removed]
>

30531. Nice find!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 02:23:24 UTC
From: KA5TRO
Topic: 30531 Message: 30531

While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).

Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.

So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.

Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.

If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.

Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)

So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.

Thanks for reading.

73

Tony KA5TRO

[Non-text portions of this message have been removed]

30532. Re: [TS-520_820_530_830] T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 03:02:48 UTC
From: jeffrey lord
Topic: 30529 Message: 30532

Bill,
I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me know how your QRP circuit goes and will it go to 10 Watts??

Jeff
VK4FNRS

----- Original Message ----
From: Bill <w_r_cromwell@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, 30 March, 2011 5:48:22 PM
Subject: [TS-520_820_530_830] T-599 update

So now,

I replaced the 12BY7 driver tube with one from the stache and now I have stable output as well as usable output from the transverter connector! While I was in it I made a small, more fussy tweak to the neutralizing adjustment and the old tx is getting happy.

In the next couple of days I will go over the coil packs. When I installed the new finals last year I didn't do that and now I also have a new driver. The power out on the various bands is not even. I need a new set of screwdrivers so I'll break those in on the coil adjustments.

April Fool. No screwdrivers going near those coils!

As time permits I am going to build an outboard QRP final amp and use that instead of the ALC trick to reduce power. I expect to use a 5763 tube as the final. I will try to build that accessory so that it can be used with other low level "exciters".

73,

Bill KU8H

Michigan QRP Club M-1778

Yahoo! Groups Links

30533. Re: Nice find!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 08:48:54 UTC
From: AI4WM Bill
Topic: 30531 Message: 30533

Tony,
Sounds lie you are off to a good start.
I do the same with the air and then I check all the connectors for a tight fit sometimes unmating them and remating them to ensure proper seating. Then I check all screws that fasten any circuit boards to the chassis to ensure good grounding. Check all the electrolytics to be sure there is no leakage. I do not recall any socketed IC's in the 830.

Check K4EAAs site: www.k4eaa.com for tons of information,
Ken is perhaps the most knowledgeable person on these rigs.

73,

Bill

AI4WM

[Non-text portions of this message have been removed]

30534. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 11:33:13 UTC
From: Bill
Topic: 30529 Message: 30534

Hi Jeff,

The full, lean-on-it-hard ratings for a 5763 might give you ten watts. Other tubes can more easily do 10 watts (output). A 2E26 can pass 10 watts on SSB in class AB1 and in class C on CW can be pushed a hair past 25 watts. A 2E26 resembles a scaled down 6146. For a smaller form factor and good 'safety margin' a pair of 5763s or 6AQ5s seems about right. Have you built transmitters before? If you have any building or repair skills at all it should be easy enough. A solid state amp would work, too, but I haven't looked at suitable transistors AND I have a lot of usable tubes already. It should be easy enough to hang a full 1.5 KW off that transverter but... um... why would you bypass the 100 watt amp you already have to do that?

My T-599 will not go much below 10 Watts when I turn the drive all the way down - maybe 8.5 or 9 watts. I have been detuning the Load cap by increasing the capacitance a little to get down to 5 watts. Moving that control to the slightly higher capacitance side retains the low pass filtering while detuning to the higher side reduces the filtering according to the ancient ones. If you are using mostly SSB reducing the drive is apparently not recommended. I have done that with amtor and packet using audio tones without any problems at all.

What trouble are you having with the ALC trick? I haven't tried that on mine yet but I plan to give it a try while it's on the bench. I have a brand new pot just for that. I'll look to see if I am having the same kind of problems or if I can reproduce the problems you are having and maybe help sort it out. Somebody else on the list might have an answer for that, too. The pot and battery on the ALC lines seems to be the simplest method.

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
> I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me
> know how your QRP circuit goes and will it go to 10 Watts??
>
> Jeff
> VK4FNRS

30535. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 11:53:19 UTC
From: w5rkl
Topic: 30529 Message: 30535

Hello Jeff,

The Files section has a simple qrp circuit to control the 520's output. The file name is TS-520S-qrp.pdf

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
> I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me
> know how your QRP circuit goes and will it go to 10 Watts??
>
> Jeff
> VK4FNRS
>
>
>
>
> ----- Original Message ----
> From: Bill <w_r_cromwell@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, 30 March, 2011 5:48:22 PM
> Subject: [TS-520_820_530_830] T-599 update
>
> So now,
>
> I replaced the 12BY7 driver tube with one from the stache and now I have stable
> output as well as usable output from the transverter connector! While I was in
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>
> In the next couple of days I will go over the coil packs. When I installed the
> new finals last year I didn't do that and now I also have a new driver. The
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>
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>
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> instead of the ALC trick to reduce power. I expect to use a 5763 tube as the
> final. I will try to build that accessory so that it can be used with other low
> level "exciters".
>

> 73,
>
> Bill KU8H
>
> Michigan QRP Club M-1778
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

30536. Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 14:55:25 UTC
From: Bob
Topic: 30536 Message: 30536

N6WK Happy Birthday. You sound great on the air this morning.
Many More
73
KB6KPK
Bob

30537. Re: [TS-520_820_530_830] Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 12:20:36 UTC
From: jeffrey lord
Topic: 30529 Message: 30537

Mike ,
This is the circuit i have built , not very happy as the linier pot 250K Ohm
does not give a fine enough setting between 100 watts and 0 watts.

The range between the 2 is less that 1/8 of the pots sweep. I would like a
larger arc of effect , (less senisitivity in the pot could improve this).

Jeff

----- Original Message ----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 31 March, 2011 3:53:19 AM
Subject: [TS-520_820_530_830] Re: T-599 update

Hello Jeff,

The Files section has a simple qrp circuit to control the 520's output. The file
name is TS-520S-qrp.pdf

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
> I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me

> know how your QRP circuit goes and will it go to 10 Watts??
>
> Jeff
> VK4FNRS
>
>
>
>
> ----- Original Message ----
> From: Bill <w_r_cromwell@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, 30 March, 2011 5:48:22 PM
> Subject: [TS-520_820_530_830] T-599 update
>
> So now,
>
> I replaced the 12BY7 driver tube with one from the stache and now I have stable
>

> output as well as usable output from the transverter connector! While I was in

> it I made a small, more fussy tweak to the neutralizing adjustment and the old

> tx is getting happy.
>
> In the next couple of days I will go over the coil packs. When I installed the

> new finals last year I didn't do that and now I also have a new driver. The
> power out on the various bands is not even. I need a new set of screwdrivers so
>
> I'll break those in on the coil adjustments.
>
> April Fool. No screwdrivers going near those coils!
>
> As time permits I am going to build an outboard QRP final amp and use that
> instead of the ALC trick to reduce power. I expect to use a 5763 tube as the
> final. I will try to build that accessory so that it can be used with other low
>
> level "exciters".
>
> 73,
>
> Bill KU8H
>
> Michigan QRP Club M-1778
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

Yahoo! Groups Links

30538. Re: [TS-520_820_530_830] Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 16:08:21 UTC
From: n6wk@n6wk.com
Topic: 30536 Message: 30538

Thanks Bob
73
Gordon

On 3/31/2011 7:55 AM, Bob wrote:
>
> N6WK Happy Birthday. You sound great on the air this morning.
> Many More
> 73
> KB6KPK
> Bob
>
>

30539. Re: TS 520 for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 16:26:41 UTC
From: Chris
Topic: 30525 Message: 30539

All accessories sold

Ts-520 with cw filter and MC-50

175.00 plus shipping

--- In TS-520_820_530_830@yahoogroups.com, "Chris" <cpitre_01@...> wrote:
>
> Selling the complete station as a whole or willing to part out.
>
>
> TS-520
> MC-50
> AT-200
> VFO-520
> SP-520
>
> All are in good physical and operational condition.
>
> 450.00 takes the whole setup plus shipping.
>
> Chris
> VE3ZO
>

30540. Re: [TS-520_820_530_830] Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 17:37:39 UTC
From: pmarkavage@juno.com
Topic: 30529 Message: 30540

One could use two pots; one for a "coarse" adjustment (gets you in the area) and a second pot of a smaller resistance as a "fine" adjustment. Or you can just use a single 5-turn or 10-turn pot to improve the "fine" adjustment. If you plan to operate QRP all the time, theoretically, since the finals are in parallel, you should be able to pull one of the finals out, and drop to power out to about 40 or 50 watts. Of course, circuitry in the area should be reviewed beforehand.

Pete, wa2cwa

On Thu, 31 Mar 2011 05:20:36 -0700 (PDT) jeffrey lord
<jc_2aussie@...> writes:
> Mike ,
> This is the circuit i have built , not very happy as the linier pot
> 250K Ohm
> does not give a fine enough setting between 100 watts and 0 watts.
>
>
> The range between the 2 is less that 1/8 of the pots sweep. I would
> like a
> larger arc of effect , (less senisitivity in the pot could improve
> this).
>
> Jeff
>
>
>
> ----- Original Message ----
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, 31 March, 2011 3:53:19 AM
> Subject: [TS-520_820_530_830] Re: T-599 update
>
> Hello Jeff,
>
> The Files section has a simple qrp circuit to control the 520's
> output. The file
> name is TS-520S-qrp.pdf
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, jeffrey lord

> <jc_2aussie@...> wrote:
> >
> > Bill,
> > I am haveing trouble with the ALC TRICK on my TS 520S, could you
> please let me
>
> > know how your QRP circuit goes and will it go to 10 Watts??
> >
> > Jeff
> > VK4FNRS
> >
> >
> >
> >
> > ----- Original Message ----
> > From: Bill <w_r_cromwell@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, 30 March, 2011 5:48:22 PM
> > Subject: [TS-520_820_530_830] T-599 update
> >
> > So now,
> >
> > I replaced the 12BY7 driver tube with one from the stache and now
> I have stable
> >
> > output as well as usable output from the transverter connector!
> While I was in
>
> > it I made a small, more fussy tweak to the neutralizing adjustment
> and the old
>
> > tx is getting happy.
> >
> > In the next couple of days I will go over the coil packs. When I
> installed the
>
> > new finals last year I didn't do that and now I also have a new
> driver. The
> > power out on the various bands is not even. I need a new set of
> screwdrivers so
> >
> > I'll break those in on the coil adjustments.
> >
> > April Fool. No screwdrivers going near those coils!
> >
> > As time permits I am going to build an outboard QRP final amp and
> use that
> > instead of the ALC trick to reduce power. I expect to use a 5763
> tube as the
> > final. I will try to build that accessory so that it can be used

> with other low
> >
> > level "exciters".
> >
> > 73,
> >
> > Bill KU8H
> >
> > Michigan QRP Club M-1778

30541. Re: Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 20:08:02 UTC
From: w5rkl
Topic: 30536 Message: 30541

Happy Birthday Gordon. I didn't know. I hope you have/had a great birthday. Take care and many more birthdays to come.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Thanks Bob
> 73
> Gordon
>
>
>
> On 3/31/2011 7:55 AM, Bob wrote:
> >
> > N6WK Happy Birthday. You sound great on the air this morning.
> > Many More
> > 73
> > KB6KPK
> > Bob
> >
> >
>

30542. Re: [TS-520_820_530_830] Re: Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 20:26:48 UTC
From: n6wk@n6wk.com
Topic: 30536 Message: 30542

Thanks Mike.
I am hoping for many more myself :-)

73,
Gordon
N6WK

On 3/31/2011 1:08 PM, w5rkl wrote:
>
> Happy Birthday Gordon. I didn't know. I hope you have/had a great
> birthday. Take care and many more birthdays to come.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Thanks Bob
> > 73
> > Gordon
> >
> >
> >
> > On 3/31/2011 7:55 AM, Bob wrote:
> > >
> > > N6WK Happy Birthday. You sound great on the air this morning.
> > > Many More
> > > 73
> > > KB6KPK
> > > Bob
> > >
> > >
> > >
>
>

30543. Re: Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 21:06:17 UTC
From: Bob
Topic: 30536 Message: 30543

Mike
I don't know if Ken wanted everyone to know it was his birthday? I caught him on 80 meters this morning at 40 over S 9. Man Gordon you have a great sounding station. Just could not resist posting it, And I want to sit down someday and learn everything you and Ken know about Kenwoods, amps, etc. How many life times would it take? So I am wishing you both many more life times of fun and success.
bob
KB6KPK

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Thanks Mike.
> I am hoping for many more myself :-)
>
> 73,
> Gordon
> N6WK
>
> On 3/31/2011 1:08 PM, w5rkl wrote:
> >
> > Happy Birthday Gordon. I didn't know. I hope you have/had a great
> > birthday. Take care and many more birthdays to come.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Thanks Bob
> > > 73
> > > Gordon
> > >
> > >
> > >
> > > On 3/31/2011 7:55 AM, Bob wrote:
> > > >
> > > > N6WK Happy Birthday. You sound great on the air this morning.
> > > > Many More
> > > > 73
> > > > KB6KPK
> > > > Bob
> > > >
> > > >

> > >
> >
> >
>

30544. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 22:10:11 UTC
From: w5rkl
Topic: 30529 Message: 30544

Hi Jeff,

I'm experimenting with another circuit that uses a couple of fixed resistors, a transistor, and a 20K linear pot. So far it works quite well, varies the voltage between -.16 to -5.5VDC. I want to do some more work.

It's a breadboard project at the moment, power is 9VDC from the board's built in power supply.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Mike ,
> This is the circuit i have built , not very happy as the linier pot 250K Ohm
> does not give a fine enough setting between 100 watts and 0 watts.
>
>
> The range between the 2 is less that 1/8 of the pots sweep. I would like a
> larger arc of effect , (less senisitivity in the pot could improve this).
>
> Jeff
>

30545. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 22:50:31 UTC
From: Bill
Topic: 30529 Message: 30545

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
> I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me
> know how your QRP circuit goes and will it go to 10 Watts??
>
> Jeff
> VK4FNRS

Hah Jeff,

It turns out my ALC circuit is inoperative. The 9 volt battery and pot trick has absolutely no effect. There is never any ALC deflection on any band during tuneup, either. I have just always tuned it up the way I have always tuned up other rigs with tube finals. I run it conservatively so I have not got myself in trouble overdriving it in SSB mode.

I'll dig into that later. I have the owner's manual AND the service manual so I'll get it. I suspect a fried transistor or a defective resistor. It is even possible the previous owner (long, long ago) disabled it so he could drive a CB amp harder (or some such foolishness).

With good tubes and fresh diddle of the coil pack she's running near 100 watts output at just over 200 mA so I am pleased. New problem, she won't go below about 30 watts with the carrier drive control all the way down now. I'm going to be after that transverter out put as soon as possible. I have an operating event coming up soon so it's about time to button up and get on the air.

Mike's idea with the transistor to control the ALC sounds like a good one.

73,

Bill KU8H

30546. Happy B'day, Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 23:15:02 UTC
From: Leslie Zwiebel
Topic: 30546 Message: 30546

Happy Birthday, Gordon. Good on ya'!
(((73)))
Les

30547. Happy Birthday Gordon !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 23:19:17 UTC
From: Ruben Echevarria KA2HHB
Topic: 30547 Message: 30547

Wish you all the best and may you have many many more .... HAPPY BIRTHDAY Gordon !!!!!

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390

[Non-text portions of this message have been removed]

30548. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-03-31 23:49:06 UTC
From: Bill
Topic: 30529 Message: 30548

So...

I just couldn't leave it alone. I found that I needed to clean the meter switch and now the ALC meter reading works as expected for tuneup. The 9 volt battery and pot still have no effect. Maybe the circuit in the T-599 is dramatically different or it's just plain broken. I'll look at that later. I put the covers back on for now.

73,

Bill KU8H

30549. TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 01:31:20 UTC
From: n8ydadam
Topic: 30358 Message: 30549

I haven't thrown in the towel yet, but am still not done. All of the band switch seems ok, no broken couplers and it's properly aligned. I've replaced the caps that have been discussed on the antenna relay. I'd also noticed that someone had 6146A's in the rig, and found some good 6146B's. It's got all new cathode and screen resistors. I've neutralized the finals and found a dip, appears ok. However I'm still seeing less than 1w output. At least hasn't let the smoke out. LOL.

I wonder if I'm not getting drive through the final? I've removed and reseated all of the "board-to-board" coaxial connections I could find. Is this a common issue?

Thanks!
Adam, N8YD

30550. Re: Happy Birthday Gordon !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 04:28:03 UTC
From: kd8hmo
Topic: 30547 Message: 30550

Happy Birthday Gordon!!

--- In TS-520_820_530_830@yahoogroups.com, "Ruben Echevarria KA2HHB" <ka2hhb_2000@...>
wrote:
>
> Wish you all the best and may you have many many more .... HAPPY BIRTHDAY Gordon !!!!!
>
>
> Ruben Echevarria KA2HHB
> Newark, New Jersey 07104
> 070 Club#861 LONP#141
> 30MDG#1148 10-10#33308
> EPC#3390
>
> [Non-text portions of this message have been removed]
>

30551. Re: [TS-520_820_530_830] Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 03:54:27 UTC
From: jeffrey lord
Topic: 30529 Message: 30551

Bill,

take the ALC plug in out of the circuit when tunning up, , or the radio well not tune correctly.

only have this active after tunning .

Jeff

----- Original Message ----
From: Bill <w_r_cromwell@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 31 March, 2011 2:50:31 PM
Subject: [TS-520_820_530_830] Re: T-599 update

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
> I am haveing trouble with the ALC TRICK on my TS 520S, could you please let me

> know how your QRP circuit goes and will it go to 10 Watts??
>
> Jeff
> VK4FNRS

Hah Jeff,

It turns out my ALC circuit is inoperative. The 9 volt battery and pot trick has absolutely no effect. There is never any ALC deflection on any band during tuneup, either. I have just always tuned it up the way I have always tuned up other rigs with tube finals. I run it conservatively so I have not got myself in trouble overdriving it in SSB mode.

I'll dig into that later. I have the owner's manual AND the service manual so I'll get it. I suspect a fried transistor or a defective resistor. It is even possible the previous owner (long, long ago) disabled it so he could drive a CB amp harder (or some such foolishness).

With good tubes and fresh diddle of the coil pack she's running near 100 watts output at just over 200 mA so I am pleased. New problem, she won't go below about 30 watts with the carrier drive control all the way down now. I'm going to be after that transverter out put as soon as possible. I have an operating event coming up soon so it's about time to button up and get on the air.

Mike's idea with the transistor to control the ALC sounds like a good one.

73,

Bill KU8H

Yahoo! Groups Links

30552. Re: [TS-520_820_530_830] Re: Happy Birthday Gordon

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 05:05:56 UTC
From: george dumond
Topic: 30536 Message: 30552

Happy birthday Gordon and a whole bunch more are in the future. Also thanks for all the help you have given me.
73
George k0gwd

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, March 31, 2011 3:08:02 PM
Subject: [TS-520_820_530_830] Re: Happy Birthday Gordon

Happy Birthday Gordon. I didn't know. I hope you have/had a great birthday. Take care and many more birthdays to come.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Thanks Bob
> 73
> Gordon
>
>
>
> On 3/31/2011 7:55 AM, Bob wrote:
> >
> > N6WK Happy Birthday. You sound great on the air this morning.
> > Many More
> > 73
> > KB6KPK
> > Bob
> >
> >
>

[Non-text portions of this message have been removed]

30553. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 12:53:42 UTC
From: w5rkl
Topic: 30358 Message: 30553

Hello Adam,

What position is the LOAD control when you start you tune up procedures?

Are you using a dummy load when tuning the transmitter?

What do you mean when you say you neutralized the finals and found a dip, appears ok?

If I remember correctly you said the band switch is aligned properly. How did you check the alignment of the band switch? When you adjust the PLATE control for a dip in IP current where is the PLATE control pointer pointing to? Is the IP dip a rather large dip (LOAD control set fully CCW) or only slightly noticeable?

Finding 6146As in the final will not cause the output to be only 1 watt, assuming the tubes are not bad.

Have you measured the voltages at the final tube socket screen and grid terminals in both receive and transmit with full output from the final amplifier?

What is the final tube HV when measured at the Rectifier Unit's "800" terminal? in receive and then in transmit with full output? Don't become confused at the low voltage measured at the Rectifier Unit's "HV" terminal as a problem. The Rectifier Unit's "HV" terminal is the voltage fed to the meter switch "HV" terminal and is not the HV voltage fed to the final tubes.

There should be more than enough drive to peg the ALC meter full scale to the right when adjusting the DRIVE control in TUNE mode with the CAR control set to 12 o'clock. Is this what happens when you key the transmitter (SEND switch UP) and adjust the DRIVE control in TUNE mode?

Are you using the 530 service manual schematic? If not then you should be using it when troubleshooting problems in your 530.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "n8ydadam" <aliette@...> wrote:
>
>
> I haven't thrown in the towel yet, but am still not done. All of the band switch seems ok, no broken couplers and it's properly aligned. I've replaced the caps that have been discussed on the antenna relay. I'd also noticed that someone had 6146A's in the rig, and found some good 6146B's. It's got all new cathode and screen resistors. I've neutralized the finals and found a dip, appears ok. However I'm still seeing less than 1w output. At least hasn't let the smoke out. LOL.
>
> I wonder if I'm not getting drive through the final? I've removed and reseated all of the

"board-to-board" coaxial connections I could find. Is this a common issue?
>
> Thanks!
> Adam, N8YD
>

30554. Re: [TS-520_820_530_830] Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 14:09:18 UTC
From: Daniel TOESCA
Topic: 30358 Message: 30554

Hello Mike,

Sure, ceramic disc capacitors can fail...

About 40 years ago I built a Heathkit HW-101 kit. After testing and
alignment per the manual, it seemed the audio was quite bad. In fact, I
traced the fault to a 10 nF decoupling cap between the AGC line and ground.
I do not remember if this cap was a short or had some low resistance.
Heathkit was kind enough to send me another one (even if I had already
wired in a new one), but no reward for the time lost, hi !!

Just a side comment about the topic in progress.

Vy 73 - Daniel, ON5PY

2011/3/24 w5rkl <w5rkl@...>

>
>
> Ceramic disc capacitors "typically" do not fail nor do they change values
> over time. That does not mean ceramic disc capacitors NEVER fail.
>
> There are times when disc capacitors do fail such as pulling hard/abusing
> the leads that can lead to the internal capacitor plates to separate from
> the leads. Capacitors that are subjected to a voltage that exceeds the safe
> working voltage of the capacitor can be physically damaged, they explode.
>
> C12, the 100pf ceramic disc capacitor, has a voltage rating of "500VDC".
> This capacitor is listed in the 530 parts list on page 21 under "TS-530
> General" listing.
>
> C25, the capacitor across the relay coil terminals, should be at least
> 25VDC. When coil voltage is removed, switching from transmit to receive, the
> magnetic field that surrounds the coil collapses. As the magnetic field
> collapses, the magnetic lines cut the windings of the relay coil, resulting
> in an "induced" voltage that can be much higher than the 12VDC source
> voltage. Diode D10 on the AF unit provides some protection against this
> collapsing magnetic field induced voltage.
>
> Again, unless there is physical damage and/or the capacitors' working
> voltage has been exceeded causing destruction of the capacitor, most ceramic
> disc capacitors do not fail over time.
>
>
> 73s
> Mike

> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@...>
> wrote:
> >
> >
> > Thanks for some clarification, Mike. No problem on unplugging the set. I
> hope to be able to use it if I get it figured out. ;-)
> >
> > I wasn't quite sure on the orientation of the shaft for the band switch,
> but now I think I got it.
> >
> > Do you happen to know the voltage ratings for the caps on the antenna
> relay board? I have a recap kit, but it's only electrolytics.
> >
> > Adam
> >
> > -----Original Message-----
> > From: "w5rkl" <w5rkl@...>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Wed, 23 Mar 2011 21:56:15
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: TS-530 Project...
> >
> > Adam,
> >
> > Before doing any visual inspections and attempting to correct any out of
> sync band switch alignment, remove ALL power cable, ensure ALL power
> supplies are discharged, and take your time. If you attempt to do any of the
> following in a hurry you can make matters worse than they already are. If
> you do not understand any of this, ask questions. Do NOT assume anything.
> Switch "S22" is "inside" the final amplifier and it is the ONLY switch
> assembly inside the final amplifier.
> >
> > Remove the top and bottom covers then remove the top cover off of the
> final amplifier enclosure.
> >
> > Remove final tube V1, the front 6146. You cannot see the coupler and S22
> switch assembly inside the final amplifier clearly without removing V1.
> >
> > Look, from the right side of the final amplifier enclosure, through the
> space occupied by V1. You will see the mounting bracket that supports S22.
> You will also see the plastic coupler that connects the long band switch
> shaft to S22 switch assembly inside the final amplifier enclosure.
> >
> > There are "4" small "1.5mm" dark colored "hex" sets screws, "2" rear set
> screws that hold the plastic coupler to S22's shaft and "2" front set screws
> that hold the plastic coupler to the long shaft to the front panel knob.
> >

> > Look closely as S22 shaft, the portion that slides into and is held to
> the plastic coupler by the 2 "rear" 1.5mm small dark colored set screws. You
> should see 2 flat spots on S22's shaft.
> >
> > With the band switch knob set so the band switch knob points "exactly" at
> "10" on the front panel, one of the flat spots on S22 shaft MUST be exactly
> "vertical" on the right. The other flat spot on S22 shaft MUST be exactly
> "horizontal" on the "bottom", again with the front panel band switch knob
> pointing "exactly" at "10" on the front panel! This is the "correct"
> alignment of the entire band switch system/assembly. Any thing different
> than this means the band switch system/assembly is "out of sync"!
> >
> > The band switch "will" rotate "continuously 360 degrees" in either
> direction! There are "NO" stops to the band switch!
> >
> > You will need a "metric" hex tool, size "1.5mm". Do NOT attempt to
> remove/loosen the coupler set screws with any tool but a 1.5mm hex tool. If
> you do you will permanently damage the set screws.
> >
> > Do NOT loosen the plastic couplers' front set screws on the long band
> switch shaft unless you are replacing a broken coupler!! If the coupler is
> NOT cracked or broken and you have found S22 is out of sync with the rest of
> the band switch system/assembly, then the only set screws you need to loosen
> are the 2 "rear" set screws.
> >
> > Do NOT over tighten the set screws! Over tighten set screws will "break"
> or cause the coupler to "crack" at the set screws! If this occurs you will
> have to replace the coupler! You do NOT have to replace the coupler simply
> because it's old. As the old saying goes, "if it ain't broke don't fix
> it!!!".
> >
> > The end result, when this alignment is done properly, the front panel
> band switch knob pointing exactly at 10 with results in S22's shaft flat
> spots be exactly vertical on the right side and exactly horizontal on the
> bottom. Any other S22 shaft flat spot alignment with the band switch knob
> pointing to exactly 10 on the front panel will be wrong!
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Adam Liette" <aliette@>
> wrote:
> > >

> > >
> > > To try and simplify things... I see two little black nubs on part of
> the band switch inside the final cage. These appear to be what hold the
> switch's position. When set for 10MHz/30m where should these be in relation
> to the front panel?
> > >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>

[Non-text portions of this message have been removed]

30555. QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 14:15:27 UTC
From: w5rkl
Topic: 30555 Message: 30555

I just uploaded a QRP control circuit "pdf" file to the files section. The file is named

"Kenwood Hybrid QRP control circuit.pdf"

The transistor is an NPN. I used an MPSW42 high voltage NPN transistor simply because I have quite a few of these on hand. A 2N2222A could also be used since the voltage and current demands are very low.

The adjustable "negative" ALC control voltage varies between approximately -.16VDVDC to approximately -5.5VDC depending on 9 volt battery voltage.

The parts are easily obtained from Mouser Electronics. A small Radio Shack experimental PC board can be used to mount the components. I built this circuit on my breadboard and measured the adjustable ALC output voltage with a DVM and an analog meter. I used the analog meter to visually see how linear the output voltage varies when adjusting the 20K pot.

The 20K pot can be a screw driver adjustable or a knob adjustable pot, it's entirely up to the builder. I used a screw driver adjustable pot and the ALC control voltage varies quite smooth.

73s
Mike
W5RKL

30556. ts 520 se parted out

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 14:51:22 UTC
From: ron story
Topic: 30556 Message: 30556

i have most of the parts for a scrapped out ts 520 se, if you need a board or panel let me know, im cheep. ron ne0x

[Non-text portions of this message have been removed]

30557. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 15:25:35 UTC
From: Bill
Topic: 30529 Message: 30557

Hi Jeff,

That's what I was doing. The add-on circuit with the pot and 9 volt battery has absolutely no effect at all. I am sure there is a problem with the ALC circuit in that regard. Because the transmitter works okay in all other respects I am going to put it back on the desk and work on some other gear - then come back to that pesky ALC circuit later. One of the "other" things is a small transmitter that I have used as "boots" for a QRP rig before but should itself reduce to QRP levels. Full power out was about 35 watts if I remember correctly. I intend to see what results I can get from the transverter output on my 599 using that. The other transmitter hasn't been turned on for quite a few years so I have all the questions about dried up electrolytics and etc. That particular TX runs in class C so it's only useful for CW. When I build a new one it will be switchable class AB1/class C.

73,

Bill KU8H

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
>
> take the ALC plug in out of the circuit when tunning up, , or the radio well
> not tune correctly.
>
> only have this active after tunning .
>
> Jeff

30558. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 15:30:16 UTC
From: Bill
Topic: 30555 Message: 30558

Hi Mike,

Nice job. I snagged a copy of that for my own files so that I can implement it whenever I get the external ALC input to my 599 working.

73,

Bill KU8H

30559. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 15:39:15 UTC
From: rkersey tds.net
Topic: 30555 Message: 30559

Hi Mike,

I looked at the file for the QRP control circuit you posted. Looks like I could build that . . . . . what advantage does this circuit have over just using a 9v battery and a variable resistor to vary the voltage?

Also, what minimum and maximum output did you get? I'm guessing I would have to hook up a power meter in series with the output lead on 20M going to the antenna or dummy load to find a spot on the variable resistor dial where I would have the right output for my transverter.

I know this is real simple stuff to some of you, but I am still learning and want to make sure I have it right before something blows.

Although I can check my 9 v battery from time to time to make sure it doesn't go bad, what happens in this circuit if the voltage on the battery gets low?

Thanks for all your help.

73,
Roy
KI4HAG

[Non-text portions of this message have been removed]

30560. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 16:48:12 UTC
From: w5rkl
Topic: 30555 Message: 30560

Hi Roy and Bill,

This circuit uses the "Grounded Collector" design, very similar to the hybrid's ALC amplifier and final amplifier bias control circuit.

The transistor in this circuit provide a more "linear" control over the negative DC output voltage applied to the remote ALC terminal. This circuit also control the "maximum output voltage" that can be applied to the remote ALC connection.

The original circuit can easily apply the full battery voltage, 9VDC, to the remote ALC connection. This is not possible with this circuit since the maximum output voltage is no higher than approximately -5.5VDC, even with the pot wide open, which is more in line with "TTL" (Transistor to Transistor Logic) voltage range. Normal TTL voltage range is from 0 to 5VDC. Yes, I am aware that there is an "invalid" voltage range from 0VDC to a point where actual low TTL voltage becomes "valid". The concept here is to keep the maximum output voltage much lower than the source voltage and the output voltage, when adjusted, to be more linear.

Most "typical" maximum peak ALC voltage levels fed to the external ALC connection is approximately -4VDC. This circuit fulfills those requirements nicely and again in a more linear fashion than the original circuit.

The output is taken from the transistor's 10K fixed Collector resistor/negative battery terminal junction and the transistor's 10K Emitter ALC output resistor.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike,
>
> I looked at the file for the QRP control circuit you posted. Looks like I
> could build that . . . . . what advantage does this circuit have over just
> using a 9v battery and a variable resistor to vary the voltage?
>
> Also, what minimum and maximum output did you get? I'm guessing I would
> have to hook up a power meter in series with the output lead on 20M going to
> the antenna or dummy load to find a spot on the variable resistor dial where
> I would have the right output for my transverter.
>
> I know this is real simple stuff to some of you, but I am still learning and
> want to make sure I have it right before something blows.
>
> Although I can check my 9 v battery from time to time to make sure it
> doesn't go bad, what happens in this circuit if the voltage on the battery

> gets low?
>
> Thanks for all your help.
>
> 73,
> Roy
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

30561. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 16:53:03 UTC
From: w5rkl
Topic: 30555 Message: 30561

I forgot to comment on what happens when the battery dies. Simple, the circuit stops working just as if the battery died in the original circuit. If there is no battery voltage then the transistor will no longer conduct and produce a negative voltage to the remote ALC connection again, just as if the battery died in the original circuit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Roy and Bill,
>
> This circuit uses the "Grounded Collector" design, very similar to the hybrid's ALC amplifier and final amplifier bias control circuit.
>
> The transistor in this circuit provide a more "linear" control over the negative DC output voltage applied to the remote ALC terminal. This circuit also control the "maximum output voltage" that can be applied to the remote ALC connection.
>
> The original circuit can easily apply the full battery voltage, 9VDC, to the remote ALC connection. This is not possible with this circuit since the maximum output voltage is no higher than approximately -5.5VDC, even with the pot wide open, which is more in line with "TTL" (Transistor to Transistor Logic) voltage range. Normal TTL voltage range is from 0 to 5VDC. Yes, I am aware that there is an "invalid" voltage range from 0VDC to a point where actual low TTL voltage becomes "valid". The concept here is to keep the maximum output voltage much lower than the source voltage and the output voltage, when adjusted, to be more linear.
>
> Most "typical" maximum peak ALC voltage levels fed to the external ALC connection is approximately -4VDC. This circuit fulfills those requirements nicely and again in a more linear fashion than the original circuit.
>
> The output is taken from the transistor's 10K fixed Collector resistor/negative battery terminal junction and the transistor's 10K Emitter ALC output resistor.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>

>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@> wrote:
> >
> > Hi Mike,
> >
> > I looked at the file for the QRP control circuit you posted. Looks like I
> > could build that . . . . . what advantage does this circuit have over just
> > using a 9v battery and a variable resistor to vary the voltage?
> >
> > Also, what minimum and maximum output did you get? I'm guessing I would
> > have to hook up a power meter in series with the output lead on 20M going to
> > the antenna or dummy load to find a spot on the variable resistor dial where
> > I would have the right output for my transverter.
> >
> > I know this is real simple stuff to some of you, but I am still learning and
> > want to make sure I have it right before something blows.
> >
> > Although I can check my 9 v battery from time to time to make sure it
> > doesn't go bad, what happens in this circuit if the voltage on the battery
> > gets low?
> >
> > Thanks for all your help.
> >
> > 73,
> > Roy
> > KI4HAG
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30562. My "basket case" TS-530S have been totally restored!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 16:53:03 UTC
From: kd8hmo
Topic: 30562 Message: 30562

Please check out my now totally restored TS-530S in the photo album under my callsign. Many thanks to Gordon, N6WK for all his hard work on this radio. He did a first class restoration on a radio that was in very bad condition. You would never know it now! WOW!!

30563. Re: My "basket case" TS-530S have been totally restored!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 17:12:55 UTC
From: w5rkl
Topic: 30562 Message: 30563

Nice looking 530 and congrats to you and Gordon.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> Please check out my now totally restored TS-530S in the photo album under my callsign. Many thanks to Gordon, N6WK for all his hard work on this radio. He did a first class restoration on a radio that was in very bad condition. You would never know it now! WOW!!
>

30564. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 17:23:09 UTC
From: w5rkl
Topic: 30555 Message: 30564

I'm sorry, I indicated the RED DC meter lead is connected to the 10K collector resistor and the "Negative" battery terminal. That's wrong. The RED meter lead is connected to the battery's "Positive" terminal and 20K pot junction. The rest is okay. Sorry for the wrong polarity and attachment point statement.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> I forgot to comment on what happens when the battery dies. Simple, the circuit stops working just as if the battery died in the original circuit. If there is no battery voltage then the transistor will no longer conduct and produce a negative voltage to the remote ALC connection again, just as if the battery died in the original circuit.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Roy and Bill,
> >
> > This circuit uses the "Grounded Collector" design, very similar to the hybrid's ALC amplifier and final amplifier bias control circuit.
> >
> > The transistor in this circuit provide a more "linear" control over the negative DC output voltage applied to the remote ALC terminal. This circuit also control the "maximum output voltage" that can be applied to the remote ALC connection.
> >
> > The original circuit can easily apply the full battery voltage, 9VDC, to the remote ALC connection. This is not possible with this circuit since the maximum output voltage is no higher than approximately -5.5VDC, even with the pot wide open, which is more in line with "TTL" (Transistor to Transistor Logic) voltage range. Normal TTL voltage range is from 0 to 5VDC. Yes, I am aware that there is an "invalid" voltage range from 0VDC to a point where actual low TTL voltage becomes "valid". The concept here is to keep the maximum output voltage much lower than the source voltage and the output voltage, when adjusted, to be more linear.
> >
> > Most "typical" maximum peak ALC voltage levels fed to the external ALC connection is approximately -4VDC. This circuit fulfills those requirements nicely and again in a more linear fashion than the original circuit.
> >

> > The output is taken from the transistor's 10K fixed Collector resistor/negative battery terminal junction and the transistor's 10K Emitter ALC output resistor.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@> wrote:
> > >
> > > Hi Mike,
> > >
> > > I looked at the file for the QRP control circuit you posted. Looks like I
> > > could build that . . . . . what advantage does this circuit have over just
> > > using a 9v battery and a variable resistor to vary the voltage?
> > >
> > > Also, what minimum and maximum output did you get? I'm guessing I would
> > > have to hook up a power meter in series with the output lead on 20M going to
> > > the antenna or dummy load to find a spot on the variable resistor dial where
> > > I would have the right output for my transverter.
> > >
> > > I know this is real simple stuff to some of you, but I am still learning and
> > > want to make sure I have it right before something blows.
> > >
> > > Although I can check my 9 v battery from time to time to make sure it
> > > doesn't go bad, what happens in this circuit if the voltage on the battery
> > > gets low?
> > >
> > > Thanks for all your help.
> > >
> > > 73,
> > > Roy
> > > KI4HAG
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

30565. Re: Happy Birthday Gordon !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 18:17:10 UTC
From: M. J. Synowiec
Topic: 30547 Message: 30565

Hello to Gordon,

Many Happy Returns on your day of natal remembrance + 1! Around casa Synowiec we celebrate wedding anniversaries on 3-31. This year was #38. I hope you have many, many more b'days in store.

hugs & keep blowin' out 'dem candles,
mjsyn
K8SYN

[Non-text portions of this message have been removed]

30566. Re: [TS-520_820_530_830] Re: Happy Birthday Gordon !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 18:24:17 UTC
From: n6wk@n6wk.com
Topic: 30547 Message: 30566

Thanks.
This year was my 62nd birthday.
In July, we celebrate our 38th wedding anniversary as well :-)
Thanks to everyone for the Best Wishes !!

73,
Gordon
N6WK

On 4/1/2011 11:17 AM, M. J. Synowiec wrote:
>
> Hello to Gordon,
>
> Many Happy Returns on your day of natal remembrance + 1! Around casa
> Synowiec we celebrate wedding anniversaries on 3-31. This year was
> #38. I hope you have many, many more b'days in store.
>
> hugs & keep blowin' out 'dem candles,
> mjsyn
> K8SYN
>
> [Non-text portions of this message have been removed]
>
>

30567. Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 18:58:43 UTC
From: Paul
Topic: 30567 Message: 30567

Hi,

I'm after adding the VFO-230 to my lineup and was wandering what a fair price would be to pay.

Regards.

30568. Re: [TS-520_820_530_830] Re: Happy Birthday Gordon !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 19:18:19 UTC
From: Bill xxxxxxxxxxx
Topic: 30547 Message: 30568

Has anyone seen or heard of Wendy? She is missing again. W

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 1, 2011 1:24:17 PM
Subject: Re: [TS-520_820_530_830] Re: Happy Birthday Gordon !!!

Thanks.
This year was my 62nd birthday.
In July, we celebrate our 38th wedding anniversary as well :-)
Thanks to everyone for the Best Wishes !!

73,
Gordon
N6WK

On 4/1/2011 11:17 AM, M. J. Synowiec wrote:
>
> Hello to Gordon,
>
> Many Happy Returns on your day of natal remembrance + 1! Around casa
> Synowiec we celebrate wedding anniversaries on 3-31. This year was
> #38. I hope you have many, many more b'days in store.
>
> hugs & keep blowin' out 'dem candles,
> mjsyn
> K8SYN
>
> [Non-text portions of this message have been removed]
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

30569. Ts 530s/ ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 20:50:51 UTC
From: RICHARD FUOCO
Topic: 30569 Message: 30569

I purchased an audio comm boomset with dual earphones and boom mic a while ago to go with my ten tech omni 5. Being the mic has an electrec element it will not work with my kenwoods. Due to medical bills and disability I had to sell my ten tech. (I enjoyed my kenwood hybrids more anyhow) Is there a way to get power to the electret elementto make it work with my kenwoods? Or am I doomed to use the headset without the mic? I really like the receive audio on the headset and if the mic will work I would be very happy. I cannot afford a boomset to fit my kenwoods and I plan to keep them until I can no longer work ham radio. It's about the only enjoymant I still get to experience other than the company of my wife and children. Please give me an idea if you can. Thankyou KM5WX Richard

30570. Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 21:32:16 UTC
From: w5rkl
Topic: 30567 Message: 30570

Hi Paul,

What transceiver will you be connecting a VFO-230 to? The VFO-230 will only plug into and work with a TS-530 or TS-830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Paul" <m1zxz@...> wrote:
>
> Hi,
>
> I'm after adding the VFO-230 to my lineup and was wandering what a fair price would be to pay.
>
> Regards.
>

30571. Re: Ts 530s/ ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 21:44:12 UTC
From: w5rkl
Topic: 30569 Message: 30571

Hi Richard,

Unfortunately the 4 pin microphone socket is not designed to provide a DC voltage to power the microphone element in your headset.

The PTT voltage available on the 4 pin PTT microphone socket pin will not work either. When the PTT button is pressed, the PTT voltage is at "ground" potential leaving no voltage to power the microphone element in transmit.

You could change the microphone socket for a socket with more pins that matches the headset plug. After doing that you could tap the radio's 9VDC supply and apply that voltage to the new microphone socket's correct pins to power the headset microphone element. Mouser may have the socket you need.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "RICHARD FUOCO" <km5wx@...> wrote:
>
> I purchased an audio comm boomset with dual earphones and boom mic a while ago to go with my ten tech omni 5. Being the mic has an electrec element it will not work with my kenwoods. Due to medical bills and disability I had to sell my ten tech. (I enjoyed my kenwood hybrids more anyhow) Is there a way to get power to the electret elementto make it work with my kenwoods? Or am I doomed to use the headset without the mic? I really like the receive audio on the headset and if the mic will work I would be very happy. I cannot afford a boomset to fit my kenwoods and I plan to keep them until I can no longer work ham radio. It's about the only enjoymant I still get to experience other than the company of my wife and children. Please give me an idea if you can. Thankyou KM5WX Richard
>

30572. Re: [TS-520_820_530_830] Ts 530s/ ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 21:50:21 UTC
From: Joseph Stiles
Topic: 30569 Message: 30572

Richard,

I know that there's a wiring diagram around here somewhere..I may have went to the great land fill...there's a guy...W2ENY I think, that makes mics with the electret element and powers it with an external 2 X AA battery. "GOOGLE" him and you can see what I'm talking about.....................also you make seen an example(s) on EBAY of his work.

73's joe wb7uqu

From: RICHARD FUOCO <km5wx@bellsouth.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 1, 2011 1:50:51 PM
Subject: [TS-520_820_530_830] Ts 530s/ ts 820s

I purchased an audio comm boomset with dual earphones and boom mic a while ago to go with my ten tech omni 5. Being the mic has an electrec element it will not work with my kenwoods. Due to medical bills and disability I had to sell my ten tech. (I enjoyed my kenwood hybrids more anyhow) Is there a way to get power to the electret elementto make it work with my kenwoods? Or am I doomed to use the headset without the mic? I really like the receive audio on the headset and if the mic will work I would be very happy. I cannot afford a boomset to fit my kenwoods and I plan to keep them until I can no longer work ham radio. It's about the only enjoymant I still get to experience other than the company of my wife and children. Please give me an idea if you can. Thankyou KM5WX Richard

[Non-text portions of this message have been removed]

30573. Re: [TS-520_820_530_830] Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 22:17:44 UTC
From: jeffrey lord
Topic: 30529 Message: 30573

Bill,

Where are you placing the + & - leads???

If you go by the circuit on the net the pins are shown in muirror image , Number 1 in actually lower right (just to the right of the notch in the plug) and you number from right to left anti clock wise, as you look at the socket.

this mucked me up as well when i originally fitted the circuit.

Jeff

----- Original Message ----
From: Bill <w_r_cromwell@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, 1 April, 2011 7:25:35 AM
Subject: [TS-520_820_530_830] Re: T-599 update

Hi Jeff,

That's what I was doing. The add-on circuit with the pot and 9 volt battery has absolutely no effect at all. I am sure there is a problem with the ALC circuit in that regard. Because the transmitter works okay in all other respects I am going to put it back on the desk and work on some other gear - then come back to that pesky ALC circuit later. One of the "other" things is a small transmitter that I have used as "boots" for a QRP rig before but should itself reduce to QRP levels. Full power out was about 35 watts if I remember correctly. I intend to see what results I can get from the transverter output on my 599 using that. The other transmitter hasn't been turned on for quite a few years so I have all the questions about dried up electrolytics and etc. That particular TX runs in class C so it's only useful for CW. When I build a new one it will be switchable class AB1/class C.

73,

Bill KU8H

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Bill,
>
> take the ALC plug in out of the circuit when tunning up, , or the radio well
> not tune correctly.
>
> only have this active after tunning .
>
> Jeff

Yahoo! Groups Links

30574. TS520S tunning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 22:47:30 UTC
From: jeffrey lord
Topic: 30574 Message: 30574

Hi all,

I have a problem with the 520S ,

BIAS IS SET AT 60ma

When tunning up on any band , I cannot get full meter deflection on the meter when tunning the PLATE & LOAD controls in the final step .

I can get full deflection on the DRIVE in step 1, and dip in step 2 , but not full deflection in final step..

I am tunning into a dummy load , (50ohm) .

ANY IDEAS ON CAUSE PLEASE , AND A FIX ??

MAny Thanks,

Jeff
VK4FNRS

30575. Re: [TS-520_820_530_830] ts 520 se parted out

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 23:29:29 UTC
From: crousseau@windstream.net
Topic: 30556 Message: 30575

I would be interested in the front panel switch "paddles" if you still have them, and they are undamaged. Thanks, Calvin WOØL :)

---- ron story <ronnieboy1947@...> wrote:
> i have most of the parts for a scrapped out ts 520 se, if you need a board or
> panel let me know, im cheep. ron ne0x
>
>
> [Non-text portions of this message have been removed]
>

30576. Re: [TS-520_820_530_830] TS520S tunning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 23:30:58 UTC
From: Joseph Stiles
Topic: 30574 Message: 30576

Jeff,

Not getting full meter deflection may be caused by a couple of things: It's just is not putting out full output...check with wattmeter, or "RF VOLT" control pot on back of rig not adjusted...does not affect output...just the meter reading...Good luck

73's joe wb7uqu

From: jeffrey lord <jc_2aussie@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 1, 2011 3:47:30 PM
Subject: [TS-520_820_530_830] TS520S tunning issue

Hi all,

I have a problem with the 520S ,

BIAS IS SET AT 60ma

When tunning up on any band , I cannot get full meter deflection on the meter when tunning the PLATE & LOAD controls in the final step .

I can get full deflection on the DRIVE in step 1, and dip in step 2 , but not full deflection in final step..

I am tunning into a dummy load , (50ohm) .

ANY IDEAS ON CAUSE PLEASE , AND A FIX ??

MAny Thanks,

Jeff
VK4FNRS

[Non-text portions of this message have been removed]

30577. Re: [TS-520_820_530_830] TS520S tunning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-01 23:32:03 UTC
From: Lou Blasco
Topic: 30574 Message: 30577

Jeff,

We need more information. You say you don't get full deflection, what
do you get? What is your meter switch and mode switch set to?

Your mode switch should be set to CW.

If it's set to IP them you should aim for around 220 to 225mA. Don't
go over 250mA as you'll decrease the life of your tubes.
If it's set to RF then you should look for a peak (not full) deflection.

Lou
VK3ALB

At 09:47 02/04/2011, you wrote:
>Hi all,
>
>I have a problem with the 520S ,
>
>BIAS IS SET AT 60ma
>
>When tunning up on any band , I cannot get full meter deflection on the meter
>when tunning the PLATE & LOAD controls in the final step .
>
>I can get full deflection on the DRIVE in step 1, and dip in step 2 , but not
>full deflection in final step..
>
>I am tunning into a dummy load , (50ohm) .
>
>ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
>
>MAny Thanks,
>
>Jeff
>VK4FNRS
>
>
>------------------------------------
>
>Yahoo! Groups Links
>
>
>

30578. Fw: [TS-520_820_530_830] TS520S tunning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 00:44:34 UTC
From: jeffrey lord
Topic: 30574 Message: 30578

Lou,

settings are correct when tunning , only getting 110-120 Ma , and dip on plate
tune is just visible.

Thanks,
Jeff

----- Forwarded Message ----
From: Lou Blasco <radio@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, 1 April, 2011 3:32:03 PM
Subject: Re: [TS-520_820_530_830] TS520S tunning issue

Jeff,

We need more information. You say you don't get full deflection, what
do you get? What is your meter switch and mode switch set to?

Your mode switch should be set to CW.

If it's set to IP them you should aim for around 220 to 225mA. Don't
go over 250mA as you'll decrease the life of your tubes.
If it's set to RF then you should look for a peak (not full) deflection.

Lou
VK3ALB

At 09:47 02/04/2011, you wrote:
>Hi all,
>
>I have a problem with the 520S ,
>
>BIAS IS SET AT 60ma
>
>When tunning up on any band , I cannot get full meter deflection on the meter
>when tunning the PLATE & LOAD controls in the final step .
>
>I can get full deflection on the DRIVE in step 1, and dip in step 2 , but not
>full deflection in final step..
>
>I am tunning into a dummy load , (50ohm) .
>
>ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
>
>MAny Thanks,
>

>Jeff
>VK4FNRS
>
>
>------------------------------------
>
>Yahoo! Groups Links
>
>
>

Yahoo! Groups Links

30579. Re: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 01:23:10 UTC
From: Lou Blasco
Topic: 30574 Message: 30579

Hi Jeff,

OK, so I assume you have run through the tune-up procedure correctly
and you are on CW with the meter set to IP and you're reading around
half the expected tube current.You said in your previous post that
you set the bias to 60mA. What was it before you adjusted it? Are
there two 6146 tubes in the radio and can you see the filament glow
in both? I wonder if you have a problem around the final tubes and
only one tube is drawing current or there is else something wrong
with the tube bias. Did the radio ever work, has something happened to it?

What could it be?

Only one tube in the set
Dead tube (maybe open filament)
Broken wire or bad socket on one tube
Some problem with the tube supply or bias.

I don't know your technical ability. Are you able to make
measurements around the tubes to check the voltages are correct or do
you have someone that can help you with these measurements? The
voltages around the tubes are deadly and if you're not confident of
your abilities I would really recommend to take it to a local amateur
that can help you.

Lou
VK3ALB

At 11:44 02/04/2011, you wrote:
>Lou,
>
>
>settings are correct when tunning , only getting 110-120 Ma , and
>dip on plate
>tune is just visible.
>
>Thanks,
>Jeff
>
>
>----- Forwarded Message ----
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Fri, 1 April, 2011 3:32:03 PM
>Subject: Re: [TS-520_820_530_830] TS520S tunning issue
>

>Jeff,
>
>We need more information. You say you don't get full deflection, what
>do you get? What is your meter switch and mode switch set to?
>
>Your mode switch should be set to CW.
>
>If it's set to IP them you should aim for around 220 to 225mA. Don't
>go over 250mA as you'll decrease the life of your tubes.
>If it's set to RF then you should look for a peak (not full) deflection.
>
>Lou
>VK3ALB
>
>At 09:47 02/04/2011, you wrote:
> >Hi all,
> >
> >I have a problem with the 520S ,
> >
> >BIAS IS SET AT 60ma
> >
> >When tunning up on any band , I cannot get full meter deflection
> on the meter
> >when tunning the PLATE & LOAD controls in the final step .
> >
> >I can get full deflection on the DRIVE in step 1, and dip in step
> 2 , but not
> >full deflection in final step..
> >
> >I am tunning into a dummy load , (50ohm) .
> >
> >ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
> >
> >MAny Thanks,
> >
> >Jeff
> >VK4FNRS
> >
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> >------------------------------------
> >
> >Yahoo! Groups Links
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30580. TV-506 cable into TV-502 cable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 01:47:02 UTC
From: D
Topic: 30580 Message: 30580

So I've got 2 TV-506 cables when really I need 1 TV-506 cable and 1 TV-502 cable. Sounds like it's time to operate.
Looking @ page 4 of the TV-502 manual I can see the pin out list. Pin 6 states it goes to transverter in, so I suppose that goes to the center conductor of the RCA jumper, and make sure that pins 2 & 11 are clear.
The TV-506 manual does not include a pin out diagram. Can I assume that pin 1 goes to pin 1, pin 2 goes to pin 2, etc, and they don't jump over? I guess I'll see what it looks like in there when I open the plug.
Finally, WHY did Kenwood go to all that trouble to make a transverter cable that needed the extra RCA jumper to the xverter in jack, on the same chassis? Wouldn't it have been better to do that internally? It's not used for anything else but in this one instance...

30581. Re: TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 02:14:25 UTC
From: n8ydadam
Topic: 30358 Message: 30581

I've kept a lower setting on the load control. Everything is done into a dummy.

I followed the neutralization instructions with tuning, turning SG off, and keying at 28.500. Then I adjusted the neutralization cap for minimal signal into my other reciever, as I don't have an RF voltmeter.

My ALC has been intermittent, but I've worked on cleaning RL-1, and it seems to be improving. The bandswitch seems to be aligned correctly, following your description. I'm getting a dip outside of the markings on the plate control. Attempting to dip on 20m, the plate control is pointing to 10MHz. I see a fairly deep dip. When I neutralized the tubes, the plate dipped in the proper (10m) section of the plate scale.

I checked the voltages on the 6146's a while ago, and came up with -103v (-55v on key down) at pin 3, and 262v (220v key down) at pin 5.

The voltage at AC800 on the Rectifier board is 476v (413v key down).

Sorry for my apparent ignorance on a lot of these things. Still learning! I appreciate all the help!

Adam, N8YD

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Adam,
>
> What position is the LOAD control when you start you tune up procedures?
>
> Are you using a dummy load when tuning the transmitter?
>
> What do you mean when you say you neutralized the finals and found a dip, appears ok?
>
> If I remember correctly you said the band switch is aligned properly. How did you check the alignment of the band switch? When you adjust the PLATE control for a dip in IP current where is the PLATE control pointer pointing to? Is the IP dip a rather large dip (LOAD control set fully CCW) or only slightly noticeable?
>
> Finding 6146As in the final will not cause the output to be only 1 watt, assuming the tubes are not bad.
>
> Have you measured the voltages at the final tube socket screen and grid terminals in both receive and transmit with full output from the final amplifier?
>
> What is the final tube HV when measured at the Rectifier Unit's "800" terminal? in receive and then in transmit with full output? Don't become confused at the low voltage measured at the Rectifier Unit's "HV" terminal as a problem. The Rectifier Unit's "HV" terminal is the voltage fed to the meter switch "HV" terminal and is not the HV voltage fed

to the final tubes.
>
> There should be more than enough drive to peg the ALC meter full scale to the right when adjusting the DRIVE control in TUNE mode with the CAR control set to 12 o'clock. Is this what happens when you key the transmitter (SEND switch UP) and adjust the DRIVE control in TUNE mode?
>
> Are you using the 530 service manual schematic? If not then you should be using it when troubleshooting problems in your 530.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "n8ydadam" <aliette@> wrote:
> >
> >
> > I haven't thrown in the towel yet, but am still not done. All of the band switch seems ok, no broken couplers and it's properly aligned. I've replaced the caps that have been discussed on the antenna relay. I'd also noticed that someone had 6146A's in the rig, and found some good 6146B's. It's got all new cathode and screen resistors. I've neutralized the finals and found a dip, appears ok. However I'm still seeing less than 1w output. At least hasn't let the smoke out. LOL.
> >
> > I wonder if I'm not getting drive through the final? I've removed and reseated all of the "board-to-board" coaxial connections I could find. Is this a common issue?
> >
> > Thanks!
> > Adam, N8YD
> >
>

30582. Re: [TS-520_820_530_830] Ts 530s/ ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 02:17:13 UTC
From: Chuck Noe
Topic: 30569 Message: 30582

look into a company called rdl
radio design labs
they make several mic and audio adapters

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 01, 2011 2:50 PM
Subject: Re: [TS-520_820_530_830] Ts 530s/ ts 820s

Richard,

I know that there's a wiring diagram around here somewhere..I may have went to the great land fill...there's a guy...W2ENY I think, that makes mics with the electret element and powers it with an external 2 X AA battery. "GOOGLE" him and you can see what I'm talking about.....also you make seen an example(s) on EBAY of his work.

73's joe wb7uqu

From: RICHARD FUOCO <km5wx@bellsouth.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 1, 2011 1:50:51 PM
Subject: [TS-520_820_530_830] Ts 530s/ ts 820s

I purchased an audio comm boomset with dual earphones and boom mic a while ago to go with my ten tech omni 5. Being the mic has an electrec element it will not work with my kenwoods. Due to medical bills and disability I had to sell my ten tech. (I enjoyed my kenwood hybrids more anyhow) Is there a way to get power to the electret elementto make it work with my kenwoods? Or am I doomed to use the headset without the mic? I really like the receive audio on the headset and if the mic will work I would be very happy. I cannot afford a boomset to fit my kenwoods and I plan to keep them until I can no longer work ham radio. It's about the only enjoymant I still get to experience other than the company of my wife and children. Please give me an idea if you can. Thankyou KM5WX Richard

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30583. Re: Ts 530s/ ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 03:47:12 UTC
From: james27613
Topic: 30569 Message: 30583

hi Richard,

how about a small project box with the mic connector
on it and a pigtail with mic connector to the radio?

You can put the battery in the box and preserve the
original mic connector on the radio.

73 james ke4drn

30584. Re: TV-506 cable into TV-502 cable

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 03:50:33 UTC
From: james27613
Topic: 30580 Message: 30584

hi Dave,

I modified the interconnect tv-506 cable for my tv-502,
the cable is straight connection 1-1, etc.

I added the rca pigtail and it works great,
for the tv-506 just disconnect the rca pigtail.

73 james ke4drn

30585. Re: [TS-520_820_530_830] Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 03:57:00 UTC
From: David Rogers
Topic: 30567 Message: 30585

Actually, I think that isn't correct. I believe that, like the DFC-230 and the VFO-240, the VFO-230 can also be used with the TS-130S. I will pull out mine later and double check, but I know I have used the first two with the 130S and am pretty sure that I have used the VFO-230 with it. The VFO-230 seems to be essentially the DFC-230 in a bigger suit.

I could, of course, be wrong.

David, WA7ZYQ

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 01, 2011 2:32 PM
Subject: [TS-520_820_530_830] Re: Kenwood VFO-230

Hi Paul,

What transceiver will you be connecting a VFO-230 to? The VFO-230 will only plug into and work with a TS-530 or TS-830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Paul" <m1zxz@...> wrote:
>
> Hi,
>
> I'm after adding the VFO-230 to my lineup and was wandering what a fair price would be to pay.
>
> Regards.
>

[Non-text portions of this message have been removed]

30586. Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 04:17:39 UTC
From: w5rkl
Topic: 30567 Message: 30586

Hi David,

That may be so but when considering the hybrids, the VFO-230 will only work with the 530 and 830. The 130 is not a hybrid, it's all solid state. That was the purpose of the question asking what transceiver Paul would be using the VFO-230 with.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "David Rogers" <wa7zyq@...> wrote:
>
> Actually, I think that isn't correct. I believe that, like the DFC-230 and the VFO-240, the VFO-230 can also be used with the TS-130S. I will pull out mine later and double check, but I know I have used the first two with the 130S and am pretty sure that I have used the VFO-230 with it. The VFO-230 seems to be essentially the DFC-230 in a bigger suit.
>
> I could, of course, be wrong.
>
> David, WA7ZYQ
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, April 01, 2011 2:32 PM
> Subject: [TS-520_820_530_830] Re: Kenwood VFO-230
>
>
>
> Hi Paul,
>
> What transceiver will you be connecting a VFO-230 to? The VFO-230 will only plug into and work with a TS-530 or TS-830.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "Paul" <m1zxz@> wrote:
> >
> > Hi,
> >
> > I'm after adding the VFO-230 to my lineup and was wandering what a fair price would be to pay.
> >
> > Regards.

> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30587. 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 04:15:42 UTC
From: Tom
Topic: 30587 Message: 30587

I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off and with the switch turned on I have 59 Volts on the switch output side. Maybe a bad transformer?

Thanks
Tom

30588. Re: [TS-520_820_530_830] Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 04:22:08 UTC
From: n6wk@n6wk.com
Topic: 30567 Message: 30588

You are Correct Mike !!
For the Hybrids.. Only the 530 and 830

73,
Gordon
N6WK

On 4/1/2011 9:17 PM, w5rkl wrote:
>
> Hi David,
>
> That may be so but when considering the hybrids, the VFO-230 will only
> work with the 530 and 830. The 130 is not a hybrid, it's all solid
> state. That was the purpose of the question asking what transceiver
> Paul would be using the VFO-230 with.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "David Rogers"
> <wa7zyq@...> wrote:
> >
> > Actually, I think that isn't correct. I believe that, like the
> DFC-230 and the VFO-240, the VFO-230 can also be used with the
> TS-130S. I will pull out mine later and double check, but I know I
> have used the first two with the 130S and am pretty sure that I have
> used the VFO-230 with it. The VFO-230 seems to be essentially the
> DFC-230 in a bigger suit.
> >
> > I could, of course, be wrong.
> >
> > David, WA7ZYQ
> >
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Friday, April 01, 2011 2:32 PM
> > Subject: [TS-520_820_530_830] Re: Kenwood VFO-230
> >
> >
> >
> >
> > Hi Paul,

> >
> > What transceiver will you be connecting a VFO-230 to? The VFO-230
> will only plug into and work with a TS-530 or TS-830.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Paul" <m1zxz@> wrote:
> > >
> > > Hi,
> > >
> > > I'm after adding the VFO-230 to my lineup and was wandering what a
> fair price would be to pay.
> > >
> > > Regards.
> > >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

30589. Re: [TS-520_820_530_830] Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 04:38:18 UTC
From: David Rogers
Topic: 30567 Message: 30589

Sorry about that. Having a 520S, 130S, 850S 130V, and 830S, I guess I tend to think of them collectively rather than as being only cousins. Hi!

Not that it matters, but I did double check my comment and can -- for whatever purpose -- confirm that the VFO-230 does work with the 130S. Oh, well . . . .

73,

David, WA7ZYQ

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 01, 2011 9:17 PM
Subject: [TS-520_820_530_830] Re: Kenwood VFO-230

Hi David,

That may be so but when considering the hybrids, the VFO-230 will only work with the 530 and 830. The 130 is not a hybrid, it's all solid state. That was the purpose of the question asking what transceiver Paul would be using the VFO-230 with.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "David Rogers" <wa7zyq@...> wrote:
>
> Actually, I think that isn't correct. I believe that, like the DFC-230 and the VFO-240, the VFO-230 can also be used with the TS-130S. I will pull out mine later and double check, but I know I have used the first two with the 130S and am pretty sure that I have used the VFO-230 with it. The VFO-230 seems to be essentially the DFC-230 in a bigger suit.
>
> I could, of course, be wrong.
>
> David, WA7ZYQ
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, April 01, 2011 2:32 PM
> Subject: [TS-520_820_530_830] Re: Kenwood VFO-230
>
>
>
> Hi Paul,
>

> What transceiver will you be connecting a VFO-230 to? The VFO-230 will only plug into and work with a TS-530 or TS-830.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "Paul" <m1zxz@> wrote:
> >
> > Hi,
> >
> > I'm after adding the VFO-230 to my lineup and was wandering what a fair price would be to pay.
> >
> > Regards.
> >
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30590. Re: [TS-520_820_530_830] 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 06:18:58 UTC
From: Leslie Smith
Topic: 30587 Message: 30590

Hello Tom,
The characteristic signs of a "bad" transformer are:
(1) Shorted turn - transformer draws excess current and runs very hot, often blowing the protection device/fuse.
(2) Open primary or secondary - full voltage is applied to the primary winding, and no output on the secondary.

The symptoms you report suggest a high resistance in the switch (ie high voltage drop where there should be none.) I suggest you check the resistance of the switch, (power off and plug removed from wall socket), and inspect the switch, including the "sniff" test.

Les Smith
formerly vk2bcu

--
Leslie Smith
[1]vk2bcu@...

On Sat, 02 Apr 2011 04:15 +0000, "Tom" <thomasbaker136@...> wrote:

I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off and with the switch turned on I have 59 Volts on the switch output side. Maybe a bad transformer?
Thanks
Tom

References

1. mailto:vk2bcu@...
2. mailto:thomasbaker136@...?subject=Re%3A%20520S%20voltage
3. mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20520S%20voltage
4. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxY3BzanRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwNTg3BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTMwMTcxODA3Nw--?act=reply&messageNum=30587
5. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlazYzbmlkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTMwMTcxODA3Nw--
6. http://groups.yahoo.com/group/TS-520_820_530_830/message/30587;_ylc=X3oDMTM2bG41ODczBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwNTg3BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTMwMTcxODA3NwR0cGNJZAMzMDU4Nw--
7. http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmbjVwdjk0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDE

3MTgwNzc-?o=6
8. http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmbXRtcTRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDE3MTgwNzc-
9. http://groups.yahoo.com/group/TS-520_820_530_830/files;_ylc=X3oDMTJnM2FwbnV0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZmaWxlcwRzdGltZQMxMzAxNzE4MDc3
10. http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlMjFwaW9kBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMTcxODA3Nw--
11. http://groups.yahoo.com/;_ylc=X3oDMTJkYnJkdGR1BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAxNzE4MDc3
12. mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
13. mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
14. mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe
15. http://docs.yahoo.com/info/terms/

--
http://www.fastmail.fm - The way an email service should be

[Non-text portions of this message have been removed]

30591. Re: 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 11:42:12 UTC
From: w5rkl
Topic: 30587 Message: 30591

Hi Tom,

When you measure the high voltage are you measuring the voltage on the Rectifier Unit's "800" terminal or "AC800" terminal?

The power transformer has 2 primary windings. Each primary winding has 3 terminals, 120, 100, and 0. When measuring the "AC" voltage, the AC volt meter Black lead is connected to the "0" terminal and the Red lead is connected to the "120" terminal. With the main power switch turned ON, the voltage should be approximately 120VAC.

If the power plug has only "2" blades and both blades of the plug are the same size then it is easy to reverse the plug when inserting the plug into the wall outlet and end up with 120VAC on the transformer's primary 120 terminal and zero on the 0 terminal.

You can easily test the power switch. Unplug the 520 from the wall outlet. Ensure the main power switch is turned OFF. Connect an ohm meter across the power plug blades. If the switch is shorted in the "OFF" position you will see some resistance. If the switch is NOT shorted the ohm meter will show "infinity".

Leave the ohm meter connected to the power plug blades and turn the main power switch ON. The ohm meter should display approximately 8 to 10 ohms which is the resistance of the primary windings. Turning the main power switch OFF, the ohm meter should show "infinity". This is with the 120/240 rear panel switch set to "120". With the 120/240 switch set to 120, the transformer's primary windings are in "parallel". If you set the 120/240 switch to "240" the resistance will be higher because the transformer's primary windings are now in "series".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <thomasbaker136@...> wrote:
>
> I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off and with the switch turned on I have 59 Volts on the switch output side. Maybe a bad transformer?
>
> Thanks
> Tom
>

30592. Re: DG-5

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 13:17:50 UTC
From: Charles
Topic: 20533 Message: 30592

Lou, thanks for posting this information. I had never even heard of this freq. display unit prior to your posting. I, too, had been searching for a worthy DG-5 but had been coming up empty.
Anyway, I sent for the assembled unit and it arrived yesterday.It took me about 5 minutes to hook it up and I'm pleased to report that it works wonderfully, even on 10 meters with my TS-520SE.
I consider it money well spent and I'm looking forward to many years of service from this well constructed addition to my shack.
Thanks again.

Charlie Shaw
KB3BTO

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Bryan,
>
> I've used one of these on a TS520 and it works well.
>
> http://www.aade.com/applications/C520.htm
>
> Lou
> VK3ALB
>

30593. Re: [TS-520_820_530_830] 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 15:18:37 UTC
From: Phillip Legate
Topic: 30587 Message: 30593

Hi Tom,

350VAC X 1.4 X 2 = 980 VDC which is about right.

Remember this PS circuit is a voltage doubler.

What were the color codes and voltages on the secondary windings?

Phil

--- On Fri, 4/1/11, Tom <thomasbaker136@...> wrote:

From: Tom <thomasbaker136@...m>
Subject: [TS-520_820_530_830] 520S voltage
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, April 1, 2011, 11:15 PM

I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off and with the switch turned on I have 59 Volts on the switch output side. Maybe a bad transformer?

Thanks
Tom

[Non-text portions of this message have been removed]

30594. Re: [TS-520_820_530_830] 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 15:31:42 UTC
From: n6wk@n6wk.com
Topic: 30587 Message: 30594

Sounds more like a switch problem if you are testing the line voltage
before and after the switch

Gordon
N6WK

On 4/1/2011 9:15 PM, Tom wrote:
>
> I was checking voltage on the transformer and found 350 Volts on the
> 800 Volt term. I checked AC input voltage and I have 118 Volts on one
> side of the power on switch with the switch in off and with the switch
> turned on I have 59 Volts on the switch output side. Maybe a bad
> transformer?
>
> Thanks
> Tom
>
>

30595. Re: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 05:04:25 UTC
From: jeffrey lord
Topic: 30574 Message: 30595

LOU,

I do not have the expertise to check voltages in this area, only an f call at moment, .
All tubes show glow so are active ??,
Bias voltage was checked and has not changed was set several months ago and has not altered.

This issue started after trialing a circuit to reduce output to 10watts.

The set up was checked by another full ham, the radio was loading up correctly prior.

The circuit was checked and the fitting, by the full ham.

Jeff

----- Original Message ----
From: Lou Blasco <radio@....au>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, 1 April, 2011 5:23:10 PM
Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue

Hi Jeff,

OK, so I assume you have run through the tune-up procedure correctly and you are on CW with the meter set to IP and you're reading around half the expected tube current.You said in your previous post that you set the bias to 60mA. What was it before you adjusted it? Are there two 6146 tubes in the radio and can you see the filament glow in both? I wonder if you have a problem around the final tubes and only one tube is drawing current or there is else something wrong with the tube bias. Did the radio ever work, has something happened to it?

What could it be?

Only one tube in the set
Dead tube (maybe open filament)
Broken wire or bad socket on one tube
Some problem with the tube supply or bias.

I don't know your technical ability. Are you able to make measurements around the tubes to check the voltages are correct or do you have someone that can help you with these measurements? The voltages around the tubes are deadly and if you're not confident of your abilities I would really recommend to take it to a local amateur that can help you.

Lou
VK3ALB

At 11:44 02/04/2011, you wrote:
>Lou,
>
>
>settings are correct when tunning , only getting 110-120 Ma , and
>dip on plate
>tune is just visible.
>
>Thanks,
>Jeff
>
>
>----- Forwarded Message ----
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Fri, 1 April, 2011 3:32:03 PM
>Subject: Re: [TS-520_820_530_830] TS520S tunning issue
>
>Jeff,
>
>We need more information. You say you don't get full deflection, what
>do you get? What is your meter switch and mode switch set to?
>
>Your mode switch should be set to CW.
>
>If it's set to IP them you should aim for around 220 to 225mA. Don't
>go over 250mA as you'll decrease the life of your tubes.
>If it's set to RF then you should look for a peak (not full) deflection.
>
>Lou
>VK3ALB
>
>At 09:47 02/04/2011, you wrote:
> >Hi all,
> >
> >I have a problem with the 520S ,
> >
> >BIAS IS SET AT 60ma
> >
> >When tunning up on any band , I cannot get full meter deflection
> on the meter
> >when tunning the PLATE & LOAD controls in the final step .
> >
> >I can get full deflection on the DRIVE in step 1, and dip in step
> 2 , but not
> >full deflection in final step..
> >
> >I am tunning into a dummy load , (50ohm) .

> >
> >ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
> >
> >MAny Thanks,
> >
> >Jeff
> >VK4FNRS
> >
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> >Yahoo! Groups Links
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Yahoo! Groups Links

30596. Re: 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 06:39:31 UTC
From: grundigsat
Topic: 30587 Message: 30596

I think that it is normal because HV winding on the transformer is prepared for doubling in the rectifier/doubler.
That was my concern also in my ts520. Marks on the transformer terminals are misleading (800V), in my Kenwood it was also about 400V AC on the transformer.
If you have problem with low HV DC, you should check diodes and electrolitic capacitors in rectifier/doubler.

Oskar

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <thomasbaker136@...> wrote:
>
> I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off and with the switch turned on I have 59 Volts on the switch output side. Maybe a bad transformer?
>
> Thanks
> Tom
>

30597. Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 10:43:57 UTC
From: Paul
Topic: 30567 Message: 30597

Hi Mike,

Yeah, I should have mentioned earlier that my radio is the Trio TS830S.

Up untill a few years ago, I had the VFO-230 to compliment my setup, when I bought,it seemed like there were plenty to choose from and the avarage price seemed to be reasonable.

I went through a period of inactivity and decided that maybe I should sell up, had other interests going on and the radio wasn't being used,so the first item to go was the VFO. I regretted selling it when it had gone, so decided not to sell the other gear.

Anyhow, I'm back into the hobby, I'm located in the UK and having a hard time finding a VFO to replace the one I had.

I'v no idea of the price range per condition to expect.

Regards, Paul.

30598. Re: 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 11:17:01 UTC
From: Tom
Topic: 30587 Message: 30598

Hi Les,
Thank you for your help! The first thing i did was ohm out the power switch and it reads .2 Ohm then i read out the ac power cord (plug end) and it reads 2.1 Ohm. hooked up to the radio. Then I tore the AC power cable cinch plug apart and it was good. Then I replaced the power on switch with a toggle switch i had in my junk box and it reads the same. All of the voltages on the transformer read around 50 volts low except the 14 volt it reads 6 volts and the 800 volt reads 350 volts. I was thinking easy fix when i found out only half the line voltage is going to the transformer (bad ac line cord, switch or bad cinch plug) I checked the connections on the switch, the transformer and the cinch plug on the radio side. That is why I was thinking maybe the transformer was shorted? I double checked my readings from my VTVM with my Fluke meter.

Tom

--- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@...> wrote:
>
> Hello Tom,
> The characteristic signs of a "bad" transformer are:
> (1) Shorted turn - transformer draws excess current and runs very
> hot, often blowing the protection device/fuse.
> (2) Open primary or secondary - full voltage is applied to the
> primary winding, and no output on the secondary.
>
> The symptoms you report suggest a high resistance in the switch
> (ie high voltage drop where there should be none.) I suggest you
> check the resistance of the switch, (power off and plug removed
> from wall socket), and inspect the switch, including the "sniff"
> test.
>
> Les Smith
> formerly vk2bcu
>
>
>
> --
> Leslie Smith
> [1]vk2bcu@...
>
> On Sat, 02 Apr 2011 04:15 +0000, "Tom" <thomasbaker136@...>
> wrote:
>
>
> I was checking voltage on the transformer and found 350 Volts on
> the 800 Volt term. I checked AC input voltage and I have 118
> Volts on one side of the power on switch with the switch in off

> and with the switch turned on I have 59 Volts on the switch
> output side. Maybe a bad transformer?
> Thanks
> Tom
>
>
>
> References
>
> 1. mailto:vk2bcu@...
> 2. mailto:thomasbaker136@...?subject=Re%3A%20520S%20voltage
> 3. mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20520S%20voltage
> 4. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxY3BzanRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwNTg3BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTMwMTcxODA3Nw--?act=reply&messageNum=30587
> 5. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlazYzbmlkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTMwMTcxODA3Nw--
> 6. http://groups.yahoo.com/group/TS-520_820_530_830/message/30587;_ylc=X3oDMTM2bG41ODczBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwNTg3BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTMwMTcxODA3NwR0cGNJZAMzMDU4Nw--
> 7. http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmbjVwdjk0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDE3MTgwNzc-?o=6
> 8. http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmbXRtcTRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDE3MTgwNzc-
> 9. http://groups.yahoo.com/group/TS-520_820_530_830/files;_ylc=X3oDMTJnM2FwbnV0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZmaWxlcwRzdGltZQMxMzAxNzE4MDc3
> 10. http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlMjFwaW9kBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMTcxODA3Nw--
> 11. http://groups.yahoo.com/;_ylc=X3oDMTJkYnJkdGR1BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAxNzE4MDc3
> 12. mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
> 13. mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
> 14. mailto:TS-520_820_530_830-unsubscribe@...m?subject=Unsubscribe
> 15. http://docs.yahoo.com/info/terms/
>
> --
> http://www.fastmail.fm - The way an email service should be
>
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> [Non-text portions of this message have been removed]
>

30599. Re: [TS-520_820_530_830] 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 11:20:16 UTC
From: Tom
Topic: 30587 Message: 30599

Hi Les,
Thank you for your help! The first thing i did was ohm out the power switch and it reads .2 Ohm then i read out the ac power cord (plug end) and it reads 2.1 Ohm. hooked up to the radio. Then I tore the AC power cable cinch plug apart and it was good. Then I replaced the power on switch with a toggle switch i had in my junk box and it reads the same. All of the voltages on the transformer read around 50 volts low except the 14 volt it reads 6 volts and the 800 volt reads 350 volts. I was thinking easy fix when i found out only half the line voltage is going to the transformer (bad ac line cord, switch or bad cinch plug) I checked the connections on the switch, the transformer and the cinch plug on the radio side. That is why I was thinking maybe the transformer was shorted? I double checked my readings from my VTVM with my Fluke meter.

Tom

From: Leslie Smith <vk2bcu@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 2, 2011 1:18:58 AM
Subject: Re: [TS-520_820_530_830] 520S voltage

Hello Tom,
The characteristic signs of a "bad" transformer are:
(1) Shorted turn - transformer draws excess current and runs very hot, often blowing the protection device/fuse.
(2) Open primary or secondary - full voltage is applied to the primary winding, and no output on the secondary.

The symptoms you report suggest a high resistance in the switch (ie high voltage drop where there should be none.) I suggest you check the resistance of the switch, (power off and plug removed from wall socket), and inspect the switch, including the "sniff" test.

Les Smith
formerly vk2bcu

--
Leslie Smith
[1]vk2bcu@...

On Sat, 02 Apr 2011 04:15 +0000, "Tom" <thomasbaker136@...> wrote:

I was checking voltage on the transformer and found 350 Volts on the 800 Volt term. I checked AC input voltage and I have 118 Volts on one side of the power on switch with the switch in off

and with the switch turned on I have 59 Volts on the switch
output side. Maybe a bad transformer?
Thanks
Tom

[Non-text portions of this message have been removed]

30600. Re: 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 11:24:01 UTC
From: Tom
Topic: 30587 Message: 30600

Hi Les,
Thank you for your help! The first thing i did was ohm out the power switch and it reads .2 Ohm then i read out the ac power cord (plug end) and it reads 2.1 Ohm. hooked up to the radio. Then I tore the AC power cable cinch plug apart and it was good. Then I replaced the power on switch with a toggle switch i had in my junk box and it reads the same. All of the voltages on the transformer read around 50 volts low except the 14 volt it reads 6 volts and the 800 volt reads 350 volts. I was thinking easy fix when i found out only half the line voltage is going to the transformer (bad ac line cord, switch or bad cinch plug) I checked the connections on the switch, the transformer and the cinch plug on the radio side. That is why I was thinking maybe the transformer was shorted? I double checked my readings from my VTVM with my Fluke meter.

Tom

--- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@...>
wrote:
>
> Hello Tom,
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> (1) Shorted turn - transformer draws excess current and runs very
> hot, often blowing the protection device/fuse.
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> primary winding, and no output on the secondary.
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> The symptoms you report suggest a high resistance in the switch
> (ie high voltage drop where there should be none.) I suggest you
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> from wall socket), and inspect the switch, including the "sniff"
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>
> Les Smith
> formerly vk2bcu
>
>
>
> --
> Leslie Smith
> [1]vk2bcu@...
>
> On Sat, 02 Apr 2011 04:15 +0000, "Tom" thomasbaker136@...
> wrote:
>

>
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> the 800 Volt term. I checked AC input voltage and I have 118
> Volts on one side of the power on switch with the switch in off
> and with the switch turned on I have 59 Volts on the switch
> output side. Maybe a bad transformer?
> Thanks
> Tom
>
>
>
> References
>
> 1. mailto:vk2bcu@...
> 2. mailto:thomasbaker136@...?subject=Re%3A%20520S%20voltage
> 3.
mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20520S%20voltage
> 4.
http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxY3Bza\
nRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkA\
zMwNTg3BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTMwMTcxODA3Nw--?act=reply&messag\
eNum=30587
> 5.
http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlazYzb\
mlkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmd\
HIEc2xrA250cGMEc3RpbWUDMTMwMTcxODA3Nw--
> 6.
http://groups.yahoo.com/group/TS-520_820_530_830/message/30587;_ylc=X3oD\
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BG1zZ0lkAzMwNTg3BHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTMwMTcxODA3NwR0cGNJZAMz\
MDU4Nw--
> 7.
http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmbj\
Vwdjk0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYw\
N2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDE3MTgwNzc-?o=6
> 8.
http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmbXRt\
cTRkBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2\
dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDE3MTgwNzc-
> 9.
http://groups.yahoo.com/group/TS-520_820_530_830/files;_ylc=X3oDMTJnM2Fw\
bnV0BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2\
dGwEc2xrA3ZmaWxlcwRzdGltZQMxMzAxNzE4MDc3
> 10.
http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlMjFwaW9kBF\
9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2\
xrA3ZnaHAEc3RpbWUDMTMwMTcxODA3Nw--
> 11.
http://groups.yahoo.com/;_ylc=X3oDMTJkYnJkdGR1BF9TAzk3MzU5NzE0BGdycElkAz\
c1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAxNz\

E4MDc3
> 12.
mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20D\
elivery%20Format:%20Traditional
> 13.
mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Deliver\
y:%20Digest
> 14.
mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscrib\
e
> 15. http://docs.yahoo.com/info/terms/
>
> --
> http://www.fastmail.fm - The way an email service should be
>
>
>
> [Non-text portions of this message have been removed]
>

30601. Re: [TS-520_820_530_830] Re: 520S voltage

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 12:23:36 UTC
From: Tom
Topic: 30587 Message: 30601

Hi Mike,
Thanks for the reply! Sorry I had head up butt when reading the transformer voltages. I was reading voltages with the neg. lead still hooked up to the chassis ground lug. Here are the readings from the rectifier board.

800 14
reads 950Vdc reads 15Vdc

AC800 300 210 100 AC14
250Vac 250Vac 190Vac 90Vac 7.5Vac

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 2, 2011 6:42:12 AM
Subject: [TS-520_820_530_830] Re: 520S voltage

Hi Tom,

When you measure the high voltage are you measuring the voltage on the Rectifier Unit's "800" terminal or "AC800" terminal?

The power transformer has 2 primary windings. Each primary winding has 3 terminals, 120, 100, and 0. When measuring the "AC" voltage, the AC volt meter Black lead is connected to the "0" terminal and the Red lead is connected to the "120" terminal. With the main power switch turned ON, the voltage should be approximately 120VAC.

If the power plug has only "2" blades and both blades of the plug are the same size then it is easy to reverse the plug when inserting the plug into the wall outlet and end up with 120VAC on the transformer's primary 120 terminal and zero on the 0 terminal.

You can easily test the power switch. Unplug the 520 from the wall outlet. Ensure the main power switch is turned OFF. Connect an ohm meter across the power plug blades. If the switch is shorted in the "OFF" position you will see some resistance. If the switch is NOT shorted the ohm meter will show "infinity".

Leave the ohm meter connected to the power plug blades and turn the main power switch ON. The ohm meter should display approximately 8 to 10 ohms which is the resistance of the primary windings. Turning the main power switch OFF, the ohm meter should show "infinity". This is with the 120/240 rear panel switch set to "120". With the 120/240 switch set to 120, the transformer's primary windings are in "parallel". If you set the 120/240 switch to "240" the resistance will be higher because the transformer's primary windings are now in "series".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Tom" <thomasbaker136@...> wrote:
>
> I was checking voltage on the transformer and found 350 Volts on the 800 Volt
>term. I checked AC input voltage and I have 118 Volts on one side of the power
>on switch with the switch in off and with the switch turned on I have 59 Volts
>on the switch output side. Maybe a bad transformer?
>
> Thanks
> Tom
>

[Non-text portions of this message have been removed]

30602. 520S voltage replys

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 12:27:32 UTC
From: Tom
Topic: 30602 Message: 30602

Mike & Les,
Well I tried to reply to both of you but I get Your form submission has expired so i will try it this way.

Hi Les,
Thank you for your help! The first thing i did was ohm out the power switch and it reads .2 Ohm then i read out the ac power cord (plug end) and it reads 2.1 Ohm. hooked up to the radio. Then I tore the AC power cable cinch plug apart and it was good. Then I replaced the power on switch with a toggle switch i had in my junk box and it reads the same. All of the voltages on the transformer read around 50 volts low except the 14 volt it reads 6 volts and the 800 volt reads 350 volts. I was thinking easy fix when i found out only half the line voltage is going to the transformer (bad ac line cord, switch or bad cinch plug) I checked the connections on the switch, the transformer and the cinch plug on the radio side. That is why I was thinking maybe the transformer was shorted? I double checked my readings from my VTVM with my Fluke meter.

Hi Mike,
Thanks for the reply! Sorry I had head up butt when reading the transformer voltages. I was reading voltages with the neg. lead still hooked up to the chassis ground lug. Here are the readings from the rectifier board.

800 14
reads 950Vdc reads 15Vdc

AC800 300 210 100 AC14
250Vac 250Vac 190Vac 90Vac 7.5Vac

30603. Re: [TS-520_820_530_830] Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 18:42:57 UTC
From: Chris Meyer
Topic: 30567 Message: 30603

Expect to pay $200+ on Epay. I just bought a VFO-180 and paid $230 plus shipping.
On Apr 2, 2011, at 3:43 AM, Paul wrote:

>
>
> Hi Mike,
>
> Yeah, I should have mentioned earlier that my radio is the Trio TS830S.
>
> Up untill a few years ago, I had the VFO-230 to compliment my setup, when I bought,it seemed like there were plenty to choose from and the avarage price seemed to be reasonable.
>
> I went through a period of inactivity and decided that maybe I should sell up, had other interests going on and the radio wasn't being used,so the first item to go was the VFO. I regretted selling it when it had gone, so decided not to sell the other gear.
>
> Anyhow, I'm back into the hobby, I'm located in the UK and having a hard time finding a VFO to replace the one I had.
>
> I'v no idea of the price range per condition to expect.
>
> Regards, Paul.
>
>

[Non-text portions of this message have been removed]

30604. Re: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 20:28:47 UTC
From: Lou Blasco
Topic: 30574 Message: 30604

Hi Jeff,

It's good that the tubes glow, at least the filaments are intact but there's still a problem. If the change in operation occurred after a modification then there's a good chance the mod caused the problem. Please confirm that the tube current you see isn't with the mod in place? Next, if you haven't already done so you should remove the mod and check the radio again. If after you've removed the mod and checked the radio you still have a problem you'll have to get someone familiar with valve radios to take a look at it. I doubt it's anything fatal but the next step is to make measurements and look for something wrong.

Lou
VK3ALB

At 15:04 02/04/2011, you wrote:
>LOU,
>
>I do not have the expertise to check voltages in this area, only an f call at
>moment, .
>All tubes show glow so are active ??,
>Bias voltage was checked and has not changed was set several months
>ago and has
>not altered.
>
>This issue started after trialing a circuit to reduce output to 10watts.
>
>The set up was checked by another full ham, the radio was loading
>up correctly
>prior.
>
>The circuit was checked and the fitting, by the full ham.
>
>Jeff
>
>
>
>----- Original Message ----
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Fri, 1 April, 2011 5:23:10 PM
>Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue
>
>Hi Jeff,
>

>OK, so I assume you have run through the tune-up procedure correctly
>and you are on CW with the meter set to IP and you're reading around
>half the expected tube current.You said in your previous post that
>you set the bias to 60mA. What was it before you adjusted it? Are
>there two 6146 tubes in the radio and can you see the filament glow
>in both? I wonder if you have a problem around the final tubes and
>only one tube is drawing current or there is else something wrong
>with the tube bias. Did the radio ever work, has something happened to it?
>
>What could it be?
>
>Only one tube in the set
>Dead tube (maybe open filament)
>Broken wire or bad socket on one tube
>Some problem with the tube supply or bias.
>
>I don't know your technical ability. Are you able to make
>measurements around the tubes to check the voltages are correct or do
>you have someone that can help you with these measurements? The
>voltages around the tubes are deadly and if you're not confident of
>your abilities I would really recommend to take it to a local amateur
>that can help you.
>
>Lou
>VK3ALB
>
>
>At 11:44 02/04/2011, you wrote:
> >Lou,
> > >
> > >
> > >settings are correct when tunning , only getting 110-120 Ma , and
> > >dip on plate
> > >tune is just visible.
> > >
> > >Thanks,
> > >Jeff
> > >
> > >
> > >----- Forwarded Message ----
> > >From: Lou Blasco <radio@...>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Fri, 1 April, 2011 3:32:03 PM
> > >Subject: Re: [TS-520_820_530_830] TS520S tunning issue
> > >
> > >Jeff,
> > >
> > >We need more information. You say you don't get full deflection, what
> > >do you get? What is your meter switch and mode switch set to?
> > >

> >Your mode switch should be set to CW.
> >
> >If it's set to IP them you should aim for around 220 to 225mA. Don't
> >go over 250mA as you'll decrease the life of your tubes.
> >If it's set to RF then you should look for a peak (not full) deflection.
> >
> >Lou
> >VK3ALB
> >
> >At 09:47 02/04/2011, you wrote:
> > >Hi all,
> > >
> > >I have a problem with the 520S ,
> > >
> > >BIAS IS SET AT 60ma
> > >
> > >When tunning up on any band , I cannot get full meter deflection
> > on the meter
> > >when tunning the PLATE & LOAD controls in the final step .
> > >
> > >I can get full deflection on the DRIVE in step 1, and dip in step
> > 2 , but not
> > >full deflection in final step..
> > >
> > >I am tunning into a dummy load , (50ohm) .
> > >
> > >ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
> > >
> > >MAny Thanks,
> > >
> > >Jeff
> > >VK4FNRS
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> > >Yahoo! Groups Links
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30605. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 21:40:23 UTC
From: rkersey tds.net
Topic: 30555 Message: 30605

Hi Mike and All,

You all speak Radio real good, but my skills in that language are limited. I speak simple English a little better. I think I got the gist of what you were saying, but I want to make sure about one thing. If the 9 volt battery dies in this circuit, then the output goes to zero rather than to 80 to 100 watts, right?

73,
Roy
KI4HAG

[Non-text portions of this message have been removed]

30606. Fw: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 22:48:33 UTC
From: jeffrey lord
Topic: 30574 Message: 30606

Lou,

yes the circuit is plug-in and has been removed , the issue is still there,.
I have asked 1 of the full hams at the club to look at the set , but it may be a
couple of weeks before he can.

I will have to use my son's IC718 , in the mean time.

Many Thanks ,

Jeff
vk4fnrs

----- Forwarded Message ----
From: Lou Blasco <radio@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, 2 April, 2011 12:28:47 PM
Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue

Hi Jeff,

It's good that the tubes glow, at least the filaments are intact but
there's still a problem. If the change in operation occurred after a
modification then there's a good chance the mod caused the problem.
Please confirm that the tube current you see isn't with the mod in
place? Next, if you haven't already done so you should remove the mod
and check the radio again. If after you've removed the mod and
checked the radio you still have a problem you'll have to get someone
familiar with valve radios to take a look at it. I doubt it's
anything fatal but the next step is to make measurements and look for
something wrong.

Lou
VK3ALB

At 15:04 02/04/2011, you wrote:
>LOU,
>
>I do not have the expertise to check voltages in this area, only an f call at
>moment, .
>All tubes show glow so are active ??,
>Bias voltage was checked and has not changed was set several months
>ago and has
>not altered.
>
>This issue started after trialing a circuit to reduce output to 10watts.
>

>The set up was checked by another full ham, the radio was loading
>up correctly
>prior.
>
>The circuit was checked and the fitting, by the full ham.
>
>Jeff
>
>
>
>----- Original Message ----
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Fri, 1 April, 2011 5:23:10 PM
>Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue
>
>Hi Jeff,
>
>OK, so I assume you have run through the tune-up procedure correctly
>and you are on CW with the meter set to IP and you're reading around
>half the expected tube current.You said in your previous post that
>you set the bias to 60mA. What was it before you adjusted it? Are
>there two 6146 tubes in the radio and can you see the filament glow
>in both? I wonder if you have a problem around the final tubes and
>only one tube is drawing current or there is else something wrong
>with the tube bias. Did the radio ever work, has something happened to it?
>
>What could it be?
>
>Only one tube in the set
>Dead tube (maybe open filament)
>Broken wire or bad socket on one tube
>Some problem with the tube supply or bias.
>
>I don't know your technical ability. Are you able to make
>measurements around the tubes to check the voltages are correct or do
>you have someone that can help you with these measurements? The
>voltages around the tubes are deadly and if you're not confident of
>your abilities I would really recommend to take it to a local amateur
>that can help you.
>
>Lou
>VK3ALB
>
>
>At 11:44 02/04/2011, you wrote:
> >Lou,
> >
> >
> >settings are correct when tunning , only getting 110-120 Ma , and

> >dip on plate
> >tune is just visible.
> >
> >Thanks,
> >Jeff
> >
> >
> >----- Forwarded Message ----
> >From: Lou Blasco <radio@ozemail.com.au>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Fri, 1 April, 2011 3:32:03 PM
> >Subject: Re: [TS-520_820_530_830] TS520S tunning issue
> >
> >Jeff,
> >
> >We need more information. You say you don't get full deflection, what
> >do you get? What is your meter switch and mode switch set to?
> >
> >Your mode switch should be set to CW.
> >
> >If it's set to IP them you should aim for around 220 to 225mA. Don't
> >go over 250mA as you'll decrease the life of your tubes.
> >If it's set to RF then you should look for a peak (not full) deflection.
> >
> >Lou
> >VK3ALB
> >
> >At 09:47 02/04/2011, you wrote:
> > >Hi all,
> > >
> > >I have a problem with the 520S ,
> > >
> > >BIAS IS SET AT 60ma
> > >
> > >When tunning up on any band , I cannot get full meter deflection
> > on the meter
> > >when tunning the PLATE & LOAD controls in the final step .
> > >
> > >I can get full deflection on the DRIVE in step 1, and dip in step
> > 2 , but not
> > >full deflection in final step..
> > >
> > >I am tunning into a dummy load , (50ohm) .
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> > >ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
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> > >MAny Thanks,
> > >
> > >Jeff
> > >VK4FNRS

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Yahoo! Groups Links

30607. Re: QRP control circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 23:02:07 UTC
From: w5rkl
Topic: 30555 Message: 30607

Hello Roy,

You said:

"If the 9 volt battery dies in this circuit, then the output goes to
zero rather than to 80 to 100 watts, right?"

No. If the battery dies in my circuit or the original circuit, the "negative" voltage applied to the remote socket "ALC" connection becomes "zero". This causes the transceiver's RF output to return to "normal" and NOT reducing to "zero".

Roy, if I may ask you a question. Have you been lead to believe that the higher the ALC meter indication the more power output the transmitter will produce? I ask this question because your question asks if the battery dies the transmitter's power output drops to zero. If you have been lead to believe the ALC meter indication MUST be at the top of the ALC scale during sideband transmissions then you have been mislead, given wrong information I'm sorry to say.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike and All,
>
> You all speak Radio real good, but my skills in that language are limited.
> I speak simple English a little better. I think I got the gist of what you
> were saying, but I want to make sure about one thing. If the 9 volt battery
> dies in this circuit, then the output goes to zero rather than to 80 to 100
> watts, right?
>
> 73,
> Roy
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

30608. Re: Fw: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 23:12:37 UTC
From: Lou Blasco
Topic: 30574 Message: 30608

Righto Jeff,

I think it's significant that you're seeing about half of the
expected tube current. When you get to the bottom of it all please
post the resolution here. it might help someone in the future.

Lou
VK3ALB

At 07:48 03/04/2011, you wrote:
>Lou,
>
>yes the circuit is plug-in and has been removed , the issue is still there,.
>I have asked 1 of the full hams at the club to look at the set , but
>it may be a
>couple of weeks before he can.
>
>I will have to use my son's IC718 , in the mean time.
>
>Many Thanks ,
>
>Jeff
>vk4fnrs
>
>
>
>----- Forwarded Message ----
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sat, 2 April, 2011 12:28:47 PM
>Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue
>
>Hi Jeff,
>
>It's good that the tubes glow, at least the filaments are intact but
>there's still a problem. If the change in operation occurred after a
>modification then there's a good chance the mod caused the problem.
>Please confirm that the tube current you see isn't with the mod in
>place? Next, if you haven't already done so you should remove the mod
>and check the radio again. If after you've removed the mod and
>checked the radio you still have a problem you'll have to get someone
>familiar with valve radios to take a look at it. I doubt it's
>anything fatal but the next step is to make measurements and look for
>something wrong.
>
>Lou

>VK3ALB
>
>At 15:04 02/04/2011, you wrote:
> >LOU,
> >
> >I do not have the expertise to check voltages in this area, only
> an f call at
> >moment, .
> >All tubes show glow so are active ??,
> >Bias voltage was checked and has not changed was set several months
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> >not altered.
> >
> >This issue started after trialing a circuit to reduce output to 10watts.
> >
> >The set up was checked by another full ham, the radio was loading
> >up correctly
> >prior.
> >
> >The circuit was checked and the fitting, by the full ham.
> >
> >Jeff
> >
> >
> >
> >----- Original Message ----
> >From: Lou Blasco <radio@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Fri, 1 April, 2011 5:23:10 PM
> >Subject: Re: Fw: [TS-520_820_530_830] TS520S tuning issue
> >
> >Hi Jeff,
> >
> >OK, so I assume you have run through the tune-up procedure correctly
> >and you are on CW with the meter set to IP and you're reading around
> >half the expected tube current.You said in your previous post that
> >you set the bias to 60mA. What was it before you adjusted it? Are
> >there two 6146 tubes in the radio and can you see the filament glow
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> >Only one tube in the set
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> >Broken wire or bad socket on one tube
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> >I don't know your technical ability. Are you able to make

> >measurements around the tubes to check the voltages are correct or do
> >you have someone that can help you with these measurements? The
> >voltages around the tubes are deadly and if you're not confident of
> >your abilities I would really recommend to take it to a local amateur
> >that can help you.
> >
> >Lou
> >VK3ALB
> >
> >
> >At 11:44 02/04/2011, you wrote:
> > >Lou,
> > >
> > >
> > >settings are correct when tunning , only getting 110-120 Ma , and
> > >dip on plate
> > >tune is just visible.
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> > >Thanks,
> > >Jeff
> > >
> > >
> > >----- Forwarded Message ----
> > >From: Lou Blasco <radio@...>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Fri, 1 April, 2011 3:32:03 PM
> > >Subject: Re: [TS-520_820_530_830] TS520S tunning issue
> > >
> > >Jeff,
> > >
> > >We need more information. You say you don't get full deflection, what
> > >do you get? What is your meter switch and mode switch set to?
> > >
> > >Your mode switch should be set to CW.
> > >
> > >If it's set to IP them you should aim for around 220 to 225mA. Don't
> > >go over 250mA as you'll decrease the life of your tubes.
> > >If it's set to RF then you should look for a peak (not full) deflection.
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> > >Lou
> > >VK3ALB
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> > >At 09:47 02/04/2011, you wrote:
> > > >Hi all,
> > > >
> > > >I have a problem with the 520S ,
> > > >
> > > >BIAS IS SET AT 60ma
> > > >
> > > >When tunning up on any band , I cannot get full meter deflection

> > > on the meter
> > > >when tunning the PLATE & LOAD controls in the final step .
> > > >
> > > >I can get full deflection on the DRIVE in step 1, and dip in step
> > > 2 , but not
> > > >full deflection in final step..
> > > >
> > > >I am tunning into a dummy load , (50ohm) .
> > > >
> > > >ANY IDEAS ON CAUSE PLEASE , AND A FIX ??
> > > >
> > > >MAny Thanks,
> > > >
> > > >Jeff
> > > >VK4FNRS
> > > >
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30609. Re: T-599 update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-02 23:36:42 UTC
From: Bill
Topic: 30529 Message: 30609

Hi Jeff,

T-599 is the transmitter for a set of twins. It has a separate transmitter and receiver that can be connected to operate as a transceiver. Each can be used independently or together. The connectors on the back are dramatically different from a monolithic transceiver like the 520. However, it has the same ALC circuit. There is an RCA type connector on the back that is in parallel with the ALC pins on the interconnect cable. I used the RCA connector with +9 to ground and the -ALC control voltage picked off the pot on the center terminal of that RCA connector. I may have something as "simple" as a broken wire inside from that RCA socket to the internal ALC terminal. I'll look some other time.

I have used the 520 and 820 and worked on a 520 a little bit for a friend. I used the 820 for an entire Field Day operation and I liked it. The twins have a lot in common with those. There are of course two VFOs and either can be used for transceive, or even swapped so that the receiver VFO controls the transmit frequency and the transmitter VFO controls the receive frequency. I would be too confused to try that! The DX hounds would use that feature to hopscotch up and own the band operating in split mode to catch that elusive DX. They can also be operated in transceive with the transmitter on a different band. Not a good idea on HF but maybe with converters on each unit for satellite work. I have an extra connector that I plan to use with the receiver and some other transmitting gear - the receiver controlling the operating frequency. There are quite a few hams who use the receiver alone and do not even have the T-599.

Thanks for your thoughtful comments.

73,

Bill KU8H

30610. TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 01:37:44 UTC
From: Joseph Stiles
Topic: 30610 Message: 30610

Greeting group, & Happy B-day Gordon

This is a continuance of a prior thread...820S CW problem...that was a typo.

Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
VOX works correctly when in SSB. When send/rcv switch is used, CW keying of transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and was replaced with an NTE85..still no joy. A known good AF-AVR unit was substituted and still same problem. I am currently out of ideas as my trouble shooting skills leave a bit to be desired. Any other suggestions?

73's joe wb7uqu

[Non-text portions of this message have been removed]

30611. Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 02:46:56 UTC
From: KA5TRO
Topic: 30611 Message: 30611

I have done an intial clean and check of the TS-830S Gold Edition that I found locally.

It was really fairly clean inside. A liberal application of compressed air helped a lot.

Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.

A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?

Thanks,

Tony KA5TRO

----- Original Message -----
From: KA5TRO
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 30, 2011 9:23 PM
Subject: [TS-520_820_530_830] Nice find!

While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).

Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.

So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.

Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.

If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.

Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)

So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.

Thanks for reading.

73

Tony KA5TRO

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[Non-text portions of this message have been removed]

30612. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 06:18:37 UTC
From: Leslie Smith
Topic: 30611 Message: 30612

Hello Tony,
I'd avoid using compressed air, or at least be very careful in using it.
In place of compressed air I'd use a clean dry paint-brush with moderately firm bristles.

In terms of "bringing up" your set, you have a variac, there are a good number of web-sites that describe the process, and how to re-form caps etc. Clearly you know about this process, and the knowledge that the process needs to be done is enough.

Les

--
Leslie Smith
[1]vk2bcu@...

On Sat, 02 Apr 2011 21:46 -0500, "KA5TRO" <ka5tro@cox.net> wrote:

I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
It was really fairly clean inside. A liberal application of compressed air helped a lot.
Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP.
So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
Thanks,
Tony KA5TRO
----- Original Message -----
From: KA5TRO
To: [2]TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, March 30, 2011 9:23 PM
Subject: [TS-520_820_530_830] Nice find!
While perusing our local craigslist this week, I found an ad for

some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).

Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.

So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.

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Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)

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Thanks for reading.

73

Tony KA5TRO

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References

1. mailto:vk2bcu@...
2. mailto:TS-520_820_530_830%40yahoogroups.com
3. mailto:ka5tro@...?subject=Re%3A%20Update%20on%20my%20TS-830S%20find%3A%20Bandswitch
4. mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20Update%20on%20my%20TS-830S%20find%3A%20Bandswitch
5. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxZ285cGVuBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwNjExBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTMwMTgwNzA5OQ--?act=reply&messageNum=30611
6. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlZ3Z0MWxtBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTMwMTgwNzA5OQ--
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9. http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmcmpsdWV2BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDE4MDcwOTk-
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15. mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
16. mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
17. mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe
18. http://docs.yahoo.com/info/terms/

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http://www.fastmail.fm - Send your email first class

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30613. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 06:27:00 UTC
From: Leslie Smith
Topic: 30611 Message: 30613

Tony,

I should read my posting more carefully before pressing "send".

I should have added "and vacuum cleaner" in conjunction with the clean dry paintbrush.

I'm in the process of cleaning a very grotty BC-453, and it's amazing how much "crud" can be removed with patient vacuuming.

Les

--
http://www.fastmail.fm - Accessible with your email software or over the web

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30614. Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 11:04:00 UTC
From: Don D
Topic: 30614 Message: 30614

Have installed all new tubes but still get low drive and 60% output
I have to turn the carrier to full,to get any alc reading on the meter
ip plate is fine,just very low drive

Help and thanks

30615. Re: Kenwood VFO-230

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 11:09:10 UTC
From: Paul
Topic: 30567 Message: 30615

Thanks Chris,

Will have to keep my eye on Ebay,amongs others..

Regards..

30616. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 11:46:44 UTC
From: w5rkl
Topic: 30614 Message: 30616

Hi Don,

Low RF output problems are not always caused by the weak/bad tubes.

Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?

Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Have installed all new tubes but still get low drive and 60% output
> I have to turn the carrier to full,to get any alc reading on the meter
> ip plate is fine,just very low drive
>
> Help and thanks
>

30617. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 11:57:57 UTC
From: Don D
Topic: 30614 Message: 30617

Thank you for the reply
yes i saw that in the manual,but was not sure if i should do it
as you have confirmed it,i will give it a try
Not sure if someone fooled with it before as it is a Ebay special
The only reason i kept it,it has a dc transformer on it,very rare
as most are a/c only
thanks again

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Don,
>
> Low RF output problems are not always caused by the weak/bad tubes.
>
> Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
>
> Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
>
>
> 73s
> Mike
> W5RKL
>
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> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
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> > Help and thanks
> >
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30618. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 12:13:55 UTC
From: w5rkl
Topic: 30611 Message: 30618

Hello Tony,

The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".

Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.

Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.

I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.

Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
>
> It was really fairly clean inside. A liberal application of compressed air helped a lot.
>
> Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
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Suggestions?
>
> Thanks,
>
> Tony KA5TRO
>
> ----- Original Message -----
> From: KA5TRO
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 30, 2011 9:23 PM
> Subject: [TS-520_820_530_830] Nice find!
>
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> While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
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> Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
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> Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
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530SP). But we'll see.
>
> Thanks for reading.
>
> 73
>
> Tony KA5TRO
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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30619. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 12:37:31 UTC
From: w5rkl
Topic: 30614 Message: 30619

Don,

Is your 830 an "S" or an "M" model? The TS-830M had an optional DS2 DC supply module that the "S" model did not have. If your 830 is an "S" model, more than likely a previous owner found and installed a DS2 DC supply module. You will need the TS-830M operator's manual to see how the DS2 DC supply module is connected.

If your 830 is an "S" model then the main power connection on the rear panel would also have to be changed.

If your 830 is in fact an "S" model, not an "M" model, then I recommend checking ALL of the DS2 connections and compare the connection to the TS-830M operator's manual, page 27. I also recommend checking the main power connector connection and compare them against the main schematic page 35, also in the 830M operator's manual, to ensure the connections are correct.

The DS2 DC supply module is not an optional accessory for the TS-830S.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Thank you for the reply
> yes i saw that in the manual,but was not sure if i should do it
> as you have confirmed it,i will give it a try
> Not sure if someone fooled with it before as it is a Ebay special
> The only reason i kept it,it has a dc transformer on it,very rare
> as most are a/c only
> thanks again
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Don,
> >
> > Low RF output problems are not always caused by the weak/bad tubes.
> >
> > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
> >
> > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/

> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > Have installed all new tubes but still get low drive and 60% output
> > > I have to turn the carrier to full,to get any alc reading on the meter
> > > ip plate is fine,just very low drive
> > >
> > > Help and thanks
> > >
> >
>

30620. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 12:50:06 UTC
From: Don D
Topic: 30614 Message: 30620

on page 28 of the instruction manual,could this method be used as i don't have a signal generator
what is the best way to adjust the coils
thanks

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Thank you for the reply
> yes i saw that in the manual,but was not sure if i should do it
> as you have confirmed it,i will give it a try
> Not sure if someone fooled with it before as it is a Ebay special
> The only reason i kept it,it has a dc transformer on it,very rare
> as most are a/c only
> thanks again
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Don,
> >
> > Low RF output problems are not always caused by the weak/bad tubes.
> >
> > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
> >
> > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > Have installed all new tubes but still get low drive and 60% output
> > > I have to turn the carrier to full,to get any alc reading on the meter
> > > ip plate is fine,just very low drive
> > >
> > > Help and thanks
> > >
> >

>

30621. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 12:58:25 UTC
From: Don D
Topic: 30614 Message: 30621

yes it is a 830s with a ds2 which i found weird as i have not seen any like this
every thing looks the same except the power supply
now that you have told me it could have been modified i will check it as you say

thanks again for your time

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Don,
>
> Is your 830 an "S" or an "M" model? The TS-830M had an optional DS2 DC supply module that the "S" model did not have. If your 830 is an "S" model, more than likely a previous owner found and installed a DS2 DC supply module. You will need the TS-830M operator's manual to see how the DS2 DC supply module is connected.
>
> If your 830 is an "S" model then the main power connection on the rear panel would also have to be changed.
>
> If your 830 is in fact an "S" model, not an "M" model, then I recommend checking ALL of the DS2 connections and compare the connection to the TS-830M operator's manual, page 27. I also recommend checking the main power connector connection and compare them against the main schematic page 35, also in the 830M operator's manual, to ensure the connections are correct.
>
> The DS2 DC supply module is not an optional accessory for the TS-830S.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Thank you for the reply
> > yes i saw that in the manual,but was not sure if i should do it
> > as you have confirmed it,i will give it a try
> > Not sure if someone fooled with it before as it is a Ebay special
> > The only reason i kept it,it has a dc transformer on it,very rare
> > as most are a/c only
> > thanks again
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >

> > > Hi Don,
> > >
> > > Low RF output problems are not always caused by the weak/bad tubes.
> > >
> > > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
> > >
> > > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Have installed all new tubes but still get low drive and 60% output
> > > > I have to turn the carrier to full,to get any alc reading on the meter
> > > > ip plate is fine,just very low drive
> > > >
> > > > Help and thanks
> > > >
> > >
> >
>

30622. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 13:05:45 UTC
From: w5rkl
Topic: 30614 Message: 30622

Don,

I think you meant page "27". Page 28 is about wiring the TS-830S for 240VAC operation.

You are confusing the TS-830S service manual's receiver's COIL PACK adjustment step 16 on page 36 of the 830S service manual with the transmitter's driver coil adjustment, step 18 on page 37. A signal generator is not required to adjust the RF Unit transmitter's driver coil adjustment, step 18 page 37 in the service manual.

The receiver's coil pack adjustment, step 16 on page 36 should also be done when doing the transmitter driver coil adjustments, step 18 on page 37. This ensures both receiver and transmitter coil pack adjustments are correct.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> on page 28 of the instruction manual,could this method be used as i don't have a signal generator
> what is the best way to adjust the coils
> thanks
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Thank you for the reply
> > yes i saw that in the manual,but was not sure if i should do it
> > as you have confirmed it,i will give it a try
> > Not sure if someone fooled with it before as it is a Ebay special
> > The only reason i kept it,it has a dc transformer on it,very rare
> > as most are a/c only
> > thanks again
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Don,
> > >
> > > Low RF output problems are not always caused by the weak/bad tubes.
> > >
> > > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before

replacing any of the tubes?
> > >
> > > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Have installed all new tubes but still get low drive and 60% output
> > > > I have to turn the carrier to full,to get any alc reading on the meter
> > > > ip plate is fine,just very low drive
> > > >
> > > > Help and thanks
> > > >
> > >
> >
>

30623. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 13:10:33 UTC
From: w5rkl
Topic: 30614 Message: 30623

You can use the 830's built-in Marker (calibrator) signal as a signal source if you do not have a signal generator when adjusting the "receiver coil pack" adjustment. Again, you do not need a signal generator or the 830's Marker signal when adjusting the Driver Coil pack adjustment.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Don,
>
> I think you meant page "27". Page 28 is about wiring the TS-830S for 240VAC operation.
>
> You are confusing the TS-830S service manual's receiver's COIL PACK adjustment step 16 on page 36 of the 830S service manual with the transmitter's driver coil adjustment, step 18 on page 37. A signal generator is not required to adjust the RF Unit transmitter's driver coil adjustment, step 18 page 37 in the service manual.
>
> The receiver's coil pack adjustment, step 16 on page 36 should also be done when doing the transmitter driver coil adjustments, step 18 on page 37. This ensures both receiver and transmitter coil pack adjustments are correct.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > on page 28 of the instruction manual,could this method be used as i don't have a signal generator
> > what is the best way to adjust the coils
> > thanks
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > Thank you for the reply
> > > yes i saw that in the manual,but was not sure if i should do it
> > > as you have confirmed it,i will give it a try
> > > Not sure if someone fooled with it before as it is a Ebay special

> > > The only reason i kept it,it has a dc transformer on it,very rare
> > > as most are a/c only
> > > thanks again
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hi Don,
> > > >
> > > > Low RF output problems are not always caused by the weak/bad tubes.
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> > > >
> > > > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > >
> > > > > Have installed all new tubes but still get low drive and 60% output
> > > > > I have to turn the carrier to full,to get any alc reading on the meter
> > > > > ip plate is fine,just very low drive
> > > > >
> > > > > Help and thanks
> > > > >
> > > >
> > > >
> > >
> >
>

30624. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 13:25:11 UTC
From: Don D
Topic: 30614 Message: 30624

Mike
i just checked the bottom of the transformer and it has been re soldered
i wonder if it was going to be used for the cb band?
my instruction manual gives the adjustments for sure on page 28 and next page 29 is analog dial and 220 operation on page 29??
This seems like it's going to be a bit of work
thanks Mike

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> You can use the 830's built-in Marker (calibrator) signal as a signal source if you do not have a signal generator when adjusting the "receiver coil pack" adjustment. Again, you do not need a signal generator or the 830's Marker signal when adjusting the Driver Coil pack adjustment.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Don,
> >
> > I think you meant page "27". Page 28 is about wiring the TS-830S for 240VAC operation.
> >
> > You are confusing the TS-830S service manual's receiver's COIL PACK adjustment step 16 on page 36 of the 830S service manual with the transmitter's driver coil adjustment, step 18 on page 37. A signal generator is not required to adjust the RF Unit transmitter's driver coil adjustment, step 18 page 37 in the service manual.
> >
> > The receiver's coil pack adjustment, step 16 on page 36 should also be done when doing the transmitter driver coil adjustments, step 18 on page 37. This ensures both receiver and transmitter coil pack adjustments are correct.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > on page 28 of the instruction manual,could this method be used as i don't have a signal generator
> > > what is the best way to adjust the coils

> > > thanks
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Thank you for the reply
> > > > yes i saw that in the manual,but was not sure if i should do it
> > > > as you have confirmed it,i will give it a try
> > > > Not sure if someone fooled with it before as it is a Ebay special
> > > > The only reason i kept it,it has a dc transformer on it,very rare
> > > > as most are a/c only
> > > > thanks again
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Hi Don,
> > > > >
> > > > > Low RF output problems are not always caused by the weak/bad tubes.
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> > > > > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
> > > > >
> > > > > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > >
> > > > > > Have installed all new tubes but still get low drive and 60% output
> > > > > > I have to turn the carrier to full,to get any alc reading on the meter
> > > > > > ip plate is fine,just very low drive
> > > > > >
> > > > > > Help and thanks
> > > > > >
> > > > > >
> > > > >
> > > >
> > >
> >
>

30625. TS-520S voltage update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 15:18:40 UTC
From: Tom
Topic: 30625 Message: 30625

I checked the Car. Board and the out term. reads 0 volts and T1 has no effect. This radio has no output on any band nor will it tune up and I can only get the bias down to 70 with the pot turned full counter clockwise. The SG switch has 260 volts on the top term. 260 volts on the middle term and -116 volts on the bottom term with the switch in the up position. With the SG switch in the down position it reads 260 volts top term. -116 volts on the middle and bottom terms.

Tom

30626. Re: [TS-520_820_530_830] Frequency readout stuck on 9000 !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 13:52:49 UTC
From: Prof. Arnaldo Coro Antich
Topic: 30567 Message: 30626

Hi amigos !

My display on the TS820 is reading 9.000 all the time...
Any ideas what can be done to return it to reading properly ?

73 and DX
Arnie Coro
CO2KK

30627. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 14:58:39 UTC
From: KA5TRO
Topic: 30611 Message: 30627

Mike,

Thanks for your input.

Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.

I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.

Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?

Thanks.

Tony KA5TRO

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 7:13 AM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Hello Tony,

The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".

Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.

Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.

I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.

Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
>
> It was really fairly clean inside. A liberal application of compressed air helped a lot.
>
> Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
>
> A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
>
> Thanks,
>
> Tony KA5TRO
>
> ----- Original Message -----
> From: KA5TRO
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, March 30, 2011 9:23 PM
> Subject: [TS-520_820_530_830] Nice find!
>
>
>
> While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
>
> Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
>
> So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
>
> Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and

AT-230, so these will be redundant.
>
> If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
>
> Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
>
> So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
>
> Thanks for reading.
>
> 73
>
> Tony KA5TRO
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30628. Re: Frequency readout stuck on 9000 !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 16:10:39 UTC
From: roberteleazer@rocketmail.com
Topic: 30567 Message: 30628

Well, Arnie, the first thing we need to find out is if the radio is working okay other than the digital display. Does it at least receive something? Does it transmit?

My first guess would be not a display module problem but a problem with the carrier module. Another possibility is the VCO/PD module. A loose connector on the VCO/PD unit will produce that kind of problem as well.
But in those cases the radio set will not do much of anything except possibly produce some static from the speaker.

Get back to us with more data and we will try and help you. This kind of problem with the TS-820S is not unusual and can be very easy to fix if you have some suitable test equipment.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Prof. Arnaldo Coro Antich" <inforhc@...> wrote:
>
> Hi amigos !
>
> My display on the TS820 is reading 9.000 all the time...
> Any ideas what can be done to return it to reading properly ?
>
> 73 and DX
> Arnie Coro
> CO2KK
>

30629. Re:

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 17:05:47 UTC
From: Reggie Moody
Topic: 30629 Message: 30629

Have you recently taken off the case? If so you may have put the longer screws in the bottom instead of the shorter ones and may have grounded a circuit trace. Does the "fixed" light come on as well?

[Non-text portions of this message have been removed]

30630. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 18:29:29 UTC
From: Leslie Smith
Topic: 30611 Message: 30630

Tony,
You made the comment:
"I will go ahead and order a replacement. And I'll have to get a
1.5mm Allen wrench; the smallest I have is 2.0mm."

How easily can you get a metric allen key in USA, land of inches?
If necessary I could get one here (in metric VK) and post.

Les
ex vk2BCU

--
http://www.fastmail.fm - A no graphics, no pop-ups email service

[Non-text portions of this message have been removed]

30631. REL: CO2KK's TS820 with display stuck at 9000.X

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 18:37:51 UTC
From: Prof. Arnaldo Coro Antich
Topic: 30631 Message: 30631

Dear amigos:
The transceiver is working quite well on all bands...
I do notice a slight change in voice pitch when switching on an AM signal
from USB to LSB... (maybe the BFO crystal frequencies are not where
they should be ?)
The digital display remains stuck at 9000.X , and I see that the last
digit behind the decimal point does move from 0 to 9.

73 and DX
Arnie Coro
CO2KK

30632. Re: [TS-520_820_530_830] REL: CO2KK's TS820 with display stuck at 9000.X

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 19:29:04 UTC
From: Charles Coffee
Topic: 30631 Message: 30632

Arnaldo;

1st try this link below to obtain data on cleaning the Display Unit (2 PC boards) in the TS-820

http://groups.yahoo.com/group/TS-520_820_530_830/message/28957

The DG-1, Display Unit is in a metal enclosure (2 PC boards inside) and provides the data to the digital display tube behind the front panel and above analog dial.

Very often, the internal connector pins inside the Display Unit are dirty. The 2 small PC board inside the Display Unit metal enclosure are separated by a metal enclosure wall in between the boards. The boards are connected through a set of "fixed" pins. Over time and environment, the pins and board connectors do get dirty and can cause problems such as you are experiencing.

You will need to remove the Display Unit, remove the outer covers, and remove each board, one at a time, cleaning the fixed pins and sockets on each board. Use care when removing the Display Unit as well as the boards. I recommend you use DEOXIT D5 Contact cleaner for the pins (a very small amount on each pin
with a Q-Tip) and then put the connector on/off a couple of times to help clean the pins/sockets in the
connectors. Also, on top of the Display Unit, you have a connector to the display tube that should be cleaned
with DeOxit, and on the bottom of the Display Unit. You have screws on the bottom of the Display Unit
that must be removed to take it out of the chassis.

Make sure you use canned (compressed) air and blow out any excess DeOxit D5 before applying any
power, it is very flammable. I normally let it set for several hours after using D5 so it can dry out
well.

Regards

Chuck, KJ4GU

On Sun, Apr 3, 2011 at 2:37 PM, Prof. Arnaldo Coro Antich
<inforhc@...>wrote:

> Dear amigos:
> The transceiver is working quite well on all bands...
> I do notice a slight change in voice pitch when switching on an AM signal

> from USB to LSB... (maybe the BFO crystal frequencies are not where
> they should be ?)
> The digital display remains stuck at 9000.X , and I see that the last
> digit behind the decimal point does move from 0 to 9.
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> 73 and DX
> Arnie Coro
> CO2KK
>
>
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> Yahoo! Groups Links
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30633. Re: Fw: Fw: [TS-520_820_530_830] TS520S tuning issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:19:52 UTC
From: John Davidson
Topic: 30574 Message: 30633

Half current, maybe one tube has; no screen voltage at the tube pin / open screen dropping resistor, plate cap unsoldered from the tube, open capacitor supplying RF drive to the grid pin, a loose point in tube socket pins, a few starting points for troubleshooting ....

From: Lou Blasco <radio@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 2, 2011 7:12:37 PM
Subject: Re: Fw: Fw: [TS-520_820_530_830] TS520S tuning issue

Righto Jeff,

I think it's significant that you're seeing about half of the expected tube current. When you get to the bottom of it all please post the resolution here. it might help someone in the future.

Lou
VK3ALB
 > >>
>

[Non-text portions of this message have been removed]

30634. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:23:30 UTC
From: w5rkl
Topic: 30611 Message: 30634

I recently bought a set of Metric hex tools, 9 in all, sizes ranging from 1.5mm to 10mm at the local hardware store for $6. The hex tool set is made in the U.S. by BONDHUS GerillaProof Tools.

As strange as it may seem, American hardware stores and home supply houses do carry all types and sizes of Metric tools and at reasonable prices.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@...> wrote:
>
> Tony,
> You made the comment:
> "I will go ahead and order a replacement. And I'll have to get a
> 1.5mm Allen wrench; the smallest I have is 2.0mm."
>
> How easily can you get a metric allen key in USA, land of inches?
> If necessary I could get one here (in metric VK) and post.
>
> Les
> ex vk2BCU
>
> --
> http://www.fastmail.fm - A no graphics, no pop-ups email service
>
>
>
> [Non-text portions of this message have been removed]
>

30635. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:37:20 UTC
From: John Becker
Topic: 30611 Message: 30635

For what it's worth - there are not hard to get at all.
Even the smallest of the wal mart stores have them
Or - auto part stores have then with all the Japanese
cars.

At 01:29 PM 4/3/2011, you wrote:
>Tony,
> You made the comment:
> "I will go ahead and order a replacement. And I'll have to get a
>1.5mm Allen wrench; the smallest I have is 2.0mm."
>
>How easily can you get a metric allen key in USA, land of inches?
>If necessary I could get one here (in metric VK) and post.
>
>Les
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>--
>http://www.fastmail.fm - A no graphics, no pop-ups email service
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>[Non-text portions of this message have been removed]
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30636. Re: [TS-520_820_530_830] TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 21:14:11 UTC
From: Joseph Stiles
Topic: 30610 Message: 30636

Group,

I need help on the below problem....tnx

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 2, 2011 6:37:44 PM
Subject: [TS-520_820_530_830] TS-830S CW problem

Greeting group, & Happy B-day Gordon

This is a continuance of a prior thread...820S CW problem...that was a typo.

Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and
was replaced with an NTE85..still no joy. A known good AF-AVR unit was
substituted and still same problem. I am currently out of ideas as my trouble
shooting skills leave a bit to be desired. Any other suggestions?

73's joe wb7uqu

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[Non-text portions of this message have been removed]

30637. Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 21:40:43 UTC
From: w5rkl
Topic: 30610 Message: 30637

Joe,

With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss in speaker), short AF Unit plug 5 pin 2 to chassis ground. Do you hear the side tone? If you do then the "KEY" wire from AF Unit plug 5 pin 2 to the CW key socket is open, the CW key socket has a bad "KEY" terminal connection, or the CW key socket is very dirty.

I have experienced this problem before with my 820. I applied DeoXit D5 to the 1/4" plug shaft, inserted it into the CW socket then rotated the plug several times in both directions. I then tried keying the transceiver in CW mode and I could hear the side tone.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Group,
>
> I need help on the below problem....tnx
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, April 2, 2011 6:37:44 PM
> Subject: [TS-520_820_530_830] TS-830S CW problem
>
>
> Greeting group, & Happy B-day Gordon
>
> This is a continuance of a prior thread...820S CW problem...that was a typo.
>
> Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
> VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
> transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and
> was replaced with an NTE85..still no joy. A known good AF-AVR unit was
> substituted and still same problem. I am currently out of ideas as my trouble
> shooting skills leave a bit to be desired. Any other suggestions?
>
> 73's joe wb7uqu
>

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30638. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:47:03 UTC
From: KA5TRO
Topic: 30611 Message: 30638

Leslie,

Thanks for the kind offer. I won't have any problem finding one. I just don't currently have one. I have most English and Metric sizes, but just not one that small in Metric.

73

Tony KA5TRO

----- Original Message -----
From: Leslie Smith
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 1:29 PM
Subject: Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Tony,
You made the comment:
"I will go ahead and order a replacement. And I'll have to get a
1.5mm Allen wrench; the smallest I have is 2.0mm."

How easily can you get a metric allen key in USA, land of inches?
If necessary I could get one here (in metric VK) and post.

Les
ex vk2BCU

--
http://www.fastmail.fm - A no graphics, no pop-ups email service

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[Non-text portions of this message have been removed]

30639. TS-830S slightly intermittent RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:36:22 UTC
From: ww8x_joe
Topic: 30639 Message: 30639

Hello... I'm new to this group and hope to learn more about my first Kenwood transceiver. I recently bought a very sharp looking TS-830S. It appears to have been well cared for and is operating quite well -- I'm super pleased with it.

I have noticed a slight problem in the transmit. Once in a while when I speak into the mike there's very little meter movement and the station on the other end says I've really dropped off. Cycling the speech processor on and off several times seems to cure it. Normally the transmit works great for a long period then all of a sudden the problem arises again and after cycling the processor switch several times the RF returns to normal.

I haven't used deOxit yet or done any cleaning inside of it. Does this sound like a dirty contact problem?

Thanks for any input,
WW8X Joe

30640. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 20:47:51 UTC
From: KA5TRO
Topic: 30611 Message: 30640

My set is 2mm to 10mm :-)

WRT my filter cap neutralization question... ground the plate cap socket to chassis, correct?

73

Tony KA5TRO

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 3:23 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

I recently bought a set of Metric hex tools, 9 in all, sizes ranging from 1.5mm to 10mm at the local hardware store for $6. The hex tool set is made in the U.S. by BONDHUS GerillaProof Tools.

As strange as it may seem, American hardware stores and home supply houses do carry all types and sizes of Metric tools and at reasonable prices.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@...> wrote:
>
> Tony,
> You made the comment:
> "I will go ahead and order a replacement. And I'll have to get a
> 1.5mm Allen wrench; the smallest I have is 2.0mm."
>
> How easily can you get a metric allen key in USA, land of inches?
> If necessary I could get one here (in metric VK) and post.
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> Les
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>
> --
> http://www.fastmail.fm - A no graphics, no pop-ups email service
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>
>
> [Non-text portions of this message have been removed]
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30641. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:06:46 UTC
From: w5rkl
Topic: 30611 Message: 30641

Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.

Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mike,
>
> Thanks for your input.
>
> Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.
>
> I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
>
> Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
>
> Thanks.
>
> Tony KA5TRO
>
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 7:13 AM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
>
>
>
> Hello Tony,
>
> The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".

>
> Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
>
> Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
>
> I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
>
> Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> >
> > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> >
> > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> >
> > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
> >
> > A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> >
> > Thanks,
> >
> > Tony KA5TRO
> >

> > ----- Original Message -----
> > From: KA5TRO
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, March 30, 2011 9:23 PM
> > Subject: [TS-520_820_530_830] Nice find!
> >
> >
> >
> > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> >
> > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> >
> > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> >
> > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> >
> > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
> >
> > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
> >
> > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> >
> > Thanks for reading.
> >
> > 73

> >
> > Tony KA5TRO
> >
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30642. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:19:36 UTC
From: pwrapsengineer
Topic: 30611 Message: 30642

I have a couple of adjustable metric wrenches. One is a 30cm and another is a 25cm. Strangely, they look just like my English versions of the same design--12 inch and 10 inch Crescent wrenches to be exact. Yup, good old metric system coming to America!!

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> I recently bought a set of Metric hex tools, 9 in all, sizes ranging from 1.5mm to 10mm at the local hardware store for $6. The hex tool set is made in the U.S. by BONDHUS GerillaProof Tools.
>
> As strange as it may seem, American hardware stores and home supply houses do carry all types and sizes of Metric tools and at reasonable prices.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Leslie Smith" <vk2bcu@> wrote:
> >
> > Tony,
> > You made the comment:
> > "I will go ahead and order a replacement. And I'll have to get a
> > 1.5mm Allen wrench; the smallest I have is 2.0mm."
> >
> > How easily can you get a metric allen key in USA, land of inches?
> > If necessary I could get one here (in metric VK) and post.
> >
> > Les
> > ex vk2BCU
> >
> > --
> > http://www.fastmail.fm - A no graphics, no pop-ups email service
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30643. Re: TS-830S slightly intermittent RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:26:41 UTC
From: w5rkl
Topic: 30639 Message: 30643

Hello Joe,

With the Processor knob turned OFF, the meter switch set to ALC, MIC gain set with you speaking in a normal voice about 1 to 2 inches from the MIC, the ALC meter should just start to flicker above zero. With that setting, do the distant stations hear you fine? This is assuming there is no local noise at the receiving stations. If so then the speech amplifier is working fine.

It is possible the Processor pot is dirty and needs cleaning. I would clean the Processor pot by applying a small amount of cleaner to the pot, rotating the pot both ways several times, then use canned air to remove any/all cleaner residue. Wait at least 3 to 5 minutes before applying power. Test the 830 with the processor turned ON to see if your problem goes away.

Remember it's not how LOUD you sound at the receiving end but how clean your transmit signal is. The MIC gain should be set so the ALC meter indication with you speaking at 1 to 2 inches from the microphone in a normal voice, should be just starting to flicker above zero. This is the point of maximum transmitter gain and maximum peak RF output. The higher the ALC meter indication the more reduction in RF output occurs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ww8x_joe" <ww8x.joe@...> wrote:
>
> Hello... I'm new to this group and hope to learn more about my first Kenwood transceiver. I recently bought a very sharp looking TS-830S. It appears to have been well cared for and is operating quite well -- I'm super pleased with it.
>
> I have noticed a slight problem in the transmit. Once in a while when I speak into the mike there's very little meter movement and the station on the other end says I've really dropped off. Cycling the speech processor on and off several times seems to cure it. Normally the transmit works great for a long period then all of a sudden the problem arises again and after cycling the processor switch several times the RF returns to normal.
>
> I haven't used deOxit yet or done any cleaning inside of it. Does this sound like a dirty contact problem?
>
> Thanks for any input,
> WW8X Joe
>

30644. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:33:01 UTC
From: Bob Macklin
Topic: 30611 Message: 30644

DON'T TOUCH THE COILS UNLESS YOU HAVE THE PROPER TUNING TOOLS! THAT'S HOW THE SLUGS GET BROKEN!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 3:06 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.

Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mike,
>
> Thanks for your input.
>
> Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.
>
> I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
>
> Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
>
> Thanks.
>
> Tony KA5TRO
>

>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 7:13 AM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
>
>
> Hello Tony,
>
> The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".
>
> Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
>
> Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
>
> I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
>
> Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> >
> > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> >
> > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> >
> > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
> >
> > A quick load test showed full 100W output on 20M. I didn't test any other band, though,

because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> >
> > Thanks,
> >
> > Tony KA5TRO
> >
> > ----- Original Message -----
> > From: KA5TRO
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, March 30, 2011 9:23 PM
> > Subject: [TS-520_820_530_830] Nice find!
> >
> >
> >
> > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> >
> > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> >
> > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> >
> > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> >
> > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
> >
> > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
> >
> > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud

out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> >
> > Thanks for reading.
> >
> > 73
> >
> > Tony KA5TRO
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >
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> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30645. Re: [TS-520_820_530_830] TS-830S slightly intermittent RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:38:34 UTC
From: n6wk@n6wk.com
Topic: 30639 Message: 30645

Hi Joe,
Yes! Clean the Processor switch with some De-Oxit.
You'll find that is your problem. It is difficult to get some De-Oxit into some of those little switches, but it can be done through the little holes.
Be sure to exercise the switch after spraying some inside it .

73,
Gordon
N6WK

On 4/3/2011 1:36 PM, ww8x_joe wrote:
>
> Hello... I'm new to this group and hope to learn more about my first
> Kenwood transceiver. I recently bought a very sharp looking TS-830S.
> It appears to have been well cared for and is operating quite well --
> I'm super pleased with it.
>
> I have noticed a slight problem in the transmit. Once in a while when
> I speak into the mike there's very little meter movement and the
> station on the other end says I've really dropped off. Cycling the
> speech processor on and off several times seems to cure it. Normally
> the transmit works great for a long period then all of a sudden the
> problem arises again and after cycling the processor switch several
> times the RF returns to normal.
>
> I haven't used deOxit yet or done any cleaning inside of it. Does this
> sound like a dirty contact problem?
>
> Thanks for any input,
> WW8X Joe
>
>

30646. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 22:40:22 UTC
From: John Becker
Topic: 30611 Message: 30646

At 05:19 PM 4/3/2011, you wrote:
>I have a couple of adjustable metric wrenches. One is a 30cm and another is a 25cm. Strangely, they look just like my English versions of the same design--12 inch and 10 inch Crescent wrenches to be exact. Yup, good old metric system coming to America!!

Funny my ADJUSTABLE wrenches don't know the difference between
the 2. Ain't found anything "either" wont work on.

30647. TS520S NOT TUNEING

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:32:51 UTC
From: jeffrey lord
Topic: 30647 Message: 30647

Hi All,

I checked throygh the Manual, and found that somehow the Rf Voltage had been moved,
I folled the MAnual , and reset it for 2/3 meter reading .
The set now shows normal deflections on tune-up,
Previously I had less than 2mm deflection on the plate control , I now have a readable deflection , and full meter deflection is attainable when tuneing Plate & load controls in final tune step..

Cheers,
 Jeff
VK4FNRS

30648. Re: Low drive 830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:34:51 UTC
From: Don D
Topic: 30614 Message: 30648

Hi mike
Don again
After adjusting all the coil pack this what i have come up with
1.8 full output 105 watts carrier in the center great
3.5,7.1 10.1,18,21,and 24 output is 90 watts with carrier fully
clockwise
If the carrier control is in the center i get half of that output 40 watts
Ten meters shows no drive at all ,but i can get 50 watts out
playing with the plate and load
73s
Don
ve2ud

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Mike
> i just checked the bottom of the transformer and it has been re soldered
> i wonder if it was going to be used for the cb band?
> my instruction manual gives the adjustments for sure on page 28 and next page 29 is analog dial and 220 operation on page 29??
> This seems like it's going to be a bit of work
> thanks Mike
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > You can use the 830's built-in Marker (calibrator) signal as a signal source if you do not have a signal generator when adjusting the "receiver coil pack" adjustment. Again, you do not need a signal generator or the 830's Marker signal when adjusting the Driver Coil pack adjustment.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Don,
> > >
> > > I think you meant page "27". Page 28 is about wiring the TS-830S for 240VAC operation.
> > >
> > > You are confusing the TS-830S service manual's receiver's COIL PACK adjustment step 16 on page 36 of the 830S service manual with the transmitter's driver coil adjustment, step 18 on page 37. A signal generator is not required to adjust the RF Unit transmitter's

driver coil adjustment, step 18 page 37 in the service manual.
> > >
> > > The receiver's coil pack adjustment, step 16 on page 36 should also be done when doing the transmitter driver coil adjustments, step 18 on page 37. This ensures both receiver and transmitter coil pack adjustments are correct.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > on page 28 of the instruction manual,could this method be used as i don't have a signal generator
> > > > what is the best way to adjust the coils
> > > > thanks
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > >
> > > > > Thank you for the reply
> > > > > yes i saw that in the manual,but was not sure if i should do it
> > > > > as you have confirmed it,i will give it a try
> > > > > Not sure if someone fooled with it before as it is a Ebay special
> > > > > The only reason i kept it,it has a dc transformer on it,very rare
> > > > > as most are a/c only
> > > > > thanks again
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > > Hi Don,
> > > > > >
> > > > > > Low RF output problems are not always caused by the weak/bad tubes.
> > > > > >
> > > > > > Have you tried performing the COIL PACK adjustment, step 16 on page 36 and the GENERATOR DRIVE COIL ADJUSTMENT, step 18 on page 37 in the 830 service manual before replacing any of the tubes?
> > > > > >
> > > > > > Do you have the 830 service manual? If not you can download it from Gordon's website, www.n6wk.com/kenwood/
> > > > > >
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
> > > > > >

> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > > >
> > > > > > > Have installed all new tubes but still get low drive and 60% output
> > > > > > > I have to turn the carrier to full,to get any alc reading on the meter
> > > > > > > ip plate is fine,just very low drive
> > > > > > > >
> > > > > > > Help and thanks
> > > > > > > >
> > > > > > >
> > > > > >
> > > > >
> > > >
> > >
>

30649. Full ALC deflection when tuning

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:36:17 UTC
From: Chris Parnell
Topic: 30518 Message: 30649

Hi everyone.... didn't get any responses to this question... just a quick update
The full ALC issue seems to be band dependent too... it completely pegs over on 20mts and on 15mts is a little on the high side but not pegged.

Any direction at all?

Cheers
Chris, ZL1CDP

Begin forwarded message:

> Hi all,
>
> I have my 830 working again after some time, but think I may have an issue with tubes... and would like guidance.
> The issue is that when I flick to the send button (TX) I get full ALC deflection, regardless of mode, regardless of whether the heater is on or off on the front panel.
>
> I can tune the rig to around 50W output on 20 meters, but the ALC full deflection is still there.
>
> Is this an issue with the two 6146 tubes? any ideas?
>
> Thanks
> Chris Parnell, ZL1CDP
>
>

[Non-text portions of this message have been removed]

30650. Receive alignment 520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:39:35 UTC
From: yioutta_99
Topic: 30650 Message: 30650

Hi all

After a successful tube change and neutralization, I decided to align the receive per the manual. I went through all the bands and tweeked the Antenna and mixer coils for max meter reading using the cal signal. I could not get the meter to move much if any except for the 20 meter band, that I could bring up a bit, the other bands didnt seem to respond. I did them in order, on the proper freq with the tuning tool. I hope i put the coilds back to where they should be. The cal signal was lowest on 28 mhz .

Also in the Hyterdyne, they give a band but not a freq to adjust the oscillator. when would I hear this oscillation? Are they talking about the Cal sig? They dont say to turn that on.

Thanks

Steve

any suggestions?

30651. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 00:01:31 UTC
From: markshawley
Topic: 30611 Message: 30651

There is a nice description of the bandswitch rebuild process along with pictures on Ken's site specifically at http://www.k4eaa.com/bandswitch.html (along with lots of other great service info on the site in general). If you're replacing the bandswitch rather than repairing it, the process should be even simpler.

Mark
KJ4NXX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.
>
> Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> >
> > Mike,
> >
> > Thanks for your input.
> >
> > Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.
> >
> > I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
> >
> > Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
> >
> > Thanks.
> >
> > Tony KA5TRO
> >

> >
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sunday, April 03, 2011 7:13 AM
> > Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
> >
> >
> >
> > Hello Tony,
> >
> > The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".
> >
> > Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
> >
> > Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
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> > I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
> >
> > Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> > >
> > > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> > >
> > > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> > >
> > > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up

well.
> > >
> > > A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> > >
> > > Thanks,
> > >
> > > Tony KA5TRO
> > >
> > > ----- Original Message -----
> > > From: KA5TRO
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wednesday, March 30, 2011 9:23 PM
> > > Subject: [TS-520_820_530_830] Nice find!
> > >
> > >
> > >
> > > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> > >
> > > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> > >
> > > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> > >
> > > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> > >
> > > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
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> > > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out

away from the city anyway.)
> > >
> > > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> > >
> > > Thanks for reading.
> > >
> > > 73
> > >
> > > Tony KA5TRO
> > >
> > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
> >
>

30652. Re: Full ALC deflection when tuning

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 00:20:33 UTC
From: roberteleazer@rocketmail.com
Topic: 30518 Message: 30652

Not getting full ALC deflection on every band, especially the higher bands, is normal.

In fact for the TS-520, I believe that Kenwood has said that no ALC deflection is normal for 10M, although many people report getting substantial ALC transmit indications on that band.

Substantially less output on the higher bands is a common indicator of weak final tubes.

I assume the output you are measuring is CW. The only way to reliably measure SSB output is by feeding the mike input with middle, low and high frequency tones from an audio signal generator to explore the passband of the SSB filter. This is the procedure recommended by INRAD.

Is your ALC deflection steady or does it sag off after the first couple of seconds of transmit? If it does that is an indicator of a weak driver tube.

Finally, of course, you should consider aligning the driver coils.

Regards,

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi everyone.... didn't get any responses to this question... just a quick update
> The full ALC issue seems to be band dependent too... it completely pegs over on 20mts and on 15mts is a little on the high side but not pegged.
>
> Any direction at all?
>
>
> Cheers
> Chris, ZL1CDP
>
> Begin forwarded message:
>
> > Hi all,
> >
> > I have my 830 working again after some time, but think I may have an issue with tubes... and would like guidance.
> > The issue is that when I flick to the send button (TX) I get full ALC deflection, regardless of mode, regardless of whether the heater is on or off on the front panel.
> >
> > I can tune the rig to around 50W output on 20 meters, but the ALC full deflection is still there.
> >

> > Is this an issue with the two 6146 tubes? any ideas?
> >
> > Thanks
> > Chris Parnell, ZL1CDP
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

30653. Re: TS830s readout

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:18:52 UTC
From: k4ynd
Topic: 14231 Message: 30653

I have been chasing 830s on ebay for the last three or four weeks. I finally picked one up on QTH. I am curious what rig you won, I may have been bidding on it too

73
Don

--- In TS-520_820_530_830@yahoogroups.com, "ke7nbn" <msherry1785@...> wrote:
>
> I bought a TS-830s "Gold" on ebay a few weeks ago. Of course it was
> in perfect condition! Well, when I unpacked it and turned it on the
> readout just stayed on one frequency, about 500 Hz below the band
> the switch was on. The tuner worked ok because I could tune in SSB
> stations. I thought that the DH was the problem, but it was off. I
> spent a day or so listening to the stations but having no idea what
> freq. they were on. All of a sudden the readout started working
> correctly, and has been working now for a couple of weeks.
>
> This evening it started the problem again. Some times it is locked
> on the frequency 500 Hz below the band and then sometimes the
> numbers jump around with no control by the tuner.
>
> I have turned the transceiver off, for fear something might be
> shorting out or something.
>
> I need some help if figuring out what is happening.
>
> Saturday I will be picking up a new Kenwood station complete. I
> bought a TS-530s with antenna tuner, speaker, phone patch, mike and
> 150' of RG-8U. The person I am buying the station from was the
> original purchaser and lost interest in ham radio after about 10
> hours of being on the air. This equipment has been in storage since
> the mid 1980's. I was planning on using the 530 as my backup radio
> and the 830 as my primary. I didn't think I would be needing it so
> soon.
>
> A friend said to be careful powering up the 530 the first time. He
> said the electrolytic capacitors may have dried up over the years.
> He suggested that I get a variac and slowly power up the radio a
> little at a time over a period of one day.
>
> Any suggestions would be appreciated on the 830.
>
> Thanks,
>
> Lee KE7NBN

>

30654. TS 520SE no drive or output on 10 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:25:16 UTC
From: k4ynd
Topic: 30654 Message: 30654

I have a had a TS520SE for over a year now. It works well and puts out 100 watts across the board except 10 meters. nothing on 10. Last week it would not tune on 15. I could only get very low drive on 15. (tuning into a dummy load) I replaced the drive tube. seems much crisper on 40. On 15,I can tune about 100 watts into a dummy load even though the drive seems low.. Still nothing on 10.. I used Doxite on the band switch last night too. Rig looks brand new inside

Any Ideas?

k4YND

30655. Re: TS 520SE lack of drive in the tune position 10m and 15m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-03 23:55:40 UTC
From: k4ynd
Topic: 30437 Message: 30655

That worked on 15. I have full output of 15 into a dummy load. Still dead as a doornail on 10.. The bandswitch looks brand new and is very crisp. I dont think it is the band switch

--- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
>
> My 530SP is the same way. For 10 M I have to tune in the CW position. It
> took me the longest time to figure it out, but sometimes when I put the band
> switch at that indent it does not make good contact. I have learned that
> when 10M just won't tune, wiggle the band selector switch just a little and
> watch the needles jump (still in CW).
>
>
>
> Rick KF7JFU
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of k4ynd
> Sent: Saturday, March 26, 2011 11:56 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] TS 520SE lack of drive in the tune position
> 10m and 15m
>
>
>
>
>
> I have had a TS 520SE for over a year now has always worked great on
> 80,40,20 and 15.. When I got it. I could not get any drive on 10 meters (in
> the tune position.) Today I tried to tune up on a dummy load on 15 in the
> tune position. When I try to adjust the drive knob the needle (ALC position)
> barely shows anything.
>
> Im hoping this points to a very soft drive tube (still tunes on 40)
>
> What do you think
>
> K4YND
>
>
>
>
>
>
> [Non-text portions of this message have been removed]

>

30656. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 00:47:27 UTC
From: KA5TRO
Topic: 30611 Message: 30656

Not touching the coils. Just trying to neutralize the filter caps.

:-)

Tony KA5TRO

----- Original Message -----
From: Bob Macklin
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 5:33 PM
Subject: Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

DON'T TOUCH THE COILS UNLESS YOU HAVE THE PROPER TUNING TOOLS! THAT'S HOW THE SLUGS GET BROKEN!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 3:06 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.

Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mike,
>
> Thanks for your input.
>
> Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.

>
> I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
>
> Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
>
> Thanks.
>
> Tony KA5TRO
>
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> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 7:13 AM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
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> Hello Tony,
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> The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".
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> Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
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> Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
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> I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
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> Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
>
> 73s
> Mike
> W5RKL
>

> --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> >
> > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> >
> > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> >
> > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
> >
> > A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> >
> > Thanks,
> >
> > Tony KA5TRO
> >
> > ----- Original Message -----
> > From: KA5TRO
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, March 30, 2011 9:23 PM
> > Subject: [TS-520_820_530_830] Nice find!
> >
> >
> >
> > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> >
> > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> >
> > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> >
> > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> >

> > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
> >
> > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
> >
> > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> >
> > Thanks for reading.
> >
> > 73
> >
> > Tony KA5TRO
> >
> > [Non-text portions of this message have been removed]
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30657. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 00:47:04 UTC
From: KA5TRO
Topic: 30611 Message: 30657

Mike,

I'll be letting it sit for somewhat more than 10 minutes before I dive into that HV section. :-)

As far as alignment goes -- now that the coupler has failed completely, I'm going to assume that as long as I have the 'flat' parts in alignment, I'm good, right? :-)

I'll have to order the part anyway, so it will be a few days before I take a run at it anyway.

Thanks

Tony KA5TRO

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 5:06 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.

Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
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> Mike,
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> Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
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> From: w5rkl
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30658. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 00:50:06 UTC
From: KA5TRO
Topic: 30611 Message: 30658

Mark,

Yeah, I've seen that. I think that my entire problem is/was related to a cracked (now completely broken) shaft coupler. I'm not entirely sure I want to pull the whole thing apart, though it might not be a bad idea to do so while I'm in there anyway... it could probably stand a good cleaning and a touch of DeoXit.

I think I'll have a better idea after I get into it. I'll order the part from K4EAA and then wait until I receive it before diving into it. I've got another long week this week anyway...

Tony KA5TRO

----- Original Message -----
From: markshawley
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 7:01 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

There is a nice description of the bandswitch rebuild process along with pictures on Ken's site specifically at http://www.k4eaa.com/bandswitch.html (along with lots of other great service info on the site in general). If you're replacing the bandswitch rather than repairing it, the process should be even simpler.

Mark
KJ4NXX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.
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> > > Thanks for reading.
> > >
> > > 73
> > >
> > > Tony KA5TRO
> > >
> > > [Non-text portions of this message have been removed]
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30659. Re: [TS-520_820_530_830] Re: Full ALC deflection when tuning

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 01:41:17 UTC
From: Chris Parnell
Topic: 30518 Message: 30659

Hi Robert,

The issue I am experiencing is that although I can tune for around 100W out, the ALC reading is pegged to the right on 20Mts... (regardless of whether I am in Tune, CW or SSB modes)... tuning for 100W out (more or less) has no effect on this ALC reading.

15 mts... as per above but less ALC reading (just less than fully pegged to right hand side).

Cheers
Chris, ZL1CDP

On 4/04/2011, at 12:20 PM, roberteleazer@... wrote:

> Not getting full ALC deflection on every band, especially the higher bands, is normal.
>
> In fact for the TS-520, I believe that Kenwood has said that no ALC deflection is normal for 10M, although many people report getting substantial ALC transmit indications on that band.
>
> Substantially less output on the higher bands is a common indicator of weak final tubes.
>
> I assume the output you are measuring is CW. The only way to reliably measure SSB output is by feeding the mike input with middle, low and high frequency tones from an audio signal generator to explore the passband of the SSB filter. This is the procedure recommended by INRAD.
>
> Is your ALC deflection steady or does it sag off after the first couple of seconds of transmit? If it does that is an indicator of a weak driver tube.
>
> Finally, of course, you should consider aligning the driver coils.
>
> Regards,
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi everyone.... didn't get any responses to this question... just a quick update
> > The full ALC issue seems to be band dependent too... it completely pegs over on 20mts and on 15mts is a little on the high side but not pegged.
> >
> > Any direction at all?
> >
> >

> > Cheers
> > Chris, ZL1CDP
> >
> > Begin forwarded message:
> >
> > > Hi all,
> > >
> > > I have my 830 working again after some time, but think I may have an issue with tubes... and would like guidance.
> > > The issue is that when I flick to the send button (TX) I get full ALC deflection, regardless of mode, regardless of whether the heater is on or off on the front panel.
> > >
> > > I can tune the rig to around 50W output on 20 meters, but the ALC full deflection is still there.
> > >
> > > Is this an issue with the two 6146 tubes? any ideas?
> > >
> > > Thanks
> > > Chris Parnell, ZL1CDP
> > >
> > >
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> > [Non-text portions of this message have been removed]
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30660. Re: [TS-520_820_530_830] Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 01:49:31 UTC
From: Joseph Stiles
Topic: 30610 Message: 30660

Mike,

Tnx fer the info...I'll get to it on Monday...this problem is driving me nuts. I do highly suspect the CW jack..as it seems to be a rather simple circuit.(one I can understand..at least partially) and appears not much can go wrong... AGN TNX!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 3, 2011 2:40:43 PM
Subject: [TS-520_820_530_830] Re: TS-830S CW problem

Joe,

With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss in speaker), short AF Unit plug 5 pin 2 to chassis ground. Do you hear the side tone? If you do then the "KEY" wire from AF Unit plug 5 pin 2 to the CW key socket is open, the CW key socket has a bad "KEY" terminal connection, or the CW key socket is very dirty.

I have experienced this problem before with my 820. I applied DeoXit D5 to the 1/4" plug shaft, inserted it into the CW socket then rotated the plug several times in both directions. I then tried keying the transceiver in CW mode and I could hear the side tone.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Group,
>
> I need help on the below problem....tnx
>
> 73's joe wb7uqu
>
>
>
>
> ---
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com

> Sent: Sat, April 2, 2011 6:37:44 PM
> Subject: [TS-520_820_530_830] TS-830S CW problem
>
>
> Greeting group, & Happy B-day Gordon
>
> This is a continuance of a prior thread...820S CW problem...that was a typo.
>
> Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
> VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
> transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and
>
> was replaced with an NTE85..still no joy. A known good AF-AVR unit was
> substituted and still same problem. I am currently out of ideas as my trouble
> shooting skills leave a bit to be desired. Any other suggestions?
>
> 73's joe wb7uqu
>
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30661. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 02:25:19 UTC
From: w5rkl
Topic: 30611 Message: 30661

Looking at the 830 with the final amplifier top removed and the 830's front panel facing you, the "flats" on the shaft of the final amplifier switch assembly, S22, must be exactly vertical on the right and exactly horizontal on the bottom of the shaft. I am NOT talking about the "long band switch shaft"! Some folks get confused when talking about "flats" since the long band switch shaft has a flat side. I'm talk ONLY about the shaft of switch S22 inside the final amplifier enclosure. Switch assembly S22 is the ONLY switch assembly inside the final amplifier.

The front panel band switch knob pointer must be pointing exactly at 10. Again, I'm NOT talking about 10 meters, which some folks tend to get confused about, when I say set the band switch knob to "10". There is only "1" band switch position labeled "10" on the front panel and that position is NOT 10 meters!

With these 2 things done exactly as I described and all 4 of the coupler set screws are tightened, the band switch is aligned properly. Any deviation from this will be wrong!

Symptoms you may/can experience if the complete band switch assembly which includes the 6 individual band switch wafers and S22 inside the final amplifier, are

1. Very weak to no IP dip when adjusting the PLATE control during tune up
2. Plate control, at dip, will NOT be pointing at the correct frequency label on the front panel you are attempting to tune the transmitter up on.
3. Plates of both final amplifier tubes can and most likely will, turn RED (a BIG NO-NO!!) when RF is applied to the final tubes.
4. Very little, if any, RF output to a watt meter and/or the RF meter switch setting.
5. High IP current even with very little RF output and very little, if any IP dip.
6. If transmitter is kept keyed and the final tube plates turn RED, the cathode resistors can overheat and be damaged plus the fuse could easily blow.
7. Excessive constant IP current can lead to overheating the RF choke in the final amplifier
8. Undue stress will be placed on the power supplies.

Some or all of the above may/can happen if the band switch assembly is out of alignment. I know from experience, items 1, 2, 3, 4 and 6 can easily happen when RF is applied (CAR control adjusted clockwise) during tune up, especially in CW mode.

Therefore, make sure you fully understand how the flats on the shaft of switch assembly S22 inside the final amplifier enclosure are to be and the band switch knob must point exactly at 10.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mike,

>
> I'll be letting it sit for somewhat more than 10 minutes before I dive into that HV section. :-)
>
> As far as alignment goes -- now that the coupler has failed completely, I'm going to assume that as long as I have the 'flat' parts in alignment, I'm good, right? :-)
>
> I'll have to order the part anyway, so it will be a few days before I take a run at it anyway.
>
> Thanks
>
> Tony KA5TRO
>
> ----- Original Message -----
> From: w5rkl
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 5:06 PM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
>
>
> Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.
>
> Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> >
> > Mike,
> >
> > Thanks for your input.
> >
> > Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.
> >
> > I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
> >
> > Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?

> >
> > Thanks.
> >
> > Tony KA5TRO
> >
> >
> > ----- Original Message -----
> > From: w5rkl
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sunday, April 03, 2011 7:13 AM
> > Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
> >
> >
> >
> > Hello Tony,
> >
> > The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".
> >
> > Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
> >
> > Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
> >
> > I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
> >
> > Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> > >
> > > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> > >

> > > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> > >
> > > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
> > >
> > > A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> > >
> > > Thanks,
> > >
> > > Tony KA5TRO
> > >
> > > ----- Original Message -----
> > > From: KA5TRO
> > > To: TS-520_820_530_830@...m
> > > Sent: Wednesday, March 30, 2011 9:23 PM
> > > Subject: [TS-520_820_530_830] Nice find!
> > >
> > >
> > >
> > > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> > >
> > > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> > >
> > > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> > >
> > > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> > >
> > > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.

> > >
> > > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
> > >
> > > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> > >
> > > Thanks for reading.
> > >
> > > 73
> > >
> > > Tony KA5TRO
> > >
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30662. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 02:29:37 UTC
From: w5rkl
Topic: 30611 Message: 30662

The information shown on Ken's website is for removing the RF Unit. You do NOT have to pull the band switch shaft completely out as shown on Ken's website.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mark,
>
> Yeah, I've seen that. I think that my entire problem is/was related to a cracked (now completely broken) shaft coupler. I'm not entirely sure I want to pull the whole thing apart, though it might not be a bad idea to do so while I'm in there anyway... it could probably stand a good cleaning and a touch of DeoXit.
>
> I think I'll have a better idea after I get into it. I'll order the part from K4EAA and then wait until I receive it before diving into it. I've got another long week this week anyway...
>
> Tony KA5TRO
>
> ----- Original Message -----
> From: markshawley
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 7:01 PM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
>
>
>
>
> There is a nice description of the bandswitch rebuild process along with pictures on Ken's site specifically at http://www.k4eaa.com/bandswitch.html (along with lots of other great service info on the site in general). If you're replacing the bandswitch rather than repairing it, the process should be even simpler.
>
> Mark
> KJ4NXX
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.

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> >
> > 73s
> > Mike
> > W5RKL
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> > > Mike,
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> > > I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
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> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sunday, April 03, 2011 7:13 AM
> > > Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
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> > > >
> > > > Thanks,
> > > >
> > > > Tony KA5TRO
> > > >
> > > > ----- Original Message -----
> > > > From: KA5TRO
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Wednesday, March 30, 2011 9:23 PM

> > > > Subject: [TS-520_820_530_830] Nice find!
> > > >
> > > >
> > > >
> > > > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
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> > > > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> > > >
> > > > Thanks for reading.
> > > >
> > > > 73
> > > >
> > > > Tony KA5TRO
> > > >

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30663. Fixed channel operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 03:17:27 UTC
From: Bryan
Topic: 30663 Message: 30663

I am planning on using the fixed channel operation for my TS 520. I have the formula to figure the frequency for the crystal needed. Reading in the manual I also see that it just plugs in to the fixed board. After it is plugged in you just net the frequency to get it spot on. Is there a specific brand of crystal needed for this. Also where would one get the specific crystal needed. I have never done this before with any other Kenwood Hybrid, so just needing a little bump in the right direction and if there are any specific little tricks that makes it a little bit easier.

Thanks,
Bryan

30664. Finals on the way out TS 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 02:06:25 UTC
From: jswarbrick@xtra.co.nz
Topic: 30664 Message: 30664

Hi,

I have a TS 520s. I've been having a lot of fun and working some good DX as 20m seems to be open currently.

Anyhow I've noticed that on 20m I seem to be able to get a max of 75w out. I'm measuring this with the power meter built into my antenna tuner.

I tune into a dummy load (I built a version of the Dummy load on K4EAA's website and I follow the tune up procedure on Ken's Site also).

What I notice on switching from the dummy load to the antenna tuner / antenna is that I get a peak of approx 100w which drops pretty quickly (3/4 Seconds) to 75w.. I suspect what I'm seeing is a tired Driver tube.

Does that sound likely...????

If so yep I can source replacement Tubes (Ebay etc) but I have no equipment assist in the process to neutralize them. Any thoughts on that would be greatful.

Thanks in advance

John
ZL1JPS

30665. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 02:37:07 UTC
From: KA5TRO
Topic: 30611 Message: 30665

Roger that. I didn't think so. I know I'll have to pull the forward-most 6146B to access the coupler.

10MHz, not 10M. Right. :-)

Will check back in after I give this a run. Thanks again, all.

Tony KA5TRO

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 9:29 PM
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

The information shown on Ken's website is for removing the RF Unit. You do NOT have to pull the band switch shaft completely out as shown on Ken's website.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> Mark,
>
> Yeah, I've seen that. I think that my entire problem is/was related to a cracked (now completely broken) shaft coupler. I'm not entirely sure I want to pull the whole thing apart, though it might not be a bad idea to do so while I'm in there anyway... it could probably stand a good cleaning and a touch of DeoXit.
>
> I think I'll have a better idea after I get into it. I'll order the part from K4EAA and then wait until I receive it before diving into it. I've got another long week this week anyway...
>
> Tony KA5TRO
>
> ----- Original Message -----
> From: markshawley
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, April 03, 2011 7:01 PM
> Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
>
>
>
>
> There is a nice description of the bandswitch rebuild process along with pictures on

Ken's site specifically at http://www.k4eaa.com/bandswitch.html (along with lots of other great service info on the site in general). If you're replacing the bandswitch rather than repairing it, the process should be even simpler.
>
> Mark
> KJ4NXX
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Yes but I would turn the 830 off and let it sit for 10 minutes. After 10 minutes, measure the voltage at the top of the final amplifier RF choke (round white cylinder with wire wrapped around it). The voltage should be very close to, if not, zero! If that's what you see then it's safe to work on the band switch coupler replacement and alignment.
> >
> > Do you understand how to align the band switch assembly? If you have any questions, ask them before you start. You can easily end up with the entire band switch assembly being out of sync. I just went through this exact same problem with a local ham's 530 and he "thought" he knew how to do it but didn't. Again, ask if you have any questions.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> > >
> > > Mike,
> > >
> > > Thanks for your input.
> > >
> > > Closer inspection does reveal that the coupler is, indeed, cracked, and has now failed completely.
> > >
> > > I will go ahead and order a replacement. And I'll have to get a 1.5mm Allen wrench; the smallest I have is 2.0mm.
> > >
> > > Pretty sure I understand how to discharge the filter caps, but to make sure I'm clear: I ground the line that goes to the final tube plate cap, correct?
> > >
> > > Thanks.
> > >
> > > Tony KA5TRO
> > >
> > >
> > > ----- Original Message -----
> > > From: w5rkl
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sunday, April 03, 2011 7:13 AM
> > > Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
> > >

> > >
> > >
> > > Hello Tony,
> > >
> > > The band switch "Detent" is on the final amplifier S22 band switch switch assembly. The other 6 band switch wafers on the RF Unit do not have any "Detents".
> > >
> > > Again, the Detent consist of metal ball bearings on S22 in the final amplifier. The ball bearings are sandwiched between S22 metal frame and a flexible spring membrane. The switch assembly's metal frame has tabs around the frame's circumference. As the switch is rotated the balls roll over and fall between the tabs, hence the "Detent". If the flexible spring membrane is weak or one of the balls has fallen out then the band switch Detent will be affected.
> > >
> > > Most switch detents have 2 balls 180 degrees opposite each other in the switch support frame. You can see the ball bearings on switch S22 in the final amplifier enclosure. Remove the final amplifier top cover then remove V1, front 6146, and look at switch S22 while rotating the band switch. You will see how the balls roll over the tabs on the metal frame of S22 as you rotate the band switch.
> > >
> > > I recommend visually inspecting the coupler very closely while rotating the band switch. Cracks in the coupler may not be readily seen during an initial inspection. Cracks in the couplers typically are caused by over tightening the set screws, applying too much torgue to the set screws. A 1.5mm metric hex tool is required to loosen/tighten the set screws.
> > >
> > > Remove the main power plug from the wall outlet and make sure the filter capacitors are discharged before attempting any work in the 830.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@> wrote:
> > > >
> > > > I have done an intial clean and check of the TS-830S Gold Edition that I found locally.
> > > >
> > > > It was really fairly clean inside. A liberal application of compressed air helped a lot.
> > > >
> > > > Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.
> > > >
> > > > A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it

closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?
> > > >
> > > > Thanks,
> > > >
> > > > Tony KA5TRO
> > > >
> > > > ----- Original Message -----
> > > > From: KA5TRO
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Wednesday, March 30, 2011 9:23 PM
> > > > Subject: [TS-520_820_530_830] Nice find!
> > > >
> > > >
> > > >
> > > > While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).
> > > >
> > > > Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.
> > > >
> > > > So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.
> > > >
> > > > Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.
> > > >
> > > > If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.
> > > >
> > > > Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)
> > > >
> > > > So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I

should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.
> > > >
> > > > Thanks for reading.
> > > >
> > > > 73
> > > >
> > > > Tony KA5TRO
> > > >
> > > > [Non-text portions of this message have been removed]
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30666. Re: [TS-520_820_530_830] Finals on the way out TS 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 05:22:40 UTC
From: Bob Macklin
Topic: 30664 Message: 30666

If the power changes when connected to the antenna you probably have something in the antenna system heating up. The SWR will be changing.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: jswarbrick@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, April 03, 2011 7:06 PM
Subject: [TS-520_820_530_830] Finals on the way out TS 520S

Hi,

I have a TS 520s. I've been having a lot of fun and working some good DX as 20m seems to be open currently.

Anyhow I've noticed that on 20m I seem to be able to get a max of 75w out. I'm measuring this with the power meter built into my antenna tuner.

I tune into a dummy load (I built a version of the Dummy load on K4EAA's website and I follow the tune up procedure on Ken's Site also).

What I notice on switching from the dummy load to the antenna tuner / antenna is that I get a peak of approx 100w which drops pretty quickly (3/4 Seconds) to 75w.. I suspect what I'm seeing is a tired Driver tube.

Does that sound likely...????

If so yep I can source replacement Tubes (Ebay etc) but I have no equipment assist in the process to neutralize them. Any thoughts on that would be greatful.

Thanks in advance

John
ZL1JPS

[Non-text portions of this message have been removed]

30667. RE: [TS-520_820_530_830] Finals on the way out TS 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 07:00:33 UTC
From: John Swarbrick
Topic: 30664 Message: 30667

I thought of this as well. If I connect the dummy load to the tuner in place of the antenna I still get the drop from 100w to 75w after 3-4 seconds...

Cheers

John

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob Macklin
Sent: Monday, 4 April 2011 5:23 p.m.
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Finals on the way out TS 520S

If the power changes when connected to the antenna you probably have something in the antenna system heating up. The SWR will be changing.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: jswarbrick@... <mailto:jswarbrick%40xtra.co.nz>
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, April 03, 2011 7:06 PM
Subject: [TS-520_820_530_830] Finals on the way out TS 520S

Hi,

I have a TS 520s. I've been having a lot of fun and working some good DX as 20m seems to be open currently.

Anyhow I've noticed that on 20m I seem to be able to get a max of 75w out. I'm measuring this with the power meter built into my antenna tuner.

I tune into a dummy load (I built a version of the Dummy load on K4EAA's website and I follow the tune up procedure on Ken's Site also).

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Does that sound likely...????

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Thanks in advance

John
ZL1JPS

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[Non-text portions of this message have been removed]

30668. Re: Finals on the way out TS 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 13:28:41 UTC
From: w5rkl
Topic: 30664 Message: 30668

Hello John,

You said you think your RF output problem is a "tired driver tube". This is a typical quick fix to a problem that could easily not be caused by a tube. Unless troubleshooting results clearly point to a tube as the source of a problem, don't automatically waste time and money replacing tubes. More often then not, RF output problems are not caused by weak tubes. This is not to say RF output problems are never caused by weak or bad tubes. It simple means most RF output problem are not caused by weak/bad tubes, nothing more.

Try this simple and easy test.

1. Connect the 520 to a 50 ohm dummy load that can safely handle 100 watts for at least 30 second to a minute without overheating.

2. Set Mode switch to TUNE

3. Set the CAR control to 11 o'clock

4. Set meter switch to ALC

5. Flip the SEND switch UP (520 in transmit)

6. Adjust the DRIVE control for a peak ALC meter indication. If the meter pegs full scale to the right, rotate the CAR control CCW so the meter pointer points at 12 o'clock and continue adjusting the DRIVE control for a peak meter indicaiton.

7. Leave the 520 keyed and watch the ALC meter for a few seconds.

8. Flip the SEND switch DOWN, places 520 in receive

When performing item 7 above, does the meter start to drop back towards zero? If it does, regardless how slow or fast the meter moves, the driver tube is weak and should be replaced.

Perform the above simple test after the 520 has been warmed up for at least 30 minutes.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jswarbrick@..." <jswarbrick@...> wrote:
>
> Hi,
>
> I have a TS 520s. I've been having a lot of fun and working some good DX as 20m seems to be open currently.
>
> Anyhow I've noticed that on 20m I seem to be able to get a max of 75w out. I'm measuring

this with the power meter built into my antenna tuner.
>
> I tune into a dummy load (I built a version of the Dummy load on K4EAA's website and I follow the tune up procedure on Ken's Site also).
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> What I notice on switching from the dummy load to the antenna tuner / antenna is that I get a peak of approx 100w which drops pretty quickly (3/4 Seconds) to 75w.. I suspect what I'm seeing is a tired Driver tube.
>
> Does that sound likely...????
>
> If so yep I can source replacement Tubes (Ebay etc) but I have no equipment assist in the process to neutralize them. Any thoughts on that would be greatful.
>
> Thanks in advance
>
> John
> ZL1JPS
>

30669. Re: [TS-520_820_530_830] Fixed channel operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 14:07:11 UTC
From: Joseph Stiles
Topic: 30663 Message: 30669

Bryan,

No particular "brand." just has to be the right "CASE." Go to "International Crystal Manufacturing Co.'s " web site, or call them at 800-725-1426. They are very helpful. You should be able to just tell them what kind of rig...Kenwood...TS520..etc... and for what you are using the crystal for. Be prepared to pay about $22.00.

73's joe wb7uqu

From: Bryan <flyfshn76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 3, 2011 8:17:27 PM
Subject: [TS-520_820_530_830] Fixed channel operation

I am planning on using the fixed channel operation for my TS 520. I have the formula to figure the frequency for the crystal needed. Reading in the manual I also see that it just plugs in to the fixed board. After it is plugged in you just net the frequency to get it spot on. Is there a specific brand of crystal needed for this. Also where would one get the specific crystal needed. I have never done this before with any other Kenwood Hybrid, so just needing a little bump in the right direction and if there are any specific little tricks that makes it a little bit easier.

Thanks,
Bryan

[Non-text portions of this message have been removed]

30670. Any comments or suggestions on the low drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 14:14:05 UTC
From: Don D
Topic: 30670 Message: 30670

After adjusting all the coil pack this what i have come up with
1.8 full output 105 watts carrier in the center great
3.5,7.1 10.1,18,21,and 24 output is 90 watts with carrier fully
clockwise
If the carrier control is in the center i get half of that output 40 watts
Ten meters shows no drive at all ,but i can get 50 watts out
playing with the plate and load

Should i try to adjust the carrier?

thank you
Don
ve2ud

30671. Re: [TS-520_820_530_830] Finals on the way out TS 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 14:19:20 UTC
From: Bob Macklin
Topic: 30664 Message: 30671

If the radio does not do this without the tuner then the problem is in the tuner.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: John Swarbrick
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 04, 2011 12:00 AM
Subject: RE: [TS-520_820_530_830] Finals on the way out TS 520S

I thought of this as well. If I connect the dummy load to the tuner in place
of the antenna I still get the drop from 100w to 75w after 3-4 seconds...

Cheers

John

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob Macklin
Sent: Monday, 4 April 2011 5:23 p.m.
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Finals on the way out TS 520S

If the power changes when connected to the antenna you probably have
something in the antenna system heating up. The SWR will be changing.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: jswarbrick@... <mailto:jswarbrick%40xtra.co.nz>
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Sunday, April 03, 2011 7:06 PM
Subject: [TS-520_820_530_830] Finals on the way out TS 520S

Hi,

I have a TS 520s. I've been having a lot of fun and working some good DX as
20m seems to be open currently.

Anyhow I've noticed that on 20m I seem to be able to get a max of 75w out.
I'm measuring this with the power meter built into my antenna tuner.

I tune into a dummy load (I built a version of the Dummy load on K4EAA's website and I follow the tune up procedure on Ken's Site also).

What I notice on switching from the dummy load to the antenna tuner / antenna is that I get a peak of approx 100w which drops pretty quickly (3/4 Seconds) to 75w.. I suspect what I'm seeing is a tired Driver tube.

Does that sound likely...????

If so yep I can source replacement Tubes (Ebay etc) but I have no equipment assist in the process to neutralize them. Any thoughts on that would be greatful.

Thanks in advance

John
ZL1JPS

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30672. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 15:20:41 UTC
From: kb9wwq
Topic: 30611 Message: 30672

I have those same wrenches, but mine all seem to be left-handed.

--- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@...> wrote:
>
> At 05:19 PM 4/3/2011, you wrote:
> >I have a couple of adjustable metric wrenches. One is a 30cm and another is a 25cm. Strangely, they look just like my English versions of the same design--12 inch and 10 inch Crescent wrenches to be exact. Yup, good old metric system coming to America!!
>
> Funny my ADJUSTABLE wrenches don't know the difference between
> the 2. Ain't found anything "either" wont work on.
>

30673. Re: [TS-520_820_530_830] Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 16:06:05 UTC
From: Joseph Stiles
Topic: 30610 Message: 30673

Mike,

Cleaned CW key jack with DEOXIT and blew out with "canned air." No change. Tested as instructed below, no change. I checked the voltage on pin 2-plug 5 with key plug out..."ZERO", with key plug in: -70v. With CW key plug in and pin 2 is shorted to ground, I can hear a "crackle" in the speaker...but no side tone or keying(QSK) The wire on plug 3 is OK.

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 3, 2011 6:49:31 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S CW problem

Mike,

Tnx fer the info...I'll get to it on Monday...this problem is driving me nuts. I do highly suspect the CW jack..as it seems to be a rather simple circuit.(one I can understand..at least partially) and appears not much can go wrong... AGN TNX!

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 3, 2011 2:40:43 PM
Subject: [TS-520_820_530_830] Re: TS-830S CW problem

Joe,

With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss in

speaker), short AF Unit plug 5 pin 2 to chassis ground. Do you hear the side tone? If you do then the "KEY" wire from AF Unit plug 5 pin 2 to the CW key socket is open, the CW key socket has a bad "KEY" terminal connection, or the CW

key socket is very dirty.

I have experienced this problem before with my 820. I applied DeoXit D5 to the 1/4" plug shaft, inserted it into the CW socket then rotated the plug several times in both directions. I then tried keying the transceiver in CW mode and I could hear the side tone.

73s
Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Group,
>
> I need help on the below problem....tnx
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, April 2, 2011 6:37:44 PM
> Subject: [TS-520_820_530_830] TS-830S CW problem
>
>
> Greeting group, & Happy B-day Gordon
>
> This is a continuance of a prior thread...820S CW problem...that was a typo.
>
> Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
> VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
> transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and
>
>
> was replaced with an NTE85..still no joy. A known good AF-AVR unit was
> substituted and still same problem. I am currently out of ideas as my trouble
> shooting skills leave a bit to be desired. Any other suggestions?
>
> 73's joe wb7uqu
>
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>
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>

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30674. Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 16:37:47 UTC
From: w5rkl
Topic: 30610 Message: 30674

If you turn VOX OFF, plug in a CW key, set the MODE switch to CW, flip the SEND switch UP then press the CW key, do you see RF output? If so then the normal CW keying circuit is working properly. Now you need to track down why the CW side tone oscillator is not working. Since VOX appears to be working in sideband, it's not the VOX circuit that's causing the problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> Cleaned CW key jack with DEOXIT and blew out with "canned air." No change.
> Tested as instructed below, no change. I checked the voltage on pin 2-plug 5
> with key plug out..."ZERO", with key plug in: -70v. With CW key plug in and pin
> 2 is shorted to ground, I can hear a "crackle" in the speaker...but no side tone
> or keying(QSK) The wire on plug 3 is OK.
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: Joseph Stiles <stilesjoseph@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 3, 2011 6:49:31 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S CW problem
>
>
> Mike,
>
> Tnx fer the info...I'll get to it on Monday...this problem is driving me
> nuts. I do highly suspect the CW jack..as it seems to be a rather simple
> circuit.(one I can understand..at least partially) and appears not much can go
> wrong... AGN TNX!
>
> 73's joe wb7uqu
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 3, 2011 2:40:43 PM

> Subject: [TS-520_820_530_830] Re: TS-830S CW problem
>
> Joe,
>
> With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss in
>
> speaker), short AF Unit plug 5 pin 2 to chassis ground. Do you hear the side
> tone? If you do then the "KEY" wire from AF Unit plug 5 pin 2 to the CW key
> socket is open, the CW key socket has a bad "KEY" terminal connection, or the CW
>
> key socket is very dirty.
>
> I have experienced this problem before with my 820. I applied DeoXit D5 to the
> 1/4" plug shaft, inserted it into the CW socket then rotated the plug several
> times in both directions. I then tried keying the transceiver in CW mode and I
> could hear the side tone.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Group,
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> > I need help on the below problem....tnx
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> > 73's joe wb7uqu
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> >
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> > _____
> > From: Joseph Stiles <stilesjoseph@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, April 2, 2011 6:37:44 PM
> > Subject: [TS-520_820_530_830] TS-830S CW problem
> >
> >
> > Greeting group, & Happy B-day Gordon
> >
> > This is a continuance of a prior thread...820S CW problem...that was a typo.
> >
> > Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
> > VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
> > transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect and
> >
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> > was replaced with an NTE85..still no joy. A known good AF-AVR unit was

> > substituted and still same problem. I am currently out of ideas as my trouble
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> [Non-text portions of this message have been removed]
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30675. Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 16:42:55 UTC
From: w5rkl
Topic: 30611 Message: 30675

If you watch yourself in a mirror while using the "left handed" wrenches, the wrenches now become "right handed" wrenches!! No need to buy more expensive "right handed" wrenches, simply use a mirror. You have a mirror don't you??? Talk about a "quick fix", that's one you may not have thought of!!!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kb9wwq" <kb9wwq@...> wrote:
>
> I have those same wrenches, but mine all seem to be left-handed.
>
> --- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@> wrote:
> >
> > At 05:19 PM 4/3/2011, you wrote:
> > >I have a couple of adjustable metric wrenches. One is a 30cm and another is a 25cm. Strangely, they look just like my English versions of the same design--12 inch and 10 inch Crescent wrenches to be exact. Yup, good old metric system coming to America!!
> >
> > Funny my ADJUSTABLE wrenches don't know the difference between
> > the 2. Ain't found anything "either" wont work on.
> >
>

30676. Re: TS-830S slightly intermittent RF output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 16:42:23 UTC
From: ww8x_joe
Topic: 30639 Message: 30676

Thanks for the suggestions!!.. I will certainly try cleaning the pot and the switch with deoxit.
73
Joe WW8X

30677. Re: Fixed channel operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 11:43:19 UTC
From: W2FID
Topic: 30663 Message: 30677

HI BRYAN:
I HAVE FOUND "JAN CRYSTALS" TO BE A VERY GOOD SOURCE FOR MY NEEDS OVER THE YEARS. GOOGLE IT, AND GIVE HER A CALL. PRICES ARE FAIR, AND HER CUSTOMER SERVICE IS EXCELLENT.
MARSHALL
W2FID

[Non-text portions of this message have been removed]

30678. Re: [TS-520_820_530_830] Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 18:13:41 UTC
From: Joseph Stiles
Topic: 30610 Message: 30678

Mike,

The answer is: When mode switch to CW...send/rcv...to SEND...and key is depressed..transmitter is keyed with adequate (98W/20M)... output. Just no side tone. Is Q1 on the AF-AVR board the "SIDE TONE OSCILLATOR?" or just a "switch" for the VOX circuit? Do I need to look elsewhere. I am not the best at diagnostics...but I am getting better..thanks to you and the group.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 4, 2011 9:37:47 AM
Subject: [TS-520_820_530_830] Re: TS-830S CW problem

If you turn VOX OFF, plug in a CW key, set the MODE switch to CW, flip the SEND switch UP then press the CW key, do you see RF output? If so then the normal CW keying circuit is working properly. Now you need to track down why the CW side tone oscillator is not working. Since VOX appears to be working in sideband, it's not the VOX circuit that's causing the problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...>
wrote:
>
> Mike,
>
> Cleaned CW key jack with DEOXIT and blew out with "canned air." No change.
>
> Tested as instructed below, no change. I checked the voltage on pin 2-plug 5
> with key plug out..."ZERO", with key plug in: -70v. With CW key plug in and
>pin
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> 2 is shorted to ground, I can hear a "crackle" in the speaker...but no side
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> or keying(QSK) The wire on plug 3 is OK.
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 3, 2011 6:49:31 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S CW problem
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> Tnx fer the info...I'll get to it on Monday...this problem is driving me
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> wrong... AGN TNX!
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> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 3, 2011 2:40:43 PM
> Subject: [TS-520_820_530_830] Re: TS-830S CW problem
>
> Joe,
>
> With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss
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>
>
> speaker), short AF Unit plug 5 pin 2 to chassis ground. Do you hear the side
> tone? If you do then the "KEY" wire from AF Unit plug 5 pin 2 to the CW key
> socket is open, the CW key socket has a bad "KEY" terminal connection, or the
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>
>
> key socket is very dirty.
>
> I have experienced this problem before with my 820. I applied DeoXit D5 to the

> 1/4" plug shaft, inserted it into the CW socket then rotated the plug several
> times in both directions. I then tried keying the transceiver in CW mode and I

> could hear the side tone.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:

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> > I need help on the below problem....tnx
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> > From: Joseph Stiles <stilesjoseph@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, April 2, 2011 6:37:44 PM
> > Subject: [TS-520_820_530_830] TS-830S CW problem
> >
> >
> > Greeting group, & Happy B-day Gordon
> >
> > This is a continuance of a prior thread...820S CW problem...that was a typo.
> >
> > Problem: No keying of transmitter and no "sidetone" on CW with VOX "ON."
> > VOX works correctly when in SSB. When send/rcv switch is used, CW keying of
> > transmitter works...but still no side tone. Q-1 on AF-AVR board was suspect
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> >
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> > was replaced with an NTE85..still no joy. A known good AF-AVR unit was
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30679. Re: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 19:40:56 UTC
From: Geoff Hegarty
Topic: 30611 Message: 30679

They may seem left-handed, but I think you'll find that those wrenches were actually designed for use on the back of the radio.
Geoff

--- On Tue, 5/4/11, kb9wwq <kb9wwq@...> wrote:

From: kb9wwq <kb9wwq@...>
Subject: [TS-520_820_530_830] Re: Update on my TS-830S find: Bandswitch
To: TS-520_820_530_830@yahoogroups.com
Received: Tuesday, 5 April, 2011, 1:20 AM

I have those same wrenches, but mine all seem to be left-handed.

--- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@...> wrote:

>

> At 05:19 PM 4/3/2011, you wrote:

> >I have a couple of adjustable metric wrenches. One is a 30cm and another is a 25cm. Strangely, they look just like my English versions of the same design--12 inch and 10 inch Crescent wrenches to be exact. Yup, good old metric system coming to America!!

>

> Funny my ADJUSTABLE wrenches don't know the difference between

> the 2. Ain't found anything "either" wont work on.

>

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30680. Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 19:47:52 UTC
From: w5rkl
Topic: 30610 Message: 30680

Joe,

Q1 is on the AF board and Q1 is the side tone oscillator. If the side tone oscillator fails for what ever reason, there will be CW side tone resulting in no CW break-in.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike,
>
> The answer is: When mode switch to CW...send/rcv...to SEND...and key is
> depressed..transmitter is keyed with adequate (98W/20M)... output. Just no side
> tone. Is Q1 on the AF-AVR board the "SIDE TONE OSCILLATOR?" or just a "switch"
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>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, April 4, 2011 9:37:47 AM
> Subject: [TS-520_820_530_830] Re: TS-830S CW problem
>
>
> If you turn VOX OFF, plug in a CW key, set the MODE switch to CW, flip the SEND
> switch UP then press the CW key, do you see RF output? If so then the normal CW
> keying circuit is working properly. Now you need to track down why the CW side
> tone oscillator is not working. Since VOX appears to be working in sideband,
> it's not the VOX circuit that's causing the problem.
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> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@>
> wrote:
> >
> > Mike,

> >
> > Cleaned CW key jack with DEOXIT and blew out with "canned air." No change.
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> > Tested as instructed below, no change. I checked the voltage on pin 2-plug 5
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, April 3, 2011 6:49:31 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S CW problem
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> > Mike,
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> > _____
> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, April 3, 2011 2:40:43 PM
> > Subject: [TS-520_820_530_830] Re: TS-830S CW problem
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> > Joe,
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> > With the 830 in CW, VOX turned OFF, volume control turned up a bit (hear hiss
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> > key socket is very dirty.
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> > I have experienced this problem before with my 820. I applied DeoXit D5 to the
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> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sat, April 2, 2011 6:37:44 PM
> > > Subject: [TS-520_820_530_830] TS-830S CW problem
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30681. Re: [TS-520_820_530_830] Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 19:58:42 UTC
From: Joseph Stiles
Topic: 30610 Message: 30681

Mike,

I think I should check the voltage levels as listed for the Q1. Maybe...the "known good" AF-AVR board Q1 was/is bad also....just my luck...Oh well..........gives good experience....I guess.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 4, 2011 12:47:52 PM
Subject: [TS-520_820_530_830] Re: TS-830S CW problem

Joe,

Q1 is on the AF board and Q1 is the side tone oscillator. If the side tone oscillator fails for what ever reason, there will be CW side tone resulting in no CW break-in.

73s
Mike
W5RKL

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> diagnostics...but I am getting better..thanks to you and the group.
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> ---
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, April 4, 2011 9:37:47 AM

> Subject: [TS-520_820_530_830] Re: TS-830S CW problem
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> > with key plug out..."ZERO", with key plug in: -70v. With CW key plug in and

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30682. Re: [TS-520_820_530_830] Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 20:48:13 UTC
From: Joseph Stiles
Topic: 30610 Message: 30682

Mike & group,

Q1 voltage values: No plug in CW jack..power ON, heater-OFF. send/rcv in
RCV: B=0v, C=8.9v, E=1.6mv

"""""" """""
"""" send/rcv in SEND: B=.7mv, C= 8.99v, E=1.0mv

CW key plug in CW jack, send/rcv in RCV:
B=1.2mv, C=8.99v, E= 226mv

"" "" ""
"" " SEND/Key down: B=0v, C=9v, E=18mv

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trying...hihi...................

73's joe wb7uqu

From: Joseph Stiles <stilesjoseph@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 4, 2011 12:58:42 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S CW problem

Mike,

I think I should check the voltage levels as listed for the Q1. Maybe...the
"known good" AF-AVR board Q1 was/is bad also....just my luck...Oh
well..........gives good experience....I guess.

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 4, 2011 12:47:52 PM
Subject: [TS-520_820_530_830] Re: TS-830S CW problem

Joe,

Q1 is on the AF board and Q1 is the side tone oscillator. If the side tone
oscillator fails for what ever reason, there will be CW side tone resulting in
no CW break-in.

73s
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W5RKL

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> To: TS-520_820_530_830@yahoogroups.com
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> Subject: [TS-520_820_530_830] Re: TS-830S CW problem
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30683. Re: TS-830S CW problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-04 22:33:12 UTC
From: w5rkl
Topic: 30610 Message: 30683

The 830 high resolution schematic I have shows AF Unit Q1 voltages as follows:

Base - 3.5VDC
Collector - 6.6VDC
Emitter - 3.6VDC

Those voltages are with nothing plugged into the CW socket and MODE switch set to TUNE.

If replacing Q1 doesn't fix the problem you might check the diodes, there are 3 diodes. Two diodes are 1S1555 and the other is WZ-090. The WZ-090 diode is a 9 volt zener and the 1S1555's are simple silicon diodes.

I seriously doubt the fix capacitors are the source of the problem. C6 is a 10ufd 16VDC electrolytic but I doubt that is the problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Mike & group,
>
> Q1 voltage values: No plug in CW jack..power ON, heater-OFF. send/rcv in
> RCV: B=0v, C=8.9v, E=1.6mv
>
> """""" """""
> """" send/rcv in SEND: B=.7mv, C= 8.99v, E=1.0mv
>
> CW key plug in CW jack, send/rcv in RCV:
> B=1.2mv, C=8.99v, E= 226mv
>
> "" "" ""
> "" " SEND/Key down: B=0v, C=9v, E=18mv
>
> From what I understand from the voltage levels is that...Q1 appears to have
> failed....on what i THOUGHT was a "known good" AF board. Does this appear to be
> correct?, or should I look after this transistor? Please remember...I am not
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30684. Re: [TS-520_820_530_830] Re: Full ALC deflection when tuning

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-05 02:04:33 UTC
From: John Davidson
Topic: 30518 Message: 30684

When my TS520 was new I got barely any ALC movement on 10 M when tuning up but got about 75 W out key down.
Good ALC deflection on all the lower bands, at least 100W output.
 Now nearly 40 years later, on the 2nd set of tubes, I only get about 60W on 10M but still 100w on the lower bands.
Lately I just leave the rig on 80M and my 80M dipole connected due to wear and tear on the band switch. It looks like a real pain to remove and replace all the wiring on that bandswitch ! Gave up After several attempts at cleaning the contacts since that only caused temporary correct operation of the band switch.
73...JD

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 3, 2011 8:20:33 PM
Subject: [TS-520_820_530_830] Re: Full ALC deflection when tuning

Not getting full ALC deflection on every band, especially the higher bands, is normal.

In fact for the TS-520, I believe that Kenwood has said that no ALC deflection is normal for 10M, although many people report getting substantial ALC transmit indications on that band.

Substantially less output on the higher bands is a common indicator of weak final tubes.

I assume the output you are measuring is CW. The only way to reliably measure SSB output is by feeding the mike input with middle, low and high frequency tones from an audio signal generator to explore the passband of the SSB filter. This is the procedure recommended by INRAD.

Is your ALC deflection steady or does it sag off after the first couple of seconds of transmit? If it does that is an indicator of a weak driver tube.

Finally, of course, you should consider aligning the driver coils.

Regards,

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi everyone.... didn't get any responses to this question... just a quick
>update

> The full ALC issue seems to be band dependent too... it completely pegs over on
>20mts and on 15mts is a little on the high side but not pegged.
>
> Any direction at all?
>
>
> Cheers
> Chris, ZL1CDP
>
> Begin forwarded message:
>
> > Hi all,
> >
> > I have my 830 working again after some time, but think I may have an issue
>with tubes... and would like guidance.
> > The issue is that when I flick to the send button (TX) I get full ALC
>deflection, regardless of mode, regardless of whether the heater is on or off on
>the front panel.
> >
> > I can tune the rig to around 50W output on 20 meters, but the ALC full
>deflection is still there.
> >
> > Is this an issue with the two 6146 tubes? any ideas?
> >
> > Thanks
> > Chris Parnell, ZL1CDP
> >
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30685. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-05 22:56:10 UTC
From: AI4WM Bill
Topic: 30611 Message: 30685

Ken Kemski, K4EAA has a detailed article on his site about the band switches.

http://www.k4eaa.com/examples.html

73,

Bill

AI4WM

--- On Sat, 4/2/11, KA5TRO <ka5tro@...> wrote:

From: KA5TRO <ka5tro@...>
Subject: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, April 2, 2011, 10:46 PM

I have done an intial clean and check of the TS-830S Gold Edition that I found locally.

It was really fairly clean inside. A liberal application of compressed air helped a lot.

Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.

A quick load test showed full 100W output on 20M. I didn't test any other band, though, because I have a bandswitch problem -- it's *very* loose in the detents and if you don't have it *just so* the VFO won't be active. I did run it all the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?

Thanks,

Tony KA5TRO

----- Original Message -----

From: KA5TRO

To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, March 30, 2011 9:23 PM

Subject: [TS-520_820_530_830] Nice find!

While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).

Well, I contacted the seller, who had already fielded dozens of calls wanting to low-ball him an offer -- it was his late grandfather's station, and the grandfather had passed away while the man was in the Army. Now that he's out/retired, he's getting rid of all the stuff he inherited, including his Ham station.

So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.

Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.

If the rig checks out well and cleans up as nicely as I expect it to, I'll probably keep it and sell my 530SP, which is in very nice condx, along with the extra VFO and AT.

Grandfather also had a big amp and tuner, and I hope *those* check out as well. Not sure what I'll do with those, yet, as I don't really have the setup to run QRO here, but might hang on to them anyway if I ever do. Might happen in a few years, once the kids are out of school and if I get my druthers and move out into the country somewhat. (I'm not CCR restricted, but I *am* XYL restricted. And I have other hobbies that will do better out away from the city anyway.)

So, for those of you who resurrect these rigs on a regular basis -- any suggestions for what I should or should not do? My thoughts were to blow the majority of the dust and crud out of the rig with compressed air, and then power it up (soft start? I do have a variac) and see what happens. I can do output tests easily enough into a dummy load, check the VFO for operation, check the TX freq with a counter I have. Any other major points I should consider? The gear has been sitting since 2003, so I'm concerned about caps. Am certainly interested in hearing what else I should look for or be concerned about. I bought the lot primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.

Thanks for reading.

73

Tony KA5TRO

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30686. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-05 22:58:46 UTC
From: AI4WM Bill
Topic: 30611 Message: 30686

In hasted I forgot the link to the article....

http://www.k4eaa.com/bandswitch.html

He also has some parts available.

73,

Bill

AI4WM

--- On Tue, 4/5/11, AI4WM Bill <ai4wm@...> wrote:

From: AI4WM Bill <ai4wm@yahoo.com>
Subject: Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 5, 2011, 6:56 PM

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http://www.k4eaa.com/examples.html

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--- On Sat, 4/2/11, KA5TRO <ka5tro@...> wrote:

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bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?

Thanks,

Tony KA5TRO

----- Original Message -----

From: KA5TRO

To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, March 30, 2011 9:23 PM

Subject: [TS-520_820_530_830] Nice find!

While perusing our local craigslist this week, I found an ad for some ham gear for sale. Seller listed a Kenwood TS-830S, a VFO-240 and an AT-230, along with some other goodies (and baddies).

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So, we talked a bit, and he told me to come and take a look. So I did. I guess he liked me shooting straight with him, as I made him an offer on the gear and he sold it to me.

Turned out the 830S is a Gold Edition and looks to be in nice enough condition. Everything looks to be well-used, but not abused, and most of it should clean up nicely. Grandfather was a CW operator, so the only filter in the 830S was a CW filter, so I'll be adding filters, assuming the rig checks out okay. And I've already got a VFO-240 and AT-230, so these will be redundant.

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primarily for this rig (and the big amp and tuner, assuming both work) and the rest is gravy that I think I can sell and make my investment back (without necessarily selling my 530SP). But we'll see.

Thanks for reading.

73

Tony KA5TRO

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30687. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-05 23:57:16 UTC
From: Joseph Stiles
Topic: 30611 Message: 30687

Tony,

I have replaced about 30 or so broken/cracked bandswitch couplers. The switch in the final cage area is pretty robust. I have not seen one that is truly broken. Replacement of the coupler is rather easy...the hard part is getting a long enough allen wrench to get at the screws. Follow K4EAA's instructions...especially about the HIGH VOLTAGE!

Make sure you observe correct alignment of the shafts...there's plenty of coverage in prior messages about this....good luck....

73's joe wb7uqu

From: AI4WM Bill <ai4wm@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 5, 2011 3:56:10 PM
Subject: Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Ken Kemski, K4EAA has a detailed article on his site about the band switches.

http://www.k4eaa.com/examples.html

73,

Bill

AI4WM

--- On Sat, 4/2/11, KA5TRO <ka5tro@...> wrote:

From: KA5TRO <ka5tro@...>
Subject: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, April 2, 2011, 10:46 PM

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It was really fairly clean inside. A liberal application of compressed air helped a lot.

Opened up the HV section and did a visual inspection. Everything looked good. It looks like the gentleman took pretty good care not to overdrive the rig, and tuned it up well.

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the way around and while it does work on all bands it isn't as solid as my -530SP. So, I gather I'll either need a new bandswitch or to repair this one. Is there a way to do this? I haven't looked at it closely yet -- I just finished checking out the rig, and I've been working at stuff all day today and I don't want to go poking around in there just yet. If it's a replacement, I'm okay with that (I guess). If it's repairable, I'm not sure exactly how I should proceed. Suggestions?

Thanks,

Tony KA5TRO

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From: KA5TRO

To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, March 30, 2011 9:23 PM

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Thanks for reading.

73

Tony KA5TRO

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30688. Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 01:08:55 UTC
From: O. W. SMITH
Topic: 30611 Message: 30688

i HAD A BAND SWITCH PROBLEM AND K4EAA TOLD ME GET SOME ELECTRONIC CLEANER AND CANNED AIR LIBERAL FLOOD BAND WITH AND WORK IT BACK AND FORTH ALOT! THEN BLOW IT OUT LET DRY AND HOUR AND TRY IT MY PROBLEM WENT AWAY FOR A YEAR AND RETURNED RIG WAS DEAD DID IT AGAIN AND YEAR LATER STILL WORKING FB IF YOU DO THE DIGITAL FOR THE READ OUT IT WILL HELP ALSO TO BRING BACK THE FREQ READOUT JUST UNPLUG CONNECTIONS AND USE THE CLEANER WORK THEM BACK AND FOR A BIT DRY THEM AND PLUG EM IN WORKS

From: AI4WM Bill <ai4wm@...>
To: TS-520_820_530_830@...m
Sent: Tue, April 5, 2011 3:58:46 PM
Subject: Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

In hasted I forgot the link to the article....

http://www.k4eaa.com/bandswitch.html

He also has some parts available.

73,

Bill

AI4WM

--- On Tue, 4/5/11, AI4WM Bill <ai4wm@yahoo.com> wrote:

From: AI4WM Bill <ai4wm@...>
Subject: Re: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 5, 2011, 6:56 PM

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73,

Bill

AI4WM

--- On Sat, 4/2/11, KA5TRO <ka5tro@...> wrote:

From: KA5TRO <ka5tro@...>

Subject: [TS-520_820_530_830] Update on my TS-830S find: Bandswitch

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Thanks for reading.

73

Tony KA5TRO

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30689. No ALC and No Output on TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 02:45:46 UTC
From: vinnievision
Topic: 30689 Message: 30689

Hello all,

I hope you guys can help with this problem.

I bought a TS-820 that has been lying around idle for some time. Looks pristine and appears not abused with the original outputs. It came with a dirty VFO which I cleaned and the receive is very good. If this is any indication, I have been spraying pots, connectors and switches.

There is no ALC and therefore no output. Yes, the SG switch in the back is "on". No ALC deflection on the meter on tune. I set the mode switch to CW and can "guess" at the settings for 20M and set the drive and plate with the carrier control at 3/4 up to get 10 watts output max. (anybody want a QRP rig?)the IP when I do that is about 90ma. On USB in this mode I can shout in the mike and deflect the meter to 10 watts. I traced the ALC line back to The RF board X44-1150-00 on the RF-3 connector pin 6 (ALC) I measure 2.56 volts. It remains steady no matter where I adjust the drive control, or whether I get 10 watts out or 0. FG pin 9 goes from -110v to -56 volts when I key up on CW, but still no ALC and no output. The bias is good at 60ma. I have also traced the ALC line to the IF board and it is has continuity. I have re-seated the RF board and the relay. Now I'm wondering whether Q5 is gone on the board, but before I go in that direction - wondering what else I'm missing here. Also thinking whether I can connect a battery to pin 6 to drive the ALC below 2 volts and whether that would get some output -- but don't want to blow Q5 if it is still good.

Great looking radio, would love to get it running.

Vinnie
KC2KXV

30690. Re: No ALC and No Output on TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 03:56:13 UTC
From: w5rkl
Topic: 30689 Message: 30690

Hello Vinnie,

Don't start replacing components yet and do not apply a battery voltage to the ALC line! You accomplish absolutely nothing by applying a battery voltage to the ALC line and you could end up creating more problems than you already have.

Transmitter ALC does NOT "increase" power output, it "reduces" power output but ONLY when grid current flows in the final tubes! If you have been told that the higher the ALC indication the higher the power output then you have been mislead.

ALC is produced ONLY when grid current flows in the final tubes. The only time grid current will flow in the final tubes is when the RF sine wave signal from the driver is at a level that causes the final tube grids to swing positive.

There are a couple of things you should check first;

1. Check resistors R5 and R6 on the HV Unit board. Both are 56K 1/2 watt.

2. Check and if necessary, perform the COIL PACK DRIVER adjustments. Procedure is contained in the 820 service manual. Service manual is available for download, free, at www.n6wk.com/kenwood/

3. Clean the band switch wafers

4. Check and clean ALL PC board plugs and pins.

5. Check all PC board mounting screws. Most all of them provide a ground return for the PC board. These areas must be clean and making good connection.

6. Measure the Rectifier Unit DC voltages at the following Rectifier Unit terminals

6A - 800 (this is the final amplifier's high voltage. It should be approximately 900VDC or so in standby (receive) and slightly less in transmit with idling current flowing in the final tubes.

6B - 300A, 300B, 210A, 210B

If you do not have the operator and service manual then I recommend you obtain both of them. You can't service the 820 without the service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "vinnievision" <KC2KXV@...> wrote:
>
> Hello all,
>
> I hope you guys can help with this problem.

>
> I bought a TS-820 that has been lying around idle for some time. Looks pristine and appears not abused with the original outputs. It came with a dirty VFO which I cleaned and the receive is very good. If this is any indication, I have been spraying pots, connectors and switches.
>
> There is no ALC and therefore no output. Yes, the SG switch in the back is "on". No ALC deflection on the meter on tune. I set the mode switch to CW and can "guess" at the settings for 20M and set the drive and plate with the carrier control at 3/4 up to get 10 watts output max. (anybody want a QRP rig?)the IP when I do that is about 90ma. On USB in this mode I can shout in the mike and deflect the meter to 10 watts. I traced the ALC line back to The RF board X44-1150-00 on the RF-3 connector pin 6 (ALC) I measure 2.56 volts. It remains steady no matter where I adjust the drive control, or whether I get 10 watts out or 0. FG pin 9 goes from -110v to -56 volts when I key up on CW, but still no ALC and no output. The bias is good at 60ma. I have also traced the ALC line to the IF board and it is has continuity. I have re-seated the RF board and the relay. Now I'm wondering whether Q5 is gone on the board, but before I go in that direction - wondering what else I'm missing here. Also thinking whether I can connect a battery to pin 6 to drive the ALC below 2 volts and whether that would get some output -- but don't want to blow Q5 if it is still good.
>
> Great looking radio, would love to get it running.
>
> Vinnie
> KC2KXV
>

30691. Re: No ALC and No Output on TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 11:36:41 UTC
From: vinnievision
Topic: 30689 Message: 30691

Mike,

Thanks for this task list. You have come up with a couple of ideas I have not thought of. I have the service manual and will get to work -- it will be a few days until I get back to the shack and will report back. It makes sense that the problem could be a corroded pin connection on one of the boards or mounting screws. This radio has been on the shelf too long

73s
Vinnie
KC2KXV

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Vinnie,
>
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>
> 3. Clean the band switch wafers
>
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>
> 5. Check all PC board mounting screws. Most all of them provide a ground return for the PC board. These areas must be clean and making good connection.
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>
> 6B - 300A, 300B, 210A, 210B
>
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>
> 73s
> Mike
> W5RKL
>
>
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> >
> > Hello all,
> >
> > I hope you guys can help with this problem.
> >
> > I bought a TS-820 that has been lying around idle for some time. Looks pristine and appears not abused with the original outputs. It came with a dirty VFO which I cleaned and the receive is very good. If this is any indication, I have been spraying pots, connectors and switches.
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> >
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> >
> > Vinnie
> > KC2KXV
> >
>

30692. Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 18:39:33 UTC
From: Don D
Topic: 30692 Message: 30692

Disappointment that no members could help me solve the low level of alc
meter reading and what the cause could be
I have also never seen a rig like this 830s.It has the dc power supply
plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the
830m

cheers
ve2ud

30693. Fw: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 20:19:14 UTC
From: jeffrey lord
Topic: 30693 Message: 30693

Don,

I have a TS520s and had a similiar issue , that when tunning-up I could not get a full meter reading to load & plate .

have you checked RF VOLTAGE ?? , or do you not have to do this on the 830?? I am not familiar with the set , or the tunning process.

I found that the RF VOLTAGE was low and on the 520S , this can be adjusted via an access panel on the left side of the rig.

Once i had readjusted this to the recommended 2/3 of the meter sweep, the set works correctly.

cheers,

Jeff

----- Forwarded Message ----
From: Don D <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, 6 April, 2011 10:39:33 AM
Subject: [TS-520_820_530_830] Disappointment that no members could help

Disappointment that no members could help me solve the low level of alc meter reading and what the cause could be
I have also never seen a rig like this 830s.It has the dc power supply plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m

cheers
ve2ud

Yahoo! Groups Links

30694. Fw: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 20:23:20 UTC
From: jeffrey lord
Topic: 30693 Message: 30694

Don ,

Just another thought as well , on E-HAM in the froum , there is a section called ASK ELMER" this is for questions to be naswered , I have had good replys from this group ,.

all you need to do in registar , and ask your question, ..
Jeff

----- Forwarded Message ----
From: Don D <ve2ud@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, 6 April, 2011 10:39:33 AM
Subject: [TS-520_820_530_830] Disappointment that no members could help

Disappointment that no members could help me solve the low level of alc meter reading and what the cause could be
I have also never seen a rig like this 830s.It has the dc power supply plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m

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Yahoo! Groups Links

30695. Re: Fw: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 20:41:45 UTC
From: w5rkl
Topic: 30693 Message: 30695

Jeff and others,

The RF Volt pot setting has no control over the actual RF output level of the transceiver. The RF Volt pot only controls the level of rectified RF being fed to the meter's "RF" switch setting, nothing more. None of the meter scales are used. The only thing to be viewed is the position of the meter pointer when setting the RF VOLT pot, nothing else.

If one looks at the schematic, there are only a few components, couple of fixed resistors (voltage divider), a diode to rectify the RF into a DC voltage, and the pot to vary the DC voltage level applied to the meter switch RF setting.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Don,
>
> I have a TS520s and had a similiar issue , that when tunning-up I could not get
> a full meter reading to load & plate .
>
> have you checked RF VOLTAGE ?? , or do you not have to do this on the 830?? I am
> not familiar with the set , or the tunning process.
>
> I found that the RF VOLTAGE was low and on the 520S , this can be adjusted via
> an access panel on the left side of the rig.
>
> Once i had readjusted this to the recommended 2/3 of the meter sweep, the set
> works correctly.
>
> cheers,
>
> Jeff

30696. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 20:51:48 UTC
From: w5rkl
Topic: 30692 Message: 30696

Don,

Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Disappointment that no members could help me solve the low level of alc
> meter reading and what the cause could be
> I have also never seen a rig like this 830s.It has the dc power supply
> plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
>
> cheers
> ve2ud
>

30697. Re: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 20:56:58 UTC
From: Chris Parnell
Topic: 30692 Message: 30697

Don,

I got no answers to my "FULL SCALE ALC" problem either, but I've solved it now.

Good luck

Chris, ZL1CDP

Sent from my iPhone

On 7/04/2011, at 6:39, Don D <ve2ud@...> wrote:

> Disappointment that no members could help me solve the low level of alc
> meter reading and what the cause could be
> I have also never seen a rig like this 830s.It has the dc power supply
> plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
>
> cheers
> ve2ud
>
>

[Non-text portions of this message have been removed]

30698. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 21:37:17 UTC
From: wrench101
Topic: 30202 Message: 30698

I was checking several boards for any cold solder joints, broken traces, etc. and found a couple that needed addressing. I also noticed that on the IF board, there seems to be a couple of traces that were purposely cut out. Can anyone tell me if this is normal? I can send a picture if you should need one. Thanks. 73 Steve

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Morning Steve,
>
> I just wanted to ensure the bias voltage was switching like it should between receive and transmit and vice verse.
>
> You can check the driver bias voltage at the RF Unit plug 8 pin 1 and ground. In receive the voltage should be approximately -51VDC and in transmit +.4VDC.
>
> Make sure the RF ATT push button on the front panel is not pressed. The receive signals flows through the RF ATTN push button switch. The CAL (Marker) signal does not flow through the RF ATTN switch. The PLL Unit's "MKR" (CAL) signal flows directly to the RF Unit through plug 4 pin 2.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> >
> > Hi again Mike! I beleive I checked the voltages at the driver tube, but I'm going to check again just in case. I beleive everything there was ok. The s-meter works correctly with rf gain adjustment. I'll clean the connectors once I get my first cup of java in me!
> >
> > 73
> > Steve
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Steve,
> > >
> > > Have you taken voltage readings on the driver tube to see if there is any change in voltages between receive and transmit with the new tubes? That's where I would start.
> > >
> > > It's quite possible the relay on the IF Unit may be causing the problem. Clean the plugs on the IF and AF units, one at a time, with contact cleaner, making sure the plugs seat flush on the boards.

> > >
> > > When you rotate the RF gain control CCW, in receive, does the meter rise and eventually peg full scale to the right? This is what it should do. Rotating the RF gain control CW should cause the meter to fall back to zero. Again, that's what it should do.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@> wrote:
> > > >
> > > > Ok, I've removed the key from the cw jack. I set the mode to cw, load at minimum, car between 9 and 10, and switch to send, no alc to peak. Meter switch to ip mode, only reading 60ma idle current. No RF. I know that when I used to hit send, the meter would "bounce up" a bit and return to nil. Now it doesn't do that anymore. I also notice that the receive is acting funny. The marker signal is very weak and sometimes isn't there at all. I remember once the other day when tuning in the marker signal, that it faded out to barely audible with the volume all the way up. The cw sidetone is plenty loud. It's as if there isn't anything there for the finals to work with signal wise.
> > > >
> > > > Thanks again
> > > > 73
> > > > Steve
> > >
> >
>

30699. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 21:54:35 UTC
From: Don D
Topic: 30692 Message: 30699

Hi Mike
well i did as you said re the coil pack and they did need adjusting
i did try the carrier adjustment but it seemed fine
i did try a mic to see how it would work and hardly got any movement on the meter
however when i pushed the proc switch on the power and the reading came up to normal

thank you
73 Don

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Don,
>
> Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?
>
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Disappointment that no members could help me solve the low level of alc
> > meter reading and what the cause could be
> > I have also never seen a rig like this 830s.It has the dc power supply
> > plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
> >
> > cheers
> > ve2ud
> >
>

30700. Re: Fw: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 22:12:48 UTC
From: Don D
Topic: 30693 Message: 30700

Thank you very much Jeff

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Don ,
>
> Just another thought as well , on E-HAM in the froum , there is a section called
> ASK ELMER" this is for questions to be naswered , I have had good replys from
> this group ,.
>
> all you need to do in registar , and ask your question, ..
> Jeff
>
>
>
> ----- Forwarded Message ----
> From: Don D <ve2ud@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, 6 April, 2011 10:39:33 AM
> Subject: [TS-520_820_530_830] Disappointment that no members could help
>
> Disappointment that no members could help me solve the low level of alc
> meter reading and what the cause could be
> I have also never seen a rig like this 830s.It has the dc power supply
> plus the back door for the ds-1a also it has the 12 dc plate on the back and
> it is not the 830m
>
> cheers
> ve2ud
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

30701. Re: Fw: [TS-520_820_530_830] Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 22:15:14 UTC
From: Don D
Topic: 30693 Message: 30701

hi Jeff
yes i think it is ok as it is around 850
will check just in case
thanks
73
Don

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Don,
>
> I have a TS520s and had a similiar issue , that when tunning-up I could not get
> a full meter reading to load & plate .
>
> have you checked RF VOLTAGE ?? , or do you not have to do this on the 830?? I am
> not familiar with the set , or the tunning process.
>
> I found that the RF VOLTAGE was low and on the 520S , this can be adjusted via
> an access panel on the left side of the rig.
>
> Once i had readjusted this to the recommended 2/3 of the meter sweep, the set
> works correctly.
>
> cheers,
>
> Jeff
>
>
>
> ----- Forwarded Message ----
> From: Don D <ve2ud@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, 6 April, 2011 10:39:33 AM
> Subject: [TS-520_820_530_830] Disappointment that no members could help
>
> Disappointment that no members could help me solve the low level of alc
> meter reading and what the cause could be
> I have also never seen a rig like this 830s.It has the dc power supply
> plus the back door for the ds-1a also it has the 12 dc plate on the back and
> it is not the 830m
>
> cheers
> ve2ud
>

>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

30702. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 22:40:32 UTC
From: w5rkl
Topic: 30692 Message: 30702

Don and others,

Not all problems have a "quick fix" such as replacing a tube. There are some problems that require a lot of troubleshooting such as taking voltage measurements, physically inspecting the PC boards and connections. Knowing how to read a schematic/wiring diagram is important to being able to trace a signal through the equipment from beginning to end. Also understanding the basics of how each individual stage works and contributes to the successful operation of the next stage is very important. For example, a failed transmit mixer will result in the transmitter failing on ALL bands but the receiver will work fine. A failed filter select diode on the IF board will affect both transmit AND receive. The same goes for the VFO, if the VFO fails then everything fails.

Most operator and service manuals have a section devoted to circuit description. This section also contains the block diagram. A block diagram can tell a lot about the equipment and how individual stages work together to produce the end product. If one intends on servicing their own equipment, reading the circuit description, studying the block diagram, and learning how to read a schematic and wiring diagram are very important. Also learning basic electronics is also important. Many times I have referred to a book that can teach basic electronics, "Basic Radio Course" by "John T. Frye". This book is no longer in print. That doesn't mean the information contained in the book is out dated. Basic electronics is the same now as it was when John's book was first written in the early 50s. A resistor and capacitors do the same thing today as they did in the 50s. A vacuum tube's ability to amplify a signal does it in the same fashion today as it did in yeas gone bay.

If your intent is to repair your own ham gear then take the time to learn basic electronics, read the equipment manual's circuit description section, ask questions about something you don't understand, and never assume anything! A ham license does not always convey electronic knowledge. I'm no expert, never cared for the word "Expert". There is always something new to learn either through research, by experimenting, or from another person.

73s
Mike

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
>
>
>
>
> Hi Mike
> well i did as you said re the coil pack and they did need adjusting
> i did try the carrier adjustment but it seemed fine
> i did try a mic to see how it would work and hardly got any movement on the meter
> however when i pushed the proc switch on the power and the reading came up to normal
>

> thank you
> 73 Don
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Don,
> >
> > Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?
> >
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > Disappointment that no members could help me solve the low level of alc
> > > meter reading and what the cause could be
> > > I have also never seen a rig like this 830s.It has the dc power supply
> > > plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
> > >
> > > cheers
> > > ve2ud
> > >
> >
>

30703. Re: [TS-520_820_530_830] Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 23:08:31 UTC
From: n6wk@n6wk.com
Topic: 30202 Message: 30703

Yes, Every 530 I have worked on has had some cut traces on the bottom of
the IF board.

Gordon
N6WK

On 4/6/2011 2:37 PM, wrench101 wrote:
>
> I was checking several boards for any cold solder joints, broken
> traces, etc. and found a couple that needed addressing. I also noticed
> that on the IF board, there seems to be a couple of traces that were
> purposely cut out. Can anyone tell me if this is normal? I can send a
> picture if you should need one. Thanks. 73 Steve
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@...> wrote:
> >
> > Morning Steve,
> >
> > I just wanted to ensure the bias voltage was switching like it
> should between receive and transmit and vice verse.
> >
> > You can check the driver bias voltage at the RF Unit plug 8 pin 1
> and ground. In receive the voltage should be approximately -51VDC and
> in transmit +.4VDC.
> >
> > Make sure the RF ATT push button on the front panel is not pressed.
> The receive signals flows through the RF ATTN push button switch. The
> CAL (Marker) signal does not flow through the RF ATTN switch. The PLL
> Unit's "MKR" (CAL) signal flows directly to the RF Unit through plug 4
> pin 2.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "wrench101"
> <wrench101@> wrote:
> > >
> > > Hi again Mike! I beleive I checked the voltages at the driver
> tube, but I'm going to check again just in case. I beleive everything
> there was ok. The s-meter works correctly with rf gain adjustment.
> I'll clean the connectors once I get my first cup of java in me!

> > >
> > > 73
> > > Steve
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Steve,
> > > >
> > > > Have you taken voltage readings on the driver tube to see if
> there is any change in voltages between receive and transmit with the
> new tubes? That's where I would start.
> > > >
> > > > It's quite possible the relay on the IF Unit may be causing the
> problem. Clean the plugs on the IF and AF units, one at a time, with
> contact cleaner, making sure the plugs seat flush on the boards.
> > > >
> > > > When you rotate the RF gain control CCW, in receive, does the
> meter rise and eventually peg full scale to the right? This is what it
> should do. Rotating the RF gain control CW should cause the meter to
> fall back to zero. Again, that's what it should do.
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "wrench101"
> <wrench101@> wrote:
> > > > >
> > > > > Ok, I've removed the key from the cw jack. I set the mode to
> cw, load at minimum, car between 9 and 10, and switch to send, no alc
> to peak. Meter switch to ip mode, only reading 60ma idle current. No
> RF. I know that when I used to hit send, the meter would "bounce up" a
> bit and return to nil. Now it doesn't do that anymore. I also notice
> that the receive is acting funny. The marker signal is very weak and
> sometimes isn't there at all. I remember once the other day when
> tuning in the marker signal, that it faded out to barely audible with
> the volume all the way up. The cw sidetone is plenty loud. It's as if
> there isn't anything there for the finals to work with signal wise.
> > > > >
> > > > > Thanks again
> > > > > 73
> > > > > Steve
> > > >
> > >
> >

>
>

30704. Re: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 23:10:45 UTC
From: n6wk@n6wk.com
Topic: 30692 Message: 30704

Don,
I suggest you clean the Proc switch with De-oxit.
These small switches for the Proc, fixed, etc etc etc are too often
overlooked when cleaning.
They cause many issues just like a lack of ALC or movement on the meter.

Gordon
N6WK

On 4/6/2011 2:54 PM, Don D wrote:
>
>
>
> Hi Mike
> well i did as you said re the coil pack and they did need adjusting
> i did try the carrier adjustment but it seemed fine
> i did try a mic to see how it would work and hardly got any movement
> on the meter
> however when i pushed the proc switch on the power and the reading
> came up to normal
>
> thank you
> 73 Don
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@...> wrote:
> >
> > Don,
> >
> > Other than performing the coil pack adjustment, what other
> troubleshooting and/or alignment steps have you done?
> >
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@> wrote:
> > >
> > > Disappointment that no members could help me solve the low level
> of alc

> > > meter reading and what the cause could be
> > > I have also never seen a rig like this 830s.It has the dc power supply
> > > plus the back door for the ds-1a also it has the 12 dc plate on
> the back and it is not the 830m
> > >
> > > cheers
> > > ve2ud
> > >
> >
>
>

30705. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 23:31:22 UTC
From: Don D
Topic: 30692 Message: 30705

Thank you Gordon

will give it a try

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Don,
> I suggest you clean the Proc switch with De-oxit.
> These small switches for the Proc, fixed, etc etc etc are too often
> overlooked when cleaning.
> They cause many issues just like a lack of ALC or movement on the meter.
>
> Gordon
> N6WK
>
> On 4/6/2011 2:54 PM, Don D wrote:
> >
> >
> >
> > Hi Mike
> > well i did as you said re the coil pack and they did need adjusting
> > i did try the carrier adjustment but it seemed fine
> > i did try a mic to see how it would work and hardly got any movement
> > on the meter
> > however when i pushed the proc switch on the power and the reading
> > came up to normal
> >
> > thank you
> > 73 Don
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > >
> > > Don,
> > >
> > > Other than performing the coil pack adjustment, what other
> > troubleshooting and/or alignment steps have you done?
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >

> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Don D" <ve2ud@> wrote:
> > > >
> > > > Disappointment that no members could help me solve the low level
> > of alc
> > > > meter reading and what the cause could be
> > > > I have also never seen a rig like this 830s.It has the dc power supply
> > > > plus the back door for the ds-1a also it has the 12 dc plate on
> > the back and it is not the 830m
> > > > >
> > > > cheers
> > > > ve2ud
> > > > >
> > > >
> > >
> > >
>

30706. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-06 23:46:35 UTC
From: Don D
Topic: 30692 Message: 30706

Great posting and it's is very true in what you said,but some times i get lazy and looking for a time saver,not fair i guess
I had a set of bad tubes and not matched so would need them anyway
My eye's are not what they use to be so that does not help either
I will make a print out of this post

thank you so much mike
73s
Don

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Don and others,
>
> Not all problems have a "quick fix" such as replacing a tube. There are some problems that require a lot of troubleshooting such as taking voltage measurements, physically inspecting the PC boards and connections. Knowing how to read a schematic/wiring diagram is important to being able to trace a signal through the equipment from beginning to end. Also understanding the basics of how each individual stage works and contributes to the successful operation of the next stage is very important. For example, a failed transmit mixer will result in the transmitter failing on ALL bands but the receiver will work fine. A failed filter select diode on the IF board will affect both transmit AND receive. The same goes for the VFO, if the VFO fails then everything fails.
>
> Most operator and service manuals have a section devoted to circuit description. This section also contains the block diagram. A block diagram can tell a lot about the equipment and how individual stages work together to produce the end product. If one intends on servicing their own equipment, reading the circuit description, studying the block diagram, and learning how to read a schematic and wiring diagram are very important. Also learning basic electronics is also important. Many times I have referred to a book that can teach basic electronics, "Basic Radio Course" by "John T. Frye". This book is no longer in print. That doesn't mean the information contained in the book is out dated. Basic electronics is the same now as it was when John's book was first written in the early 50s. A resistor and capacitors do the same thing today as they did in the 50s. A vacuum tube's ability to amplify a signal does it in the same fashion today as it did in yeas gone bay.
>
> If your intent is to repair your own ham gear then take the time to learn basic electronics, read the equipment manual's circuit description section, ask questions about something you don't understand, and never assume anything! A ham license does not always convey electronic knowledge. I'm no expert, never cared for the word "Expert". There is always something new to learn either through research, by experimenting, or from another person.
>
> 73s
> Mike

>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> >
> >
> >
> >
> > Hi Mike
> > well i did as you said re the coil pack and they did need adjusting
> > i did try the carrier adjustment but it seemed fine
> > i did try a mic to see how it would work and hardly got any movement on the meter
> > however when i pushed the proc switch on the power and the reading came up to normal
> >
> > thank you
> > 73 Don
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Don,
> > >
> > > Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?
> > >
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Disappointment that no members could help me solve the low level of alc
> > > > meter reading and what the cause could be
> > > > I have also never seen a rig like this 830s.It has the dc power supply
> > > > plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
> > > >
> > > > cheers
> > > > ve2ud
> > > >
> > >
> > >
>

30707. TS-830 NOS/ NIB Transformer on auction site

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 03:14:53 UTC
From: pwrapsengineer
Topic: 30707 Message: 30707

In case anyone needs one here is an auction item number to check out:

330550802229

No vested interest. Buy it now price is $75 plus shipping. No bid yet and starting bid is $50. Might help someone out and I can't comment on the price versus value.

Cheers,
Larry, KS7J

30708. Re: A MILESTONE FOR ME WITH TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 03:38:46 UTC
From: yioutta_99
Topic: 30349 Message: 30708

Note: Joe was nice enough to reply to an email about the alignment procedure and give some other tips. For some reason this post didnt seem to get any response so i putting the question out for the group again. I had a hard time finding it myself.

steve

Hi all

After a successful tube change and neutralization, I decided to align the receive per the manual. I went through all the bands and tweeked the Antenna and mixer coils for max meter reading using the cal signal. I could not get the meter to move much if any except for the 20 meter band, that I could bring up a bit, the other bands didnt seem to respond. I did them in order, on the proper freq with the tuning tool. I hope i put the coils back to where they should be. The cal signal was lowest on 28 mhz .

Thanks

Steve

any suggestions?

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> yioutta_99,
>
> If you have replaced ALL the tubes...driver, both final amp tubes, you
> should: 1. do the "basic" alignment steps in the operators manual for the ANT,
> MIX, and DRIVE coils. Also, especially if you have changed the
> finals...neutralize them. Good luck.................
>
> 73's joe wb7uqu
>
>
>
>
>
> _________________________________
> From: yioutta_99 <yioutta_99@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, March 27, 2011 3:02:14 PM
> Subject: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S
>
>
> I just replaced my tubes. In doing this i found out that you can peak the cal
> sig using the drive to preset it for transmit tune. i have always done it by
> ear. i now tried it using the cal. But when i tune up for transmit, I find I

> am not at peak with the drive. Is this a symptom of something needing an
> alignment?
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Folks--The S-meter business is my fault. I was trying to tell him how to
> > maximize the receiver front end sensitivity by ensuring that the driver control
> >
> > was peaked. I was trying to explain to him how to do that using the Xtal
> > Calibrator. That is where he is coming up with the S9 business. I didnt want
> >him
> >
> > tuning into a dummy load when he was having trouble understanding the operating
> >
> > manual instructions for receiver operation. You cant hurt anything peaking the
>
> > driver control in receive mode. Apparently communication and teaching is not
> >my
> >
> > strong suit. I will butt out at this time. He truly needs a local ham to demo
> > for him. Terry K9TW
> >
> >
> >
> > _____
> > From: jeffrey lord <jc_2aussie@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, March 27, 2011 5:42:21 PM
> > Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
> >
> >
> > Allan,
> > You do not have to TURN the S Meter down!!!!
> > This meter in receive only shows the strength of the incoming signal.
> >
> > FOR TRANSMIT YOU MUST TUNE THE SET TO THE BAND!!!!!
> >
> > When TUNNING The SET for TRANSMIT, you do the following:
> > 1. set the BIAS for 60MA (once this is set , this step does not have to be
> > repeated on each tune up)
> > BIAS CONTROL is in the access panel on the left hand side of the set.
> > 2 METER SWITCH to ALC & MODE switch to TUN, ADJUST the DRIVE to give MAX
> > DEFLECTION on METER.
> > 3, MODE SWITCH to IP ADJUST PLATE CONTROL to DIP /LOWEST reading on METER
> > 4. MODE SWITCH to CW ,METER SWITCH TO RF & ADJUST PLATE & LOAD CONTROLS to MAX
> >
> > DEFLECTION on METER
> >
> > This is a quick tune -up for the set & must be done each time you change BAND ,
> >

> > This also tunes the set for best rec in each BAND.
> >
> > TUNNING should be done into a DUMMY LOAD of at least 50watts, If you don't have
> >
> > one , buy or build one they are not expensive to build.
> >
> > Jeff
> > VK4FNRS
> >
> > ----- Original Message ----
> > From: Bob Macklin <macklinbob@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, 27 March, 2011 11:57:23 AM
> > Subject: Re: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
> >
> > First about the S-Meter. It shows the signal and noise. Disconnect the antenna
> >
> > and it should be very low. and the noise in the speaker should be very low.
> > Reconnect the antenna and the noise should increase as well as the reading on
> > the S-Meter.
> >
> > Good received signals will show on the S-Meter above the noise level. But for
> > SSB they will be bouncy.
> >
> > On very strong signals turn down (CCW) the RF Gain control. But when you do
> >this
> >
> >
> > the S-Meter will move CW.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: Alan Nicholson (ADHB)
> > To: 'TS-520_820_530_830@yahoogroups.com'
> > Sent: Sunday, March 27, 2011 12:44 PM
> > Subject: [TS-520_820_530_830] A MILESTONE FOR ME WITH TS-530S
> >
> >
> > Hi Jim,
> >
> > I'm glad I am not the only one confused:-)
> >
> > Just to clarify - I am ONLY using the rig to receive as I am not yet
> >licenced.
> >
> >
> > I believe from information given here and elsewhere that a random length of

> >wire
> >
> >
> > is OK to receive(but not for tx) but I am in the process of making up my first
>
> > Dipole. Poor weather put that on hold this weekend! Also we live in a dip and
> > the reception for cellphones is marginal so I assume that the reception for a
> > random wire antenna probably leaves a lot to be desired.
> >
> > I assumed the S meter would fluctuate with the signal but also thought that
> >it
> >
> >
> > needed to be around the S9 mark and that when it shot off the dial I should
> >tune
> >
> >
> > it back. The problem I have is that although the manual covers each dial and
> > button it does not explain in words I can understand what the actual effect is
>
> > or why it is used. I intend to try and get someone at the local Ham Club to
> >help
> >
> >
> > me here - and also maybe run the rig in their shack so that I can be sure that
>
> > it is operating correctly as it appears to have had a less than sympathetic
> >life
> >
> >
> > - unlike the 520S that I have but have not used yet.
> >
> > As long as members here can put up with my basic questions I am actually
> > learning something and at least my interest is being maintained.
> >
> > 73
> >
> > Alan Nicholson
> >
> > ----- Original Message -----
> > From: Jim S
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thursday, March 24, 2011 2:20 PM
> > Subject: Re: [TS-520_820_530_830] Re: A MILESTONE FOR ME WITH TS-530S
> >
> > Your remarks are confusing me, concerning the RF gain and the "calibration".
>
> > Are you expecting the S-meter to hover at some pre-determined value ? You know,
> >
> > don't you that you turn the RF gain all the way clockwise, and the S-meter

> > should rise and fall with the strength of the signals coming in.
> >
> > If you turn it counter-clockwise, the S-meter probably will go up scale (
> >that
> >
> >
> > is the way most radios work, anyway) and the signals will get weaker and
> > weaker, because you are forcing your radio to act as if a very strong signal is
> >
> > coming in, when in fact there is nothing much there!
> >
> > Also, remember that these types of radios are meant to work with a 50 ohm
> > antenna. That means, a resonant dipole working through 50 ohm coax cable, such
>
> > as RG 8 or 58. If you are trying to feed it with a random piece of wire, it is
>
> > no wonder that you are not getting much performance out of the receiver.
> >
> > If you insist on using a random piece of wire, please get an "antenna tuner"
>
> > which will match the impedance of the random wire (probably very high) to the
> >
> > radio (50 ohms, as stated)
> >
> > Please clarify if that is how you are trying to operate the rig.
> >
> > 73, Jim AG3Y
> >
> >
> >###
> >#
> >
> >
> > Scanned by MailMarshal - Marshal8e6's comprehensive email content security
> > solution.
> >
> > Download a free evaluation of MailMarshal at www.marshal.com
> >
> >###
> >#
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >

> >
> >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

30709. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 15:47:26 UTC
From: w5rkl
Topic: 30692 Message: 30709

Don, I can understand having those moments where a quick fix would be nice. We all have those once in a while.

You mentioned you had a set of bad tubes and that the tubes were not "matched". I can only assume you mean the final tubes, 6146Bs.

Kenwood as well as many other manufacturers didn't install matched 6146 tubes when the transceiver was manufactured. The final amplifier operates in "parallel". There is no benefit using matched tubes. Therefore, I recommend you not waste your money on matched tubes. However, if that's what you want then that's entirely up to you.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
>
>
> Great posting and it's is very true in what you said,but some times i get lazy and looking for a time saver,not fair i guess
> I had a set of bad tubes and not matched so would need them anyway
> My eye's are not what they use to be so that does not help either
> I will make a print out of this post
>
> thank you so much mike
> 73s
> Don
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Don and others,
> >
> > Not all problems have a "quick fix" such as replacing a tube. There are some problems that require a lot of troubleshooting such as taking voltage measurements, physically inspecting the PC boards and connections. Knowing how to read a schematic/wiring diagram is important to being able to trace a signal through the equipment from beginning to end. Also understanding the basics of how each individual stage works and contributes to the successful operation of the next stage is very important. For example, a failed transmit mixer will result in the transmitter failing on ALL bands but the receiver will work fine. A failed filter select diode on the IF board will affect both transmit AND receive. The same goes for the VFO, if the VFO fails then everything fails.
> >
> > Most operator and service manuals have a section devoted to circuit description. This section also contains the block diagram. A block diagram can tell a lot about the equipment

and how individual stages work together to produce the end product. If one intends on servicing their own equipment, reading the circuit description, studying the block diagram, and learning how to read a schematic and wiring diagram are very important. Also learning basic electronics is also important. Many times I have referred to a book that can teach basic electronics, "Basic Radio Course" by "John T. Frye". This book is no longer in print. That doesn't mean the information contained in the book is out dated. Basic electronics is the same now as it was when John's book was first written in the early 50s. A resistor and capacitors do the same thing today as they did in the 50s. A vacuum tube's ability to amplify a signal does it in the same fashion today as it did in yeas gone bay.
> >
> > If your intent is to repair your own ham gear then take the time to learn basic electronics, read the equipment manual's circuit description section, ask questions about something you don't understand, and never assume anything! A ham license does not always convey electronic knowledge. I'm no expert, never cared for the word "Expert". There is always something new to learn either through research, by experimenting, or from another person.
> >
> > 73s
> > Mike
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > >
> > >
> > >
> > >
> > > Hi Mike
> > > well i did as you said re the coil pack and they did need adjusting
> > > i did try the carrier adjustment but it seemed fine
> > > i did try a mic to see how it would work and hardly got any movement on the meter
> > > however when i pushed the proc switch on the power and the reading came up to normal
> > >
> > > thank you
> > > 73 Don
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Don,
> > > >
> > > > Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?
> > > >
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >

> > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > >
> > > > > Disappointment that no members could help me solve the low level of alc
> > > > > meter reading and what the cause could be
> > > > > I have also never seen a rig like this 830s.It has the dc power supply
> > > > > plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
> > > > >
> > > > > cheers
> > > > > ve2ud
> > > > >
> > > >
> > >
> >

30710. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 17:47:24 UTC
From: Don D
Topic: 30692 Message: 30710

Hi Mike
that's very interesting and first time i have heard that
Not saying you are wrong but will keep that in mind the next time i buy some
I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
I am lucky to have two more 830s in mint shape with about 15 hrs total
on one and 25 hrs on the other
Why i kept this one was the fact it had the dc power supply
Getting to be my busy time of the year so i might have to send it out for a check up
thanks again Mike
73s
Don

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Don, I can understand having those moments where a quick fix would be nice. We all have those once in a while.
>
> You mentioned you had a set of bad tubes and that the tubes were not "matched". I can only assume you mean the final tubes, 6146Bs.
>
> Kenwood as well as many other manufacturers didn't install matched 6146 tubes when the transceiver was manufactured. The final amplifier operates in "parallel". There is no benefit using matched tubes. Therefore, I recommend you not waste your money on matched tubes. However, if that's what you want then that's entirely up to you.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> >
> >
> > Great posting and it's is very true in what you said,but some times i get lazy and looking for a time saver,not fair i guess
> > I had a set of bad tubes and not matched so would need them anyway
> > My eye's are not what they use to be so that does not help either
> > I will make a print out of this post
> >
> > thank you so much mike
> > 73s
> > Don
> >

> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Don and others,
> > >
> > > Not all problems have a "quick fix" such as replacing a tube. There are some problems that require a lot of troubleshooting such as taking voltage measurements, physically inspecting the PC boards and connections. Knowing how to read a schematic/wiring diagram is important to being able to trace a signal through the equipment from beginning to end. Also understanding the basics of how each individual stage works and contributes to the successful operation of the next stage is very important. For example, a failed transmit mixer will result in the transmitter failing on ALL bands but the receiver will work fine. A failed filter select diode on the IF board will affect both transmit AND receive. The same goes for the VFO, if the VFO fails then everything fails.
> > >
> > > Most operator and service manuals have a section devoted to circuit description. This section also contains the block diagram. A block diagram can tell a lot about the equipment and how individual stages work together to produce the end product. If one intends on servicing their own equipment, reading the circuit description, studying the block diagram, and learning how to read a schematic and wiring diagram are very important. Also learning basic electronics is also important. Many times I have referred to a book that can teach basic electronics, "Basic Radio Course" by "John T. Frye". This book is no longer in print. That doesn't mean the information contained in the book is out dated. Basic electronics is the same now as it was when John's book was first written in the early 50s. A resistor and capacitors do the same thing today as they did in the 50s. A vacuum tube's ability to amplify a signal does it in the same fashion today as it did in yeas gone bay.
> > >
> > > If your intent is to repair your own ham gear then take the time to learn basic electronics, read the equipment manual's circuit description section, ask questions about something you don't understand, and never assume anything! A ham license does not always convey electronic knowledge. I'm no expert, never cared for the word "Expert". There is always something new to learn either through research, by experimenting, or from another person.
> > >
> > > 73s
> > > Mike
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > Hi Mike
> > > > well i did as you said re the coil pack and they did need adjusting
> > > > i did try the carrier adjustment but it seemed fine
> > > > i did try a mic to see how it would work and hardly got any movement on the meter
> > > > however when i pushed the proc switch on the power and the reading came up to

normal
> > > >
> > > > thank you
> > > > 73 Don
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Don,
> > > > >
> > > > > Other than performing the coil pack adjustment, what other troubleshooting and/or alignment steps have you done?
> > > > >
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > >
> > > > > > Disappointment that no members could help me solve the low level of alc
> > > > > > meter reading and what the cause could be
> > > > > > I have also never seen a rig like this 830s.It has the dc power supply
> > > > > > plus the back door for the ds-1a also it has the 12 dc plate on the back and it is not the 830m
> > > > > >
> > > > > > cheers
> > > > > > ve2ud
> > > > > >
> > > > >
> > > > >
> > > >
> > >
> >

30711. MC 10 Microphone Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 19:00:21 UTC
From: kd8hmo
Topic: 30711 Message: 30711

Can anyone tell me if that goofy looking hand mic (believe its the MC-10) will work on my TS-530S?

30712. Basket Case TS-530S Update

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 19:01:39 UTC
From: kd8hmo
Topic: 30712 Message: 30712

Just got my TS 530S back from Gordon and it looks AWSOME! I still dont believe it is the same radio as before LOL He did a great job! I cant wait to get back on the air and try it out.

30713. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 20:23:47 UTC
From: w5rkl
Topic: 30692 Message: 30713

One question Don. Why did you decide to buy matched final tubes in the first place?

73s
Mike

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Hi Mike
> that's very interesting and first time i have heard that
> Not saying you are wrong but will keep that in mind the next time i buy some
> I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
> I am lucky to have two more 830s in mint shape with about 15 hrs total
> on one and 25 hrs on the other
> Why i kept this one was the fact it had the dc power supply
> Getting to be my busy time of the year so i might have to send it out for a check up
> thanks again Mike
> 73s
> Don

30714. Re:how do I request to be unlisted to recieve this group ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 19:08:25 UTC
From: O. W. SMITH
Topic: 30714 Message: 30714

how do I get off this list its filing up my email nd I don't have time for it all?

[Non-text portions of this message have been removed]

30715. Re: [TS-520_820_530_830] Re:how do I request to be unlisted to recieve this group ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 20:38:16 UTC
From: n6wk@n6wk.com
Topic: 30714 Message: 30715

At the bottom right corner of EVERY email is an UNSUBSCRIBE button

On 4/7/2011 12:08 PM, O. W. SMITH wrote:
>
> how do I get off this list its filing up my email nd I don't have time
> for it
> all?
>
> [Non-text portions of this message have been removed]
>
>

30716. Re: [TS-520_820_530_830] Re:how do I request to be unlisted to recieve this group ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 20:39:36 UTC
From: meyer@bevcomm.net
Topic: 30714 Message: 30716

Lower right hand corner, just click
----- Original Message -----
From: O. W. SMITH
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 07, 2011 2:08 PM
Subject: [TS-520_820_530_830] Re:how do I request to be unlisted to recieve this group ?

how do I get off this list its filing up my email nd I don't have time for it
all?

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30717. Re:how do I request to be unlisted to recieve this group ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 20:43:59 UTC
From: Rick Slater
Topic: 30714 Message: 30717

Sign into your Yahoo groups account
Select 'Manage' My Groups
Configure Message Delivery as needed

[Non-text portions of this message have been removed]

30718. Re: [TS-520_820_530_830] MC 10 Microphone Question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 21:33:40 UTC
From: Lou Blasco
Topic: 30711 Message: 30718

Hi Richard,

There were two similar (goofy) looking microphones made by Kenwood.
One is the MC10 which is a 50Kohm impedance and the other is the MC30
which is low impedance 600 ohm mic. The MC10 is the right one for
you. How can you tell which mic you have? Look on the back of the
mic. The MC10 will have a sticker saying 50kohm and the MC30 will
have a little moulding stamped with 600 ohms.

Lou
VK3ALB

At 05:00 08/04/2011, you wrote:
>Can anyone tell me if that goofy looking hand mic (believe its the
>MC-10) will work on my TS-530S?
>
>
>
>------------------------------------
>
>Yahoo! Groups Links
>
>
>

30719. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 21:44:31 UTC
From: Don D
Topic: 30692 Message: 30719

because the guy had them for sale and stated they were matched and i have heard that they should be matched from another seller,but the manual does not say that they have too be matched
This tube guy i know has said this and when i talk to him the next time i will ask him were he gets that info from or to define it
He has been selling tubes for humppy years but that does not mean he is right
I guess as long as they are tested good they will work
I would think a 6146a and 6146b would still work and they do not have to be from the same company

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> One question Don. Why did you decide to buy matched final tubes in the first place?
>
> 73s
> Mike
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Hi Mike
> > that's very interesting and first time i have heard that
> > Not saying you are wrong but will keep that in mind the next time i buy some
> > I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
> > I am lucky to have two more 830s in mint shape with about 15 hrs total
> > on one and 25 hrs on the other
> > Why i kept this one was the fact it had the dc power supply
> > Getting to be my busy time of the year so i might have to send it out for a check up
> > thanks again Mike
> > 73s
> > Don
>

30720. Re: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 22:21:21 UTC
From: Chris Parnell
Topic: 30692 Message: 30720

Don,

I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x 6146W's (assuming that this is what you mean by "matched" Don.
makes a lot of sense to me.....

Cheers
Chris

On 8/04/2011, at 9:44 AM, Don D wrote:

>
>
> because the guy had them for sale and stated they were matched and i have heard that they should be matched from another seller,but the manual does not say that they have too be matched
> This tube guy i know has said this and when i talk to him the next time i will ask him were he gets that info from or to define it
> He has been selling tubes for humppy years but that does not mean he is right
> I guess as long as they are tested good they will work
> I would think a 6146a and 6146b would still work and they do not have to be from the same company
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >
> > One question Don. Why did you decide to buy matched final tubes in the first place?
> >
> > 73s
> > Mike
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > >
> > > Hi Mike
> > > that's very interesting and first time i have heard that
> > > Not saying you are wrong but will keep that in mind the next time i buy some
> > > I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
> > > I am lucky to have two more 830s in mint shape with about 15 hrs total
> > > on one and 25 hrs on the other
> > > Why i kept this one was the fact it had the dc power supply
> > > Getting to be my busy time of the year so i might have to send it out for a check up
> > > thanks again Mike

> > > 73s
> > > Don
> >
>
>

[Non-text portions of this message have been removed]

30721. RE: [TS-520_820_530_830] Re:how do I request to be unlisted to recieve this group ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-07 23:45:11 UTC
From: Troy Craig
Topic: 30714 Message: 30721

Click on the
<mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe>
Unsubscribe at the bottom of the message.

73's

Tcraig

KC9RRV

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of O. W. SMITH
Sent: Thursday, April 07, 2011 3:08 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re:how do I request to be unlisted to recieve
this group ?

how do I get off this list its filing up my email nd I don't have time for
it
all?

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30722. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 00:02:53 UTC
From: roberteleazer@rocketmail.com
Topic: 30692 Message: 30722

"Matched" tubes does not mean that they are two of the same kind but rather that they are electrically matched to have similar characteristics and outputs. In other words, they sampled a bunch of tubes of the same type and chose two that are similar in characteristics. This is more commonbly done for audio circuits, where distorsion is to be avoided.

It is indeed true that you should use two tubes of the same sub-type, as in S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.

Robert

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Don,
>
> I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x 6146W's (assuming that this is what you mean by "matched" Don.
> makes a lot of sense to me.....
>
> Cheers
> Chris
>
>
>
> On 8/04/2011, at 9:44 AM, Don D wrote:
>
> > >
> > >
> > > because the guy had them for sale and stated they were matched and i have heard that they should be matched from another seller,but the manual does not say that they have too be matched
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> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > One question Don. Why did you decide to buy matched final tubes in the first place?
> > > >
> > > > 73s
> > > > Mike
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> > > >

> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Hi Mike
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> > > > Getting to be my busy time of the year so i might have to send it out for a check up
> > > > thanks again Mike
> > > > 73s
> > > > Don
> > > >
> > >
> > >
>
>
>
> [Non-text portions of this message have been removed]
>

30723. Re: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 00:32:29 UTC
From: kurt@kuhlroad.net
Topic: 30692 Message: 30723

Actually, the best application for matched tubes is in a push-pull amp.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: "roberteleazer@..." <roberteleazer@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 08 Apr 2011 00:02:53
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Disappointment that no members could help

"Matched" tubes does not mean that they are two of the same kind but rather that they are electrically matched to have similar characteristics and outputs. In other words, they sampled a bunch of tubes of the same type and chose two that are similar in characteristics. This is more commonbly done for audio circuits, where distorsion is to be avoided.

It is indeed true that you should use two tubes of the same sub-type, as in S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.

Robert

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Don,
>
> I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x 6146W's (assuming that this is what you mean by "matched" Don.
> makes a lot of sense to me.....
>
> Cheers
> Chris
>
>
>
> On 8/04/2011, at 9:44 AM, Don D wrote:
>
> > >
> > >
> > because the guy had them for sale and stated they were matched and i have heard that they should be matched from another seller,but the manual does not say that they have too be matched
> > This tube guy i know has said this and when i talk to him the next time i will ask him were he gets that info from or to define it
> > He has been selling tubes for humppy years but that does not mean he is right

> > I guess as long as they are tested good they will work
> > I would think a 6146a and 6146b would still work and they do not have to be from the same company
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > One question Don. Why did you decide to buy matched final tubes in the first place?
> > >
> > > 73s
> > > Mike
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Hi Mike
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> > > > I am lucky to have two more 830s in mint shape with about 15 hrs total
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> > > > Why i kept this one was the fact it had the dc power supply
> > > > Getting to be my busy time of the year so i might have to send it out for a check up
> > > > thanks again Mike
> > > > 73s
> > > > Don
> > >
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>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

30724. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 01:26:36 UTC
From: w5rkl
Topic: 30692 Message: 30724

The final amplifier's in the hybrids, along with many other transceivers with tube amplifiers such as Heathkit, Collins, Yaesu, and Swan to name a few, are not "Push-Pull".

--- In TS-520_820_530_830@yahoogroups.com, kurt@... wrote:
>
> Actually, the best application for matched tubes is in a push-pull amp.
> Sent from my Verizon Wireless BlackBerry

30725. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 01:54:52 UTC
From: Don D
Topic: 30692 Message: 30725

I agree
Don

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> "Matched" tubes does not mean that they are two of the same kind but rather that they are electrically matched to have similar characteristics and outputs. In other words, they sampled a bunch of tubes of the same type and chose two that are similar in characteristics. This is more commonbly done for audio circuits, where distorsion is to be avoided.
>
> It is indeed true that you should use two tubes of the same sub-type, as in S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.
>
> Robert
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> >
> > Don,
> >
> > I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x 6146W's (assuming that this is what you mean by "matched" Don.
> > makes a lot of sense to me.....
> >
> > Cheers
> > Chris
> >
> >
> >
> > On 8/04/2011, at 9:44 AM, Don D wrote:
> >
> > >
> > >
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> > > I would think a 6146a and 6146b would still work and they do not have to be from the same company
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> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >

> > > > One question Don. Why did you decide to buy matched final tubes in the first place?
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> > > > 73s
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> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > >
> > > > > Hi Mike
> > > > > that's very interesting and first time i have heard that
> > > > > Not saying you are wrong but will keep that in mind the next time i buy some
> > > > > I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
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> > > > > thanks again Mike
> > > > > 73s
> > > > > Don
> > > >
> > >
> > >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30726. Re: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 03:03:06 UTC
From: Jim S
Topic: 30692 Message: 30726

No, "matched pairs" means you apply a certain amount of Plate and Screen voltage, and Grid Bias, and each tube's current draw will be very close to the same with the control voltages being identical for each tube.

The reason matched tubes are quite important in Push-Pull circuits is that one tube amplifies the positive swing of the input voltage, and the other one handles the negative swing.

Actually, both tubes are working with a certain amount of negative voltage being appied to the grid of the respective tube, and positive voltages to the plate and screen, but the inputs and thus the outputs are handled in such a way that the entire waveform of the input signal is amplified. But just the part that appears at the input to the circuit going negative is handled by one of the tubes, and the part that appears at the input to the circuit as going positive is handled by the other tube.

It's done by transformers in audio work, and usually by phase splitters or specialized RF transformers in RF applications.

----- Original Message -----
From: "Chris Parnell" <cparnell1001@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 07, 2011 6:21 PM
Subject: Re: [TS-520_820_530_830] Re: Disappointment that no members could help

> Don,
>
> I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x
> 6146W's (assuming that this is what you mean by "matched" Don.
> makes a lot of sense to me.....
>
> Cheers
> Chris
>
>
>
> On 8/04/2011, at 9:44 AM, Don D wrote:
>
>>
>>
>> because the guy had them for sale and stated they were matched and i have
>> heard that they should be matched from another seller,but the manual does
>> not say that they have too be matched
>> This tube guy i know has said this and when i talk to him the next time i

>> will ask him were he gets that info from or to define it
>> He has been selling tubes for humppy years but that does not mean he is
>> right
>> I guess as long as they are tested good they will work
>> I would think a 6146a and 6146b would still work and they do not have to
>> be from the same company
>>
>> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>> >
>> > One question Don. Why did you decide to buy matched final tubes in the
>> > first place?
>> >
>> > 73s
>> > Mike
>> >
>> >
>> >
>> >
>> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
>> > >
>> > > Hi Mike
>> > > that's very interesting and first time i have heard that
>> > > Not saying you are wrong but will keep that in mind the next time i
>> > > buy some
>> > > I was lucky to get a set of matched tubes plus the driver at a ham
>> > > fest for$50,so i grabbed them as they were new or old stock
>> > > I am lucky to have two more 830s in mint shape with about 15 hrs
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>> > > on one and 25 hrs on the other
>> > > Why i kept this one was the fact it had the dc power supply
>> > > Getting to be my busy time of the year so i might have to send it out
>> > > for a check up
>> > > thanks again Mike
>> > > 73s
>> > > Don
>> >
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>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
> http://www.pctools.com/
> =======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
http://www.pctools.com/
=======

30727. Re: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 03:29:52 UTC
From: Chris Parnell
Topic: 30692 Message: 30727

Sorry guys... was in meetings this afternoon...

Just to clarify one thing...

I didn't assume that "matched tubes" means matched sub-type tubes (as in 6146, 6146B etc)... I was saying that IF that is what Don meant, then there would be no reason not to buy a matched sub set... I should have been clearer in my reply.

Cheers
Chris

On 8/04/2011, at 3:03 PM, Jim S wrote:

> No, "matched pairs" means you apply a certain amount of Plate and Screen
> voltage, and Grid Bias, and each tube's current draw will be very close to
> the same with the control voltages being identical for each tube.
>
> The reason matched tubes are quite important in Push-Pull circuits is that
> one tube amplifies the positive swing of the input voltage, and the other
> one handles the negative swing.
>
> Actually, both tubes are working with a certain amount of negative voltage
> being appied to the grid of the respective tube, and positive voltages to
> the plate and screen, but the inputs and thus the outputs are handled in
> such a way that the entire waveform of the input signal is amplified. But
> just the part that appears at the input to the circuit going negative is
> handled by one of the tubes, and the part that appears at the input to the
> circuit as going positive is handled by the other tube.
>
> It's done by transformers in audio work, and usually by phase splitters or
> specialized RF transformers in RF applications.
>
> ----- Original Message -----
> From: "Chris Parnell" <cparnell1001@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Thursday, April 07, 2011 6:21 PM
> Subject: Re: [TS-520_820_530_830] Re: Disappointment that no members could
> help
>
> > Don,
> >
> > I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x
> > 6146W's (assuming that this is what you mean by "matched" Don.
> > makes a lot of sense to me.....
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> > Cheers
> > Chris
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> >
> > On 8/04/2011, at 9:44 AM, Don D wrote:
> >
> >>
> >>
> >> because the guy had them for sale and stated they were matched and i have
> >> heard that they should be matched from another seller,but the manual does
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> >> will ask him were he gets that info from or to define it
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> >> I would think a 6146a and 6146b would still work and they do not have to
> >> be from the same company
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> >> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >> >
> >> > One question Don. Why did you decide to buy matched final tubes in the
> >> > first place?
> >> >
> >> > 73s
> >> > Mike
> >> >
> >> >
> >> >
> >> >
> >> > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >> > >
> >> > > Hi Mike
> >> > > that's very interesting and first time i have heard that
> >> > > Not saying you are wrong but will keep that in mind the next time i
> >> > > buy some
> >> > > I was lucky to get a set of matched tubes plus the driver at a ham
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> >> > > I am lucky to have two more 830s in mint shape with about 15 hrs
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> >> > > Why i kept this one was the fact it had the dc power supply
> >> > > Getting to be my busy time of the year so i might have to send it out
> >> > > for a check up
> >> > > thanks again Mike
> >> > > 73s
> >> > > Don
> >> >
> >>

> >>
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> >
> > [Non-text portions of this message have been removed]
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> > Yahoo! Groups Links
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> > =======
> > Email scanned by PC Tools - No viruses or spyware found.
> > (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
> > http://www.pctools.com/
> > =======
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> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
> http://www.pctools.com/
> =======
>

[Non-text portions of this message have been removed]

30728. Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 10:54:18 UTC
From: Don D
Topic: 30692 Message: 30728

On the subject of matched pair
could also mean both tubes from the same company
Guess it would be ok if you were stuck and mixed them,but i have always tried to keep them from the same maker
Also what would happen if you put one 6146a and one 6146b or w together? as a pr if that's all you had on hand

ah summer time is coming,cottage time and antenna time,beer time
73s all
Don
ve2ud ve2dzo

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> I agree
> Don
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > "Matched" tubes does not mean that they are two of the same kind but rather that they are electrically matched to have similar characteristics and outputs. In other words, they sampled a bunch of tubes of the same type and chose two that are similar in characteristics. This is more commonbly done for audio circuits, where distorsion is to be avoided.
> >
> > It is indeed true that you should use two tubes of the same sub-type, as in S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.
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> > Robert
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> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > >
> > > Don,
> > >
> > > I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x 6146W's (assuming that this is what you mean by "matched" Don.
> > > makes a lot of sense to me.....
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > >
> > > On 8/04/2011, at 9:44 AM, Don D wrote:
> > >

> > > >
> > > >
> > > > because the guy had them for sale and stated they were matched and i have heard that they should be matched from another seller,but the manual does not say that they have too be matched
> > > > This tube guy i know has said this and when i talk to him the next time i will ask him were he gets that info from or to define it
> > > > He has been selling tubes for humppy years but that does not mean he is right
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> > > > I would think a 6146a and 6146b would still work and they do not have to be from the same company
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > One question Don. Why did you decide to buy matched final tubes in the first place?
> > > > >
> > > > > 73s
> > > > > Mike
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> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > >
> > > > > > Hi Mike
> > > > > > that's very interesting and first time i have heard that
> > > > > > Not saying you are wrong but will keep that in mind the next time i buy some
> > > > > > I was lucky to get a set of matched tubes plus the driver at a ham fest for$50,so i grabbed them as they were new or old stock
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> > > > > > Getting to be my busy time of the year so i might have to send it out for a check up
> > > > > > thanks again Mike
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> > > > > > Don
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> > > > [Non-text portions of this message have been removed]
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> > >
>

30729. Fw: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 12:35:10 UTC
From: jeffrey lord
Topic: 30729 Message: 30729

DON,

It's Autum down here, but always antenna & beer time..

HAVEAGOODWEEKEND,

Jeff
VK4FNRS

----- Forwarded Message ----
From: Don D <ve2ud@yahoo.ca>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, 8 April, 2011 2:54:18 AM
Subject: [TS-520_820_530_830] Re: Disappointment that no members could help

On the subject of matched pair
could also mean both tubes from the same company
Guess it would be ok if you were stuck and mixed them,but i have always tried to
keep them from the same maker
Also what would happen if you put one 6146a and one 6146b or w together? as a pr
if that's all you had on hand

ah summer time is coming,cottage time and antenna time,beer time
73s all
Don
ve2ud ve2dzo

--- In TS-520_820_530_830@...m, "Don D" <ve2ud@...> wrote:
>
> I agree
> Don
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
>wrote:
> >
> > "Matched" tubes does not mean that they are two of the same kind but rather
>that they are electrically matched to have similar characteristics and outputs.
>In other words, they sampled a bunch of tubes of the same type and chose two
>that are similar in characteristics. This is more commonbly done for audio
>circuits, where distorsion is to be avoided.
> >
> > It is indeed true that you should use two tubes of the same sub-type, as in
>S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.
> >
> > Robert

> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>wrote:
> > >
> > > Don,
> > >
> > > I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x
>6146W's (assuming that this is what you mean by "matched" Don.
> > > makes a lot of sense to me.....
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > >
> > > On 8/04/2011, at 9:44 AM, Don D wrote:
> > >
> > > >
> > > >
> > > > because the guy had them for sale and stated they were matched and i have
>heard that they should be matched from another seller,but the manual does not
>say that they have too be matched
> > > > This tube guy i know has said this and when i talk to him the next time i
>will ask him were he gets that info from or to define it
> > > > He has been selling tubes for humppy years but that does not mean he is
>right
> > > > I guess as long as they are tested good they will work
> > > > I would think a 6146a and 6146b would still work and they do not have to
>be from the same company
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > One question Don. Why did you decide to buy matched final tubes in the
>first place?
> > > > >
> > > > > 73s
> > > > > Mike
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > >
> > > > > > Hi Mike
> > > > > > that's very interesting and first time i have heard that
> > > > > > Not saying you are wrong but will keep that in mind the next time i
>buy some
> > > > > > I was lucky to get a set of matched tubes plus the driver at a ham
>fest for$50,so i grabbed them as they were new or old stock
> > > > > > I am lucky to have two more 830s in mint shape with about 15 hrs

>total
> > > > > > on one and 25 hrs on the other
> > > > > > Why i kept this one was the fact it had the dc power supply
> > > > > > Getting to be my busy time of the year so i might have to send it out
>for a check up
> > > > > > thanks again Mike
> > > > > > 73s
> > > > > > Don
> > > > > >
> > > > >
> > > > >
> > > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

Yahoo! Groups Links

30730. Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 16:35:20 UTC
From: ae5uu
Topic: 30730 Message: 30730

Good morning,

I am recapping the IF Board in my TS-820. In the parts list, C-75 is listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z

What I just took out of there, as I cleared off all the electrolytics, is a 1uf 50wv electrolyic.

To add confusion, the board is clearly marked with polarity for C-75, which lends strength to the electrolytic being correct, not withstanding what the parts list says.

Does anyone have any thoughts on this?

73,

Russell
AE5UU

30731. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 16:51:52 UTC
From: n6wk@n6wk.com
Topic: 30730 Message: 30731

Russell,
My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
electrolytic that is .001uf @ 50wvdc
If you look in the parts section listing, they show (2) C75's
one is an 1PF Electrolytic part number CE04W1H010(RL)
The other C75 is a ceramic disc that is .01uf +80% -20%

On 4/8/2011 9:35 AM, ae5uu wrote:
>
> Good morning,
>
> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
>
> What I just took out of there, as I cleared off all the electrolytics,
> is a 1uf 50wv electrolyic.
>
> To add confusion, the board is clearly marked with polarity for C-75,
> which lends strength to the electrolytic being correct, not
> withstanding what the parts list says.
>
> Does anyone have any thoughts on this?
>
> 73,
>
> Russell
> AE5UU
>
>

30732. TS 520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 16:49:00 UTC
From: dhshreve
Topic: 6634 Message: 30732

I am searching for a nice clean, working TS 520 D, S, or SE transceiver. Please contact me if you know of one being available.

30733. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 17:40:15 UTC
From: Jim S
Topic: 30730 Message: 30733

I seriously doubt that they even manufacture an electrolytic with that low a capacitance !
One MICROfarad, now I could almost believe that !

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, April 08, 2011 12:51 PM
Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

> Russell,
> My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
> electrolytic that is .001uf @ 50wvdc
> If you look in the parts section listing, they show (2) C75's
> one is an 1PF Electrolytic part number CE04W1H010(RL)
> The other C75 is a ceramic disc that is .01uf +80% -20%
>
>
> On 4/8/2011 9:35 AM, ae5uu wrote:
>>
>> Good morning,
>>
>> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
>> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
>>
>> What I just took out of there, as I cleared off all the electrolytics,
>> is a 1uf 50wv electrolyic.
>>
>> To add confusion, the board is clearly marked with polarity for C-75,
>> which lends strength to the electrolytic being correct, not
>> withstanding what the parts list says.
>>
>> Does anyone have any thoughts on this?
>>
>> 73,
>>
>> Russell
>> AE5UU
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> Yahoo! Groups Links

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> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
http://www.pctools.com/
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30734. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:02:07 UTC
From: Dennis Windle
Topic: 30730 Message: 30734

Looking at an IF board both C73 & C75 are physically 1UF 50WV Electrolytic's. I believe in the parts list the 1PF listed for C75 is a typo for 1uf as 1pf would actually be .000001uf (1X10 -12) or .001 Nano Farad (1X10-9) if I remember right. The part # listed for both C73 & C75 are the same except for the (RL) at the end of the part # and I am not sure what that means ??

KD8OXQ

----- Original Message -----
From: "Jim S" <jimstan@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, April 08, 2011 1:40 PM
Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

> I seriously doubt that they even manufacture an electrolytic with that low
a
> capacitance !
> One MICROfarad, now I could almost believe that !
>
> ----- Original Message -----
> From: <n6wk@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 08, 2011 12:51 PM
> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>
>
> > Russell,
> > My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
> > electrolytic that is .001uf @ 50wvdc
> > If you look in the parts section listing, they show (2) C75's
> > one is an 1PF Electrolytic part number CE04W1H010(RL)
> > The other C75 is a ceramic disc that is .01uf +80% -20%
> >
> >
> > On 4/8/2011 9:35 AM, ae5uu wrote:
> >>
> >> Good morning,
> >>
> >> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
> >> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
> >>
> >> What I just took out of there, as I cleared off all the electrolytics,
> >> is a 1uf 50wv electrolyic.
> >>
> >> To add confusion, the board is clearly marked with polarity for C-75,

> >> which lends strength to the electrolytic being correct, not
> >> withstanding what the parts list says.
> >>
> >> Does anyone have any thoughts on this?
> >>
> >> 73,
> >>
> >> Russell
> >> AE5UU
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> > Email scanned by PC Tools - No viruses or spyware found.
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> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17260)
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30735. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:11:39 UTC
From: n6wk@n6wk.com
Topic: 30730 Message: 30735

Jim,
I am Just stating what the Service Manual shows

Gordon
N6WK

On 4/8/2011 10:40 AM, Jim S wrote:
> I seriously doubt that they even manufacture an electrolytic with that low a
> capacitance !
> One MICROfarad, now I could almost believe that !
>
> ----- Original Message -----
> From:<n6wk@...>
> To:<TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 08, 2011 12:51 PM
> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>
>
>> Russell,
>> My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
>> electrolytic that is .001uf @ 50wvdc
>> If you look in the parts section listing, they show (2) C75's
>> one is an 1PF Electrolytic part number CE04W1H010(RL)
>> The other C75 is a ceramic disc that is .01uf +80% -20%
>>
>>
>> On 4/8/2011 9:35 AM, ae5uu wrote:
>>> Good morning,
>>>
>>> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
>>> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
>>>
>>> What I just took out of there, as I cleared off all the electrolytics,
>>> is a 1uf 50wv electrolyic.
>>>
>>> To add confusion, the board is clearly marked with polarity for C-75,
>>> which lends strength to the electrolytic being correct, not
>>> withstanding what the parts list says.
>>>
>>> Does anyone have any thoughts on this?
>>>
>>> 73,
>>>
>>> Russell
>>> AE5UU

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30736. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:14:32 UTC
From: n6wk@n6wk.com
Topic: 30730 Message: 30736

You are correct Dennis.
1pf is .000001Uf my error
I agree, the Service manual is in error, but there are many errors in
the 820 Service manual that I and Ken, K4eaa, have discovered.

Best 73,
Gordon
N6WK

On 4/8/2011 11:02 AM, Dennis Windle wrote:
> Looking at an IF board both C73& C75 are physically 1UF 50WV
> Electrolytic's. I believe in the parts list the 1PF listed for C75 is a typo
> for 1uf as 1pf would actually be .000001uf (1X10 -12) or .001 Nano Farad
> (1X10-9) if I remember right. The part # listed for both C73& C75 are the
> same except for the (RL) at the end of the part # and I am not sure what
> that means ??
>
> KD8OXQ
>
> ----- Original Message -----
> From: "Jim S"<jimstan@...>
> To:<TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 08, 2011 1:40 PM
> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>
>
>> I seriously doubt that they even manufacture an electrolytic with that low
> a
>> capacitance !
>> One MICROfarad, now I could almost believe that !
>>
>> ----- Original Message -----
>> From:<n6wk@...>
>> To:<TS-520_820_530_830@yahoogroups.com>
>> Sent: Friday, April 08, 2011 12:51 PM
>> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>>
>>
>>> Russell,
>>> My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
>>> electrolytic that is .001uf @ 50wvdc
>>> If you look in the parts section listing, they show (2) C75's
>>> one is an 1PF Electrolytic part number CE04W1H010(RL)
>>> The other C75 is a ceramic disc that is .01uf +80% -20%
>>>

>>>
>>> On 4/8/2011 9:35 AM, ae5uu wrote:
>>>> Good morning,
>>>>
>>>> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
>>>> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
>>>>
>>>> What I just took out of there, as I cleared off all the electrolytics,
>>>> is a 1uf 50wv electrolyic.
>>>>
>>>> To add confusion, the board is clearly marked with polarity for C-75,
>>>> which lends strength to the electrolytic being correct, not
>>>> withstanding what the parts list says.
>>>>
>>>> Does anyone have any thoughts on this?
>>>>
>>>> 73,
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>>>> Russell
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30737. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:24:57 UTC
From: Dennis Windle
Topic: 30730 Message: 30737

Forgot to mention that the second C75 listed in the parts list should
actually say C76 which is a .01 Disc by the base of Q17 so it is also
another typo.

KD8OXQ

----- Original Message -----
From: "Dennis Windle" <denniswindle@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, April 08, 2011 2:02 PM
Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

> Looking at an IF board both C73 & C75 are physically 1UF 50WV
> Electrolytic's. I believe in the parts list the 1PF listed for C75 is a
typo
> for 1uf as 1pf would actually be .000001uf (1X10 -12) or .001 Nano Farad
> (1X10-9) if I remember right. The part # listed for both C73 & C75 are the
> same except for the (RL) at the end of the part # and I am not sure what
> that means ??
>
> KD8OXQ
>
> ----- Original Message -----
> From: "Jim S" <jimstan@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 08, 2011 1:40 PM
> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>
>
> > I seriously doubt that they even manufacture an electrolytic with that
low
> a
> > capacitance !
> > One MICROfarad, now I could almost believe that !
> >
> > ----- Original Message -----
> > From: <n6wk@...>
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Friday, April 08, 2011 12:51 PM
> > Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF
Board
> >
> >
> > > Russell,
> > > My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
> > > electrolytic that is .001uf @ 50wvdc

> > > If you look in the parts section listing, they show (2) C75's
> > > one is an 1PF Electrolytic part number CE04W1H010(RL)
> > > The other C75 is a ceramic disc that is .01uf +80% -20%
> > >
> > >
> > > On 4/8/2011 9:35 AM, ae5uu wrote:
> > >>
> > >> Good morning,
> > >>
> > >> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
> > >> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
> > >>
> > >> What I just took out of there, as I cleared off all the
electrolytics,
> > >> is a 1uf 50wv electrolyic.
> > >>
> > >> To add confusion, the board is clearly marked with polarity for C-75,
> > >> which lends strength to the electrolytic being correct, not
> > >> withstanding what the parts list says.
> > >>
> > >> Does anyone have any thoughts on this?
> > >>
> > >> 73,
> > >>
> > >> Russell
> > >> AE5UU
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30738. Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:37:52 UTC
From: Jim S
Topic: 30730 Message: 30738

I've never seen a service manual that was 100% accurate, or didn't leave you with at least a couple of "HUH ? ? ? " moments !

Especially those that come from the far East.

----- Original Message -----
From: n6wk@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, April 08, 2011 2:11 PM
Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board

Jim,
I am Just stating what the Service Manual shows

Gordon
N6WK

On 4/8/2011 10:40 AM, Jim S wrote:
> I seriously doubt that they even manufacture an electrolytic with that low a
> capacitance !
> One MICROfarad, now I could almost believe that !
>
> ----- Original Message -----
> From:<n6wk@...>
> To:<TS-520_820_530_830@yahoogroups.com>
> Sent: Friday, April 08, 2011 12:51 PM
> Subject: Re: [TS-520_820_530_830] Correct value of C-75 in TS-820 IF Board
>
>
>> Russell,
>> My Schematic for the IF board of the 820 shows C75 as 1pf @ 50wv
>> electrolytic that is .001uf @ 50wvdc
>> If you look in the parts section listing, they show (2) C75's
>> one is an 1PF Electrolytic part number CE04W1H010(RL)
>> The other C75 is a ceramic disc that is .01uf +80% -20%
>>
>>
>> On 4/8/2011 9:35 AM, ae5uu wrote:
>>> Good morning,
>>>
>>> I am recapping the IF Board in my TS-820. In the parts list, C-75 is
>>> listed as a 0.01uf +80% -20% ceramic, Kenwood part # CK45F1H103Z
>>>
>>> What I just took out of there, as I cleared off all the electrolytics,
>>> is a 1uf 50wv electrolyic.
>>>

>>> To add confusion, the board is clearly marked with polarity for C-75,
>>> which lends strength to the electrolytic being correct, not
>>> withstanding what the parts list says.
>>>
>>> Does anyone have any thoughts on this?
>>>
>>> 73,
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>>> Russell
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http://www.pctools.com
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17270)
http://www.pctools.com/
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[Non-text portions of this message have been removed]

30739. Thank you all for your advice on the correct value of C-75 in my TS-820 IF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 18:53:38 UTC
From: ae5uu
Topic: 30739 Message: 30739

On my schematic there are two C-75s, clustered around Q-16, as you have pointed out. In my parts list, the entry is: "C-75, C76 (as one line item) @ .01uf ceramic =+80%-20%

So in summary, C-73 and C-75 are in reality both 1 uf 50wv, while C-76 (also labeled C-75) on the schematic is .01 uf ceramic.

Thanks everyone.

73,

Russell
AE5UU

30740. Fw: [TS-520_820_530_830] Re: Disappointment that no members could help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 22:36:50 UTC
From: Don D
Topic: 30729 Message: 30740

I would like to get down your way some time mate
I use to talk to lots of vk's when i had my 10 meter telrex monobander up many years a go

lots of ham's in your country with 30 to 40 thousand head of sheep.Don't know were they got the time to chat and to watch sheep and drink beer lol

did not get much of a response to my questions on here ,so i just reworded it and really got some nice feedback

thank all

All the best
Don

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> DON,
>
> It's Autum down here, but always antenna & beer time..
>
>
> HAVEAGOODWEEKEND,
>
> Jeff
> VK4FNRS
>
>
>
> ----- Forwarded Message ----
> From: Don D <ve2ud@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, 8 April, 2011 2:54:18 AM
> Subject: [TS-520_820_530_830] Re: Disappointment that no members could help
>
> On the subject of matched pair
> could also mean both tubes from the same company
> Guess it would be ok if you were stuck and mixed them,but i have always tried to
> keep them from the same maker
> Also what would happen if you put one 6146a and one 6146b or w together? as a pr
> if that's all you had on hand
>
> ah summer time is coming,cottage time and antenna time,beer time
> 73s all
> Don
> ve2ud ve2dzo

>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > I agree
> > Don
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@>
> >wrote:
> > >
> > > "Matched" tubes does not mean that they are two of the same kind but rather
> > >that they are electrically matched to have similar characteristics and outputs.
> > >In other words, they sampled a bunch of tubes of the same type and chose two
> > >that are similar in characteristics. This is more commonbly done for audio
> > >circuits, where distorsion is to be avoided.
> > >
> > > It is indeed true that you should use two tubes of the same sub-type, as in
> > >S-2001A, 6146, 6146A, 6146B, 6146W, 8298, 6883, 6293, etc.
> > >
> > > Robert
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >wrote:
> > > >
> > > > Don,
> > > >
> > > > I can't see why anyone would NOT want 2 x 6146B's or 2 x 6146's or 2 x
> > >6146W's (assuming that this is what you mean by "matched" Don.
> > > > makes a lot of sense to me.....
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > >
> > > > On 8/04/2011, at 9:44 AM, Don D wrote:
> > > >
> > > > >
> > > > > >
> > > > > because the guy had them for sale and stated they were matched and i have
> > >heard that they should be matched from another seller,but the manual does not
> > >say that they have too be matched
> > > > > > This tube guy i know has said this and when i talk to him the next time i
> > >will ask him were he gets that info from or to define it
> > > > > > He has been selling tubes for humppy years but that does not mean he is
> > >right
> > > > > > I guess as long as they are tested good they will work
> > > > > > I would think a 6146a and 6146b would still work and they do not have to
> > >be from the same company

> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > > >
> > > > > > One question Don. Why did you decide to buy matched final tubes in the
> >first place?
> > > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > > > > > >
> > > > > > > Hi Mike
> > > > > > > that's very interesting and first time i have heard that
> > > > > > > Not saying you are wrong but will keep that in mind the next time i
> >buy some
> > > > > > > I was lucky to get a set of matched tubes plus the driver at a ham
> >fest for$50,so i grabbed them as they were new or old stock
> > > > > > > I am lucky to have two more 830s in mint shape with about 15 hrs
> >total
> > > > > > > on one and 25 hrs on the other
> > > > > > > Why i kept this one was the fact it had the dc power supply
> > > > > > > Getting to be my busy time of the year so i might have to send it out
> >for a check up
> > > > > > > thanks again Mike
> > > > > > > 73s
> > > > > > > Don
> > > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
>

30741. Audio Problems with 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 23:01:39 UTC
From: keith.colgan
Topic: 30741 Message: 30741

I've had my TS-520S since about 1974. About 2 years ago I had it gone over completely by K4EAA in Fla (I believe). After its return (to CA) it worked fine on 20 mtrs, but a few months later I tried it on 40 mtrs and the audio was slow to come on. The S-mtr would indicate strong signals, but the audio would lag several seconds and then ramp up quickly to normal levels. This got progressively worse until finally the audio never came up and the symptoms spread to 15 and 20 mtrs. K4EAA suggested that maybe I needed to adjust the coils that are accessible from the bottom of the rig. I purchased plastic adjustment tools, but have been reluctant to make any changes due to lack of real electronics experience. I've replaced the rig with a FT-950, but I'm getting interested again in resolving the 520S issue. I love the rig and hate to see it idle for want of a few turns of the screw. Has anyone seen this problem and can anyone inspire me to dig in and try to fix it.

Thanks,
Keith - N7DXC - Lodi, CA

30742. TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-08 23:45:50 UTC
From: Lou Blasco
Topic: 30729 Message: 30742

Hi Everyone,

I have a TS-520S with a lazy LSB crystal that takes a few minutes to start oscillating on power up. Voltages on the carrier board are OK and I've tried adjusting TC3 and T1 over a range to see if there's a sweet spot where the crystal will start every time but no success. What next?

Lou
VK3ALB

30743. Re: TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 00:47:20 UTC
From: keith.colgan
Topic: 30729 Message: 30743

Lou,
I posted, a few minutes before yours, an issue whereby the audio on some bands would ramp up after a minute or so with my 520S. I thought it may have been due to cool temps in the shack, but it does it now all the time. I will follow the replies to your posting with interest.
Keith - N7DXC

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Everyone,
>
> I have a TS-520S with a lazy LSB crystal that takes a few minutes to
> start oscillating on power up. Voltages on the carrier board are OK
> and I've tried adjusting TC3 and T1 over a range to see if there's a
> sweet spot where the crystal will start every time but no success. What next?
>
> Lou
> VK3ALB
>

30744. Leather Carry Handle for early TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 03:34:48 UTC
From: ficfam1
Topic: 30744 Message: 30744

Anyone have a source for a replacement leather carry handle for an early TS-520.

The only close replacement that I've found is the later vinyl version.

Thanks

30745. Re: Leather Carry Handle for early TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 04:25:19 UTC
From: kd8hmo
Topic: 30744 Message: 30745

Check www.k4eaa.com I think Ken might sell replacements.

--- In TS-520_820_530_830@yahoogroups.com, "ficfam1" <ficfam1@...> wrote:
>
> Anyone have a source for a replacement leather carry handle for an early TS-520.
>
> The only close replacement that I've found is the later vinyl version.
>
> Thanks
>

30746. Re: [TS-520_820_530_830] Leather Carry Handle for early TS-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 04:44:48 UTC
From: W LEWIS
Topic: 30744 Message: 30746

Check with Bob Mansker, KE5FTF. He has Kenwood straps and nice ones at that. As I recall around $22.00-$25.00. Don't quote me. I bought one for an 820S and it was like new.73s,Butch LewisKØPSA

--- On Fri, 4/8/11, ficfam1 <ficfam1@...> wrote:

From: ficfam1 <ficfam1@...>
Subject: [TS-520_820_530_830] Leather Carry Handle for early TS-520
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, April 8, 2011, 10:34 PM

Anyone have a source for a replacement leather carry handle for an early TS-520.

The only close replacement that I've found is the later vinyl version.

Thanks

[Non-text portions of this message have been removed]

30747. Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 13:06:10 UTC
From: Don D
Topic: 30747 Message: 30747

Hi again
is there any place to trace the serial numbers as to the year it was made or the production run on it
My 830s numbers are 1111111
Anywhere i can get the info
Many thanks

Don

30748. Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 13:06:14 UTC
From: Don D
Topic: 30747 Message: 30748

Hi again
is there any place to trace the serial numbers as to the year it was made or the production run on it
My 830s numbers are 1111111
Anywhere i can get the info
Many thanks

Don

30749. Re: [TS-520_820_530_830] TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 14:23:42 UTC
From: John Davidson
Topic: 30729 Message: 30749

Lou & all,
I had the same problem with only the LSB osc working intermittantly but before I could order a new XTAL it came back to normal operation. I rarely use the TS520 on SSB (Been well over a year since I did anything besides CW with this rig) But it's nice to know it works when I do a monthly test..

From: Lou Blasco <radio@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 8, 2011 7:45:50 PM
Subject: [TS-520_820_530_830] TS-520S LSB crystal slow to start

Hi Everyone,

I have a TS-520S with a lazy LSB crystal that takes a few minutes to start oscillating on power up. Voltages on the carrier board are OK and I've tried adjusting TC3 and T1 over a range to see if there's a sweet spot where the crystal will start every time but no success. What next?

Lou
VK3ALB

[Non-text portions of this message have been removed]

30750. Re: [TS-520_820_530_830] Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 16:24:57 UTC
From: AI4WM Bill
Topic: 30747 Message: 30750

I found some help from another Kenwood Hybrid enthusiast and a fellow in GB when I had this same inquiry when I bought my TS-830S last summer.

It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.
However that puts my radio a year earlier than most of the dates I found in the radio. Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio. So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.

If you open the rig you should be able to locate IC date codes. The LSI chip in my radio was made the latter part of the year before any of the other date codes in my radio. So to make a long story (mine is way too long) short. Kenwood did not use a serial number date/manufacturing run method like Yaesu did. You can probably get close to the actual year or the year before using the serial number method.

Check G4FUI's site where he has some dating examples:
http://www.g4fui.net/rigs_frameset.html

73,

Bill

AI4WM

--- On Sat, 4/9/11, Don D <ve2ud@yahoo.ca> wrote:

From: Don D <ve2ud@...>
Subject: [TS-520_820_530_830] Serial numbers
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, April 9, 2011, 9:06 AM

Hi again

is there any place to trace the serial numbers as to the year it was made or the production run on it

My 830s numbers are 1111111

Anywhere i can get the info

Many thanks

Don

[Non-text portions of this message have been removed]

30751. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 16:43:28 UTC
From: Don D
Topic: 30747 Message: 30751

Thank you Bill for that great info
will check that out
cheers
Don
ve2ud

--- In TS-520_820_530_830@yahoogroups.com, AI4WM Bill <ai4wm@...> wrote:
>
> I found some help from another Kenwood Hybrid enthusiast and a fellow in GB when I had this same inquiry when I bought my TS-830S last summer.
>
> It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.Â
> However that puts my radio a year earlier than most of the dates I found in the radio.Â Â Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio.Â So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.
>
> If you open the rig you should be able to locate IC date codes.Â The LSI chip in my radio was made the latter part of the year before any of the other date codes in my radio.Â So to make a long story (mine is way too long) short.Â Kenwood did not use a serial number date/manufacturing run method like Yaesu did.Â You can probably get close to the actual year or the year before using the serial number method.
>
> Check G4FUI's site where he has some dating examples:
> http://www.g4fui.net/rigs_frameset.html
>
> 73,
>
> Bill
>
> AI4WM
>
> --- On Sat, 4/9/11, Don D <ve2ud@...> wrote:
>
> From: Don D <ve2ud@...>
> Subject: [TS-520_820_530_830] Serial numbers
> To: TS-520_820_530_830@yahoogroups.com
> Date: Saturday, April 9, 2011, 9:06 AM
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> Hi again
>
> is there any place to trace the serial numbers as to the year it was made or the production run on it
>
> My 830s numbers are 1111111
>
> Anywhere i can get the info
>
> Many thanks
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> Don
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> [Non-text portions of this message have been removed]
>

30752. basic alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 20:15:21 UTC
From: yioutta_99
Topic: 30752 Message: 30752

Note: Joe was nice enough to reply to an email about the alignment procedure and give some other tips. For some reason this post didnt seem to get any response so i putting the question out for the group again. I had a hard time finding it myself.

steve

Hi all

After a successful tube change and neutralization, I decided to align the receive per the manual. I went through all the bands and tweeked the Antenna and mixer coils for max meter reading using the cal signal. I could not get the meter to move much if at all, except for the 20 meter band, that I could bring up a bit, the other bands didnt seem to respond. I did them in order, on the proper freq with the tuning tool. I hope i put the coils back to where they should be. Cores felt good, not stuck, cracked etc.
The cal signal was lowest on 28 mhz .

Thanks

Steve

30753. Start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 23:00:32 UTC
From: jon_g4fut
Topic: 30753 Message: 30753

When I switch on my 830s, I get a "start-up beep". I find this annoying especially when I have told the XYL, (asleep in next room) that I have switched the rig off, and want to re-start it without her knowing. :-)
How can I switch this off?
Jon G4FUT

30754. YK-88C CW Filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-09 23:42:48 UTC
From: n6wk_skcc3
Topic: 30754 Message: 30754

selling a nice YK-88C CW filter
$75.00 shipped to your door in the USA

Contact me off list n6wk@...

Thanks,
Gordon

30755. TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 01:17:05 UTC
From: joe
Topic: 30755 Message: 30755

Hello to all on the group!

I just joined the a few weeks ago and this is my first post.

I recently became the owner of a very nice TS-830S. I really like the transceiver very much! It is in very clean cosmetic condition and works exceptionally well. I have noticed one issue that I was hoping someone might be able to assist me with.

There seems to be an intermittent problem with my meter in the ALC position. Sometimes the meter will not read any deflection in ALC mode. Other times it works fine. Even when this happens, I can still tune the transmitter to 100+ watts output on all bands (with plate current at about 225 mA.) I do this by using my external watt meter to peak the ALC in tune. My meter functions just fine in displaying the plate current, RF, compression, and HV.

Again, this problem seems to be intermittent. Sometimes the meter will read ALC as it should, other times it will not. The issue does not seem to be band specific. In other words, when the ALC isn't reading...it isn't reading on any band. Conversely, when it is working... it's working on all bands.

Here's what I've done thus far to troubleshoot it... Replaced 12BY7A driver, no change at all. Sprayed DeOxit cleaner on the meter switch and exercised the switch liberally. Initially, I thought this may have helped, but after a day or two the problem has come back.

Does anyone have any suggestions or ideas on how to fix this? I was hoping someone else may have had an issue similar to mine.

Many thanks!

73 DE WS8X

Joe Loverti Jr.

30756. More solvent!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 02:00:06 UTC
From: Lou Blasco
Topic: 30755 Message: 30756

After a chat at my local ham radio club I thought about the way we go about repairs to our equipment. One of the things that can go wrong with any radio is poor or intermittent switch contacts. There are a range of cleaning products that you can use to clean switches. How often do you hear "I used a whole can on that switch". My reply is normally "Really, a whole can?" Consider that everything that drips off the switch is wasted as it gets nowhere near the contact and doesn't help one little bit to clean the contact. You don't need more that a drop applied to the contact for it to do it's work. Better to use a small amount on the contacts and exercise the switch. Using your cleaning product carefully results in less mess and helps you pocket too.

30757. For Sale: Kenwood TS 820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 02:48:38 UTC
From: kx4wb
Topic: 30757 Message: 30757

I am selling my Kenwood TS 820S. If you are interested you can contact me off the list at: kx4wb@...

William Brooks
KX4WB

30758. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 07:52:03 UTC
From: Ger
Topic: 30755 Message: 30758

Joe,

I had the same problem with mt TS-530SP: unstable ALC reading on the S-meter and sometimes S-meter reading itself.
You need to examine relay RL-1. I replaced the relay with I ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm

Good luck and best 73's Ger, PE1CZG

--- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
>
> Hello to all on the group!
>
>
> I just joined the a few weeks ago and this is my first post.
>
> I recently became the owner of a very nice TS-830S. I really like the transceiver very much! It is in very clean cosmetic condition and works exceptionally well. I have noticed one issue that I was hoping someone might be able to assist me with.
>
> There seems to be an intermittent problem with my meter in the ALC position. Sometimes the meter will not read any deflection in ALC mode. Other times it works fine. Even when this happens, I can still tune the transmitter to 100+ watts output on all bands (with plate current at about 225 mA.) I do this by using my external watt meter to peak the ALC in tune. My meter functions just fine in displaying the plate current, RF, compression, and HV.
>
> Again, this problem seems to be intermittent. Sometimes the meter will read ALC as it should, other times it will not. The issue does not seem to be band specific. In other words, when the ALC isn't reading...it isn't reading on any band. Conversely, when it is working... it's working on all bands.
>
> Here's what I've done thus far to troubleshoot it... Replaced 12BY7A driver, no change at all. Sprayed DeOxit cleaner on the meter switch and exercised the switch liberally. Initially, I thought this may have helped, but after a day or two the problem has come back.
>
> Does anyone have any suggestions or ideas on how to fix this? I was hoping someone else may have had an issue similar to mine.
>
>
> Many thanks!
>
> 73 DE WS8X
>
> Joe Loverti Jr.

>

30759. Re: [TS-520_820_530_830] Re: TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 13:02:17 UTC
From: Lou Blasco
Topic: 30729 Message: 30759

Hi Keith,

From the symptoms you describe I think we have two different problems. You say the problem occurs on 40,20 &15 and even though you have S meter indication you have no audio. If the carrier osc doesn't work you won't get any S meter deflection and since you have the problem on bands that use two different crystals for the carrier osc it's even more unlikely that the problem lies in that area. Again, because you have S meter deflection I think the receiver is working fine and perhaps the place to start looking is around the AF stage.

Lou
VK3ALB

At 10:47 09/04/2011, you wrote:
>Lou,
>I posted, a few minutes before yours, an issue whereby the audio on
>some bands would ramp up after a minute or so with my 520S. I
>thought it may have been due to cool temps in the shack, but it does
>it now all the time. I will follow the replies to your posting with interest.
>Keith - N7DXC
>
>--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
> >
> > Hi Everyone,
> >
> > I have a TS-520S with a lazy LSB crystal that takes a few minutes to
> > start oscillating on power up. Voltages on the carrier board are OK
> > and I've tried adjusting TC3 and T1 over a range to see if there's a
> > sweet spot where the crystal will start every time but no
> success. What next?
> >
> > Lou
> > VK3ALB
> >

30760. Re: [TS-520_820_530_830] TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 13:07:23 UTC
From: Lou Blasco
Topic: 30729 Message: 30760

Hi John,

Well that would be nice if it came back but I
think swapping the crystal out might be the best
solution. I recall something about giving a lazy
crystal a hit of RF to get it going again but I'm
not sure how to go about that. For the moment, I
leave the radio on standby and it gets me out of trouble.

Lou
VK3ALB

At 00:23 10/04/2011, you wrote:
>Lou & all,
>I had the same problem with onlyÂ the LSB osc
>working intermittantly but before I
>could order a new XTAL it came back to normal
>operation. I rarely use the TS520
>on SSB (Been well over a year since IÂ did
>anything besides CWÂ with this rig) But
>it's nice to know it works when I do a monthly test.. Â Â
>
>
>_____
>From: Lou Blasco <radio@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Fri, April 8, 2011 7:45:50 PM
>Subject: [TS-520_820_530_830] TS-520S LSB crystal slow to start
>
>Â
>Hi Everyone,
>
>I have a TS-520S with a lazy LSB crystal that takes a few minutes to
>start oscillating on power up. Voltages on the carrier board are OK
>and I've tried adjusting TC3 and T1 over a range to see if there's a
>sweet spot where the crystal will start every time but no success. What next?
>
>Lou
>VK3ALB
>
>
>
>
>[Non-text portions of this message have been removed]
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>
>Yahoo! Groups Links
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30761. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 14:00:04 UTC
From: w5rkl
Topic: 30755 Message: 30761

Ger,

You said you can tune the 830 up and get 100 watts output using an external watt meter. What mode are you using to achieve 100 watts output? The 830 will not produce 100 watts output in TUNE mode. In CW mode, however, you can achieve 100 watts output.

If you are tuning the 830 up in CW mode and while watching you external watt meter, do you see any intermittent or instability in the RF output? If not then it's quite possible the source of your problem is not the AF unit relay.

Since you are not the original owner it's quite possible a previous owner may have experienced a similar problem and was instructed to replace R15 and R16 on the Rectifier Unit. If the previous owner's soldering skills were poor, there may be an intermittent poor solder connection to one or both resistors which is contributing to your intermittent problem. Therefore, I would check the solder connection to R15 and/or R16 before moving on to relay RL1 on the AF Unit board.

I also would not discount a fractured foil run on a PC board either. The foil runs are very thin and easily broken if excessive heat is applied when soldering a component lead. This is common in these hybrids.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@...> wrote:
>
> Joe,
>
> I had the same problem with mt TS-530SP: unstable ALC reading on the S-meter and sometimes S-meter reading itself.
> You need to examine relay RL-1. I replaced the relay with I ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
>
> Good luck and best 73's Ger, PE1CZG
>
> --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@> wrote:
> >
> > Hello to all on the group!
> >
> >
> > I just joined the a few weeks ago and this is my first post.
> >
> > I recently became the owner of a very nice TS-830S. I really like the transceiver very much! It is in very clean cosmetic condition and works exceptionally well. I have noticed one issue that I was hoping someone might be able to assist me with.

> >
> > There seems to be an intermittent problem with my meter in the ALC position. Sometimes the meter will not read any deflection in ALC mode. Other times it works fine. Even when this happens, I can still tune the transmitter to 100+ watts output on all bands (with plate current at about 225 mA.) I do this by using my external watt meter to peak the ALC in tune. My meter functions just fine in displaying the plate current, RF, compression, and HV.
> >
> > Again, this problem seems to be intermittent. Sometimes the meter will read ALC as it should, other times it will not. The issue does not seem to be band specific. In other words, when the ALC isn't reading...it isn't reading on any band. Conversely, when it is working... it's working on all bands.
> >
> > Here's what I've done thus far to troubleshoot it... Replaced 12BY7A driver, no change at all. Sprayed DeOxit cleaner on the meter switch and exercised the switch liberally. Initially, I thought this may have helped, but after a day or two the problem has come back.
> >
> > Does anyone have any suggestions or ideas on how to fix this? I was hoping someone else may have had an issue similar to mine.
> >
> >
> > Many thanks!
> >
> > 73 DE WS8X
> >
> > Joe Loverti Jr.
> >
>

30762. TS-530SP For Sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 14:55:06 UTC
From: Terry Wagoner
Topic: 30762 Message: 30762

I just listed my TS-530SP on QTH.Com. If interested contact me off list. wagstw46@... or call 269-663-8943.

Thanks
Terry Wagoner K9TW

30763. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 17:43:01 UTC
From: pwrapsengineer
Topic: 30747 Message: 30763

If your Kenwood has not been modified or had modules swapped in a repair, the most reliable way to date your radio is to read the date codes on the ICs or other date coded components. Usually the ICs are the easiest to decode since most semiconductor manufacturers date or lot code their parts for tracing in case there is a defect or test issue in the manufacturing process. Also, most systems manufacturers, such as Kenwood, use only relatively "fresh" IC components, not parts that have been on the shelf for several years. This is why ICs are the best to use.

In case you are not aware of the codeing process, one of the most common is a 4 digit code that has as the first two digits the year of manufacture and the next two digits are the week of the manufacturing. For example 8327 would be 1983, first week of July. Check several different types of parts and see if most are within a few weeks range. It is a good bet that the date of your Kenwood is about 3 months younger than the latest date codes you can find on the ICs. I am not certain if Kenwood stamped test or acceptance date codes on assemblies, but if they did that is a better approach or at least a great cross check.

Hope this helps.
Larry, KS7J

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Thank you Bill for that great info
> will check that out
> cheers
> Don
> ve2ud
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, AI4WM Bill <ai4wm@> wrote:
> >
> > I found some help from another Kenwood Hybrid enthusiast and a fellow in GB when I had this same inquiry when I bought my TS-830S last summer.
> >
> > It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.Â
> > However that puts my radio a year earlier than most of the dates I found in the radio.Â Â Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio.Â So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.
> >
> > If you open the rig you should be able to locate IC date codes.Â The LSI chip in my radio was made the latter part of the year before any of the other date codes in my radio.Â So to make a long story (mine is way too long) short.Â Kenwood did not use a serial number date/manufacturing run method like Yaesu did.Â You can probably get close to the actual year or the year before using the serial number method.

> >
> > Check G4FUI's site where he has some dating examples:
> > http://www.g4fui.net/rigs_frameset.html
> >
> > 73,
> >
> > Bill
> >
> > AI4WM
> >
> > --- On Sat, 4/9/11, Don D <ve2ud@> wrote:
> >
> > From: Don D <ve2ud@>
> > Subject: [TS-520_820_530_830] Serial numbers
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Saturday, April 9, 2011, 9:06 AM
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> >
> > Hi again
> >
> > is there any place to trace the serial numbers as to the year it was made or the production run on it
> >
> > My 830s numbers are 1111111
> >
> > Anywhere i can get the info
> >
> > Many thanks
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> > Don
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> > [Non-text portions of this message have been removed]
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>

30764. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 18:52:36 UTC
From: joe
Topic: 30755 Message: 30764

Okay Ger and Mike...thanks for the replies and suggestions.

Mike,
I did forget to mention that I use TUNE mode to pre-tune the 830 then switch to CWW to tune to the rig to 100 watts. I see absolutely no fluctuation in RF output at all. Its rock solid.

I'll inspect R15 / R16 and also have a look at the foil runs from the PC boards. I'm guessing those aren't any particular easy fix if that turns out to be the problem.

Ger,
My meter isn't intermittent in any other position except ALC. The S-meter functions 100%. I'm not sure if this is the same issue that you had or not but, I'll look into it after checking those resistors out.

73 with regards,

Joe
WS8X

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Ger,
>
> You said you can tune the 830 up and get 100 watts output using an external watt meter. What mode are you using to achieve 100 watts output? The 830 will not produce 100 watts output in TUNE mode. In CW mode, however, you can achieve 100 watts output.
>
> If you are tuning the 830 up in CW mode and while watching you external watt meter, do you see any intermittent or instability in the RF output? If not then it's quite possible the source of your problem is not the AF unit relay.
>
> Since you are not the original owner it's quite possible a previous owner may have experienced a similar problem and was instructed to replace R15 and R16 on the Rectifier Unit. If the previous owner's soldering skills were poor, there may be an intermittent poor solder connection to one or both resistors which is contributing to your intermittent problem. Therefore, I would check the solder connection to R15 and/or R16 before moving on to relay RL1 on the AF Unit board.
>
> I also would not discount a fractured foil run on a PC board either. The foil runs are very thin and easily broken if excessive heat is applied when soldering a component lead. This is common in these hybrids.
>
> 73s
> Mike
> W5RKL

>
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>
> --- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@> wrote:
> >
> > Joe,
> >
> > I had the same problem with mt TS-530SP: unstable ALC reading on the S-meter and sometimes S-meter reading itself.
> > You need to examine relay RL-1. I replaced the relay with I ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
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> > > Hello to all on the group!
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> > >
> > > Does anyone have any suggestions or ideas on how to fix this? I was hoping someone else may have had an issue similar to mine.
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> > >
> > > Many thanks!
> > >
> > > 73 DE WS8X

> > >
> > > Joe Loverti Jr.
> > >
> >
>

30765. Re: [TS-520_820_530_830] TS-520S LSB crystal slow to start

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 23:14:23 UTC
From: Lou Blasco
Topic: 30729 Message: 30765

I managed to track down the original owner for
this radio and it seems the lazy crystal was one
of a number of reasons for getting rid of this
radio. The last person to look at it checked the
crystal in another radio and it was slow there
too. Conversely a know good crystal was tried in
my radio and worked fine. The original owner
didn't want to pursue the repair and surrendered
the set. I'm on the track of a replacement
crystal and that should get the radio back to full operation.

Lou
VK3ALB

At 23:07 10/04/2011, you wrote:
>Hi John,
>
>Well that would be nice if it came back but I
>think swapping the crystal out might be the best
>solution. I recall something about giving a lazy
>crystal a hit of RF to get it going again but I'm
>not sure how to go about that. For the moment, I
>leave the radio on standby and it gets me out of trouble.
>
>Lou
>VK3ALB
>
>At 00:23 10/04/2011, you wrote:
> >Lou & all,
> >I had the same problem with onlyÂ the LSB osc
> >working intermittantly but before I
> >could order a new XTAL it came back to normal
> >operation. I rarely use the TS520
> >on SSB (Been well over a year since IÂ did
> >anything besides CWÂ with this rig) But
> >it's nice to know it works when I do a monthly test.. Â Â
> >
> >
> >_____
> >From: Lou Blasco <radio@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Fri, April 8, 2011 7:45:50 PM
> >Subject: [TS-520_820_530_830] TS-520S LSB crystal slow to start
> >
> >Â

> >Hi Everyone,
> >
> >I have a TS-520S with a lazy LSB crystal that takes a few minutes to
> >start oscillating on power up. Voltages on the carrier board are OK
> >and I've tried adjusting TC3 and T1 over a range to see if there's a
> >sweet spot where the crystal will start every
> time but no success. What next?
> >
> >Lou
> >VK3ALB
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> >[Non-text portions of this message have been removed]
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30766. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-10 23:49:20 UTC
From: Don D
Topic: 30747 Message: 30766

Thank you for the great posting Larry

Can you tell me what this serial number is 1111111 yes seven one's
I have sent him a few photo's of the radio for his site
I can't see any dates on the ic's but maybe i am not reading it right

I have been in touch with Martin [Check G4FUI's site where he has some dating examples:
> > > http://www.g4fui.net/rigs_frameset.html]
This is what he had to say
Hi Don,

As I understand it, the DC-DC convertor (or invertor as it may have been
called) was an "optional accessory" for the TS-830.

I don't suppose there were all that many sold, hence the rarity.

The '830S was really a bit big for mobile operation compared with the
contemporary TS-130S.

The reason for the multipole Jones plug on the radio was to allow the
co-existence of mains 120/240V AC connections (as appropriate for the region
of the world) and 12V DC - in this respect it is the same philosophy of the
older Yaesu FT-101 series. Back in those days there were fewer commercial
"mobile" alternatives.

So it's all quite interesting and you have got yourself an "oddball" bit of
interesting history there!

I don't think the serial number you quote doesn't sound quite right, so I
would be sceptical about that.

You can date your radio fairly well from the date codes on some of the chips
inside if you are up to taking the covers off and having a peek.

The cheaper TS-530S didn't have the multipole power connector, or some of
the mounting holes for the DC unit.

If you could send me some nice photos of your unusual radio, I'd be happy to
feature them on my web site, with your permission of course, if you wish.

Hope this is of some interest

73,

Martin
G4FUI

--- In TS-520_820_530_830@yahoogroups.com, "pwrapsengineer" <larry.shorthill@...> wrote:
>

> If your Kenwood has not been modified or had modules swapped in a repair, the most reliable way to date your radio is to read the date codes on the ICs or other date coded components. Usually the ICs are the easiest to decode since most semiconductor manufacturers date or lot code their parts for tracing in case there is a defect or test issue in the manufacturing process. Also, most systems manufacturers, such as Kenwood, use only relatively "fresh" IC components, not parts that have been on the shelf for several years. This is why ICs are the best to use.
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> In case you are not aware of the codeing process, one of the most common is a 4 digit code that has as the first two digits the year of manufacture and the next two digits are the week of the manufacturing. For example 8327 would be 1983, first week of July. Check several different types of parts and see if most are within a few weeks range. It is a good bet that the date of your Kenwood is about 3 months younger than the latest date codes you can find on the ICs. I am not certain if Kenwood stamped test or acceptance date codes on assemblies, but if they did that is a better approach or at least a great cross check.
>
> Hope this helps.
> Larry, KS7J
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > Thank you Bill for that great info
> > will check that out
> > cheers
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> > --- In TS-520_820_530_830@yahoogroups.com, AI4WM Bill <ai4wm@> wrote:
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> > >
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> > > However that puts my radio a year earlier than most of the dates I found in the radio.Â Â Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio.Â So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.
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> > > 73,
> > >
> > > Bill
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> > > --- On Sat, 4/9/11, Don D <ve2ud@> wrote:
> > >
> > > From: Don D <ve2ud@>
> > > Subject: [TS-520_820_530_830] Serial numbers
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Date: Saturday, April 9, 2011, 9:06 AM
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> > > Anywhere i can get the info
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30767. how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 01:30:09 UTC
From: kd5utc
Topic: 30767 Message: 30767

My alc is set for 45 watts to drive a amp in my ts820 how do i get it to do more and is there a adjustment inside of radio to do this .

Thanks Rick Kd5utc

30768. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 02:19:44 UTC
From: w5rkl
Topic: 30767 Message: 30768

Hello Rick,

What do you mean when you say, "My alc is set for 45 watts"?

How are you determining that a specific level of ALC is controlling the output to no more than 45 watts? Please explain how you are doing this.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@...> wrote:
>
> My alc is set for 45 watts to drive a amp in my ts820 how do i get it to do more and is there a adjustment inside of radio to do this .
>
> Thanks Rick Kd5utc
>

30769. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 07:03:47 UTC
From: kd5utc
Topic: 30767 Message: 30769

when i tune in cw with 45 in to amp it shows 550watts . and when i go into ssb with it the amp only does 550watts but when i take the alc out of line it does 800watts so that tells me that the alc is only doing 45watts into amp .
thanks Rick

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Rick,
>
> What do you mean when you say, "My alc is set for 45 watts"?
>
> How are you determining that a specific level of ALC is controlling the output to no more than 45 watts? Please explain how you are doing this.
>
> 73s
> Mike
> W5RKL
>
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>
> --- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@> wrote:
> >
> > My alc is set for 45 watts to drive a amp in my ts820 how do i get it to do more and is there a adjustment inside of radio to do this .
> >
> > Thanks Rick Kd5utc
> >
>

30770. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 07:37:59 UTC
From: pwrapsengineer
Topic: 30747 Message: 30770

Sorry, Don. I can't date based on the serial number. I am sure if you look hard enough at the tops of the ICs you will find some with 4 digit date codes. There are usually a couple of rows of numbers, the top is usually the part number and then under that will be either a lot code or date code and then under that will be the date code or lot code. Sometimes there is no indication of the lot code, just the 4 digit date code. There is no hard and fast rule about the placement of the date or lot codes but usually they will be under the part number type. Look for codes that start with 8. I am guessing that the radio was produced in the 80s era, I don't remember the range of years. Just a guess on my part. Incidentally, if you see a 3 digit date code then the assumption is that the omitted digit is the year (probably 8) and then the first number is the year then two digits for week. In my prior example, the code would be 327 where 8 is implied and the year would then be 83.

I haven't had the top off my 830 in a while so I can't point you in the right direction under the hood, but with all those chips in there, there must be a few with codes that will help. Keep looking!!!

You might look at the dates on caps, relays, etc., if you can't find an IC or two with readable codes.

Cheers and 73
Larry, KS7J

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
>
>
> Thank you for the great posting Larry
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> Can you tell me what this serial number is 1111111 yes seven one's
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> Hi Don,
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> I don't suppose there were all that many sold, hence the rarity.
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> The '830S was really a bit big for mobile operation compared with the

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> co-existence of mains 120/240V AC connections (as appropriate for the region
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> older Yaesu FT-101 series. Back in those days there were fewer commercial
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> the mounting holes for the DC unit.
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> If you could send me some nice photos of your unusual radio, I'd be happy to
> feature them on my web site, with your permission of course, if you wish.
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> Hope this is of some interest
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> 73,
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> Martin
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> > > >
> > > > It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.Â
> > > > However that puts my radio a year earlier than most of the dates I found in the radio.Â Â Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio.Â So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.
> > > >
> > > > If you open the rig you should be able to locate IC date codes.Â The LSI chip in

my radio was made the latter part of the year before any of the other date codes in my radio.Â So to make a long story (mine is way too long) short.Â Kenwood did not use a serial number date/manufacturing run method like Yaesu did.Â You can probably get close to the actual year or the year before using the serial number method.
> > > >
> > > > Check G4FUI's site where he has some dating examples:
> > > > http://www.g4fui.net/rigs_frameset.html
> > > >
> > > > 73,
> > > >
> > > > Bill
> > > >
> > > > AI4WM
> > > >
> > > > --- On Sat, 4/9/11, Don D <ve2ud@> wrote:
> > > >
> > > > From: Don D <ve2ud@>
> > > > Subject: [TS-520_820_530_830] Serial numbers
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Date: Saturday, April 9, 2011, 9:06 AM
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> > > > Hi again
> > > >
> > > > is there any place to trace the serial numbers as to the year it was made or the production run on it
> > > >
> > > > My 830s numbers are 1111111
> > > >
> > > > Anywhere i can get the info
> > > >
> > > > Many thanks
> > > >
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> > > >
> > > > Don

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> > > > [Non-text portions of this message have been removed]
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>

30771. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 11:34:57 UTC
From: Don D
Topic: 30747 Message: 30771

Thanks Larry for your post

I will do as you say and check it top and bottom since i have the covers off
It's looking like it might be a 1980

cheers
Don
ve2ud/ve2dzo

--- In TS-520_820_530_830@yahoogroups.com, "pwrapsengineer" <larry.shorthill@...> wrote:
>
> Sorry, Don. I can't date based on the serial number. I am sure if you look hard enough at the tops of the ICs you will find some with 4 digit date codes. There are usually a couple of rows of numbers, the top is usually the part number and then under that will be either a lot code or date code and then under that will be the date code or lot code. Sometimes there is no indication of the lot code, just the 4 digit date code. There is no hard and fast rule about the placement of the date or lot codes but usually they will be under the part number type. Look for codes that start with 8. I am guessing that the radio was produced in the 80s era, I don't remember the range of years. Just a guess on my part. Incidentally, if you see a 3 digit date code then the assumption is that the omitted digit is the year (probably 8) and then the first number is the year then two digits for week. In my prior example, the code would be 327 where 8 is implied and the year would then be 83.
>
> I haven't had the top off my 830 in a while so I can't point you in the right direction under the hood, but with all those chips in there, there must be a few with codes that will help. Keep looking!!!
>
> You might look at the dates on caps, relays, etc., if you can't find an IC or two with readable codes.
>
> Cheers and 73
> Larry, KS7J
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> >
> >
> > Thank you for the great posting Larry
> >
> > Can you tell me what this serial number is 1111111 yes seven one's
> > I have sent him a few photo's of the radio for his site
> > I can't see any dates on the ic's but maybe i am not reading it right
> >
> >
> > I have been in touch with Martin [Check G4FUI's site where he has some dating examples:
> > > > > > > http://www.g4fui.net/rigs_frameset.html]

> > This is what he had to say
> > Hi Don,
> >
> > As I understand it, the DC-DC convertor (or invertor as it may have been
> > called) was an "optional accessory" for the TS-830.
> >
> >
> > I don't suppose there were all that many sold, hence the rarity.
> >
> >
> > The '830S was really a bit big for mobile operation compared with the
> > contemporary TS-130S.
> >
> >
> > The reason for the multipole Jones plug on the radio was to allow the
> > co-existence of mains 120/240V AC connections (as appropriate for the region
> > of the world) and 12V DC - in this respect it is the same philosophy of the
> > older Yaesu FT-101 series. Back in those days there were fewer commercial
> > "mobile" alternatives.
> >
> >
> > So it's all quite interesting and you have got yourself an "oddball" bit of
> > interesting history there!
> >
> >
> > I don't think the serial number you quote doesn't sound quite right, so I
> > would be sceptical about that.
> >
> >
> > You can date your radio fairly well from the date codes on some of the chips
> > inside if you are up to taking the covers off and having a peek.
> >
> >
> > The cheaper TS-530S didn't have the multipole power connector, or some of
> > the mounting holes for the DC unit.
> >
> >
> > If you could send me some nice photos of your unusual radio, I'd be happy to
> > feature them on my web site, with your permission of course, if you wish.
> >
> >
> > Hope this is of some interest
> >
> >
> > 73,
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> >
> > Martin
> > G4FUI
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> > --- In TS-520_820_530_830@...m, "pwrapsengineer" <larry.shorthill@> wrote:
> > >
> > > If your Kenwood has not been modified or had modules swapped in a repair, the most reliable way to date your radio is to read the date codes on the ICs or other date coded components. Usually the ICs are the easiest to decode since most semiconductor manufacturers date or lot code their parts for tracing in case there is a defect or test issue in the manufacturing process. Also, most systems manufacturers, such as Kenwood, use only relatively "fresh" IC components, not parts that have been on the shelf for several years. This is why ICs are the best to use.
> > >
> > > In case you are not aware of the codeing process, one of the most common is a 4 digit code that has as the first two digits the year of manufacture and the next two digits are the week of the manufacturing. For example 8327 would be 1983, first week of July. Check several different types of parts and see if most are within a few weeks range. It is a good bet that the date of your Kenwood is about 3 months younger than the latest date codes you can find on the ICs. I am not certain if Kenwood stamped test or acceptance date codes on assemblies, but if they did that is a better approach or at least a great cross check.
> > >
> > > Hope this helps.
> > > Larry, KS7J
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> > > >
> > > > Thank you Bill for that great info
> > > > will check that out
> > > > cheers
> > > > Don
> > > > ve2ud
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, AI4WM Bill <ai4wm@> wrote:
> > > > >

> > > > > I found some help from another Kenwood Hybrid enthusiast and a fellow in GB when I had this same inquiry when I bought my TS-830S last summer.
> > > > >
> > > > > It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.Â
> > > > > However that puts my radio a year earlier than most of the dates I found in the radio.Â Â Kenwood placed the manufacture of my radio a good 5 years before any component date code in the radio.Â So either mine has futuristic ICs in it, was totally rebuilt, or the Kenwood information is totally wrong.
> > > > >
> > > > > If you open the rig you should be able to locate IC date codes.Â The LSI chip in my radio was made the latter part of the year before any of the other date codes in my radio.Â So to make a long story (mine is way too long) short.Â Kenwood did not use a serial number date/manufacturing run method like Yaesu did.Â You can probably get close to the actual year or the year before using the serial number method.
> > > > >
> > > > > Check G4FUI's site where he has some dating examples:
> > > > > http://www.g4fui.net/rigs_frameset.html
> > > > >
> > > > > 73,
> > > > >
> > > > > Bill
> > > > >
> > > > > AI4WM
> > > > >
> > > > > --- On Sat, 4/9/11, Don D <ve2ud@> wrote:
> > > > >
> > > > > From: Don D <ve2ud@>
> > > > > Subject: [TS-520_820_530_830] Serial numbers
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Date: Saturday, April 9, 2011, 9:06 AM
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> > > > > Hi again
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> > > > > is there any place to trace the serial numbers as to the year it was made or the production run on it
> > > > >
> > > > > My 830s numbers are 1111111
> > > > >
> > > > > Anywhere i can get the info
> > > > >
> > > > > Many thanks
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> > > > > [Non-text portions of this message have been removed]
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30772. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 12:03:46 UTC
From: w5rkl
Topic: 30767 Message: 30772

Hello Rick,

Unfortunately ALC doesn't do 45 watts as you say. ALC itself does not produce any power output.

You cannot "preset" a maximum 45 watts RF output in CW mode by adjusting the CAR control then expect to see that same maximum 45 watts output when you switch to sideband mode. That's not how it works.

The CAR control is only used in CW and TUNE mode. When operating in sideband the CAR control is "disabled" and all power output is controlled by the MIC gain along with any ALC produced in the 820's final amplifier.

ALC is a gain control voltage that is produced and applied to earlier stages when the drive to the final amplifier causes grid current to flow. When grid current flows in the final amplifier, power is consumed in the final tube grids. That power consumed in the grids is taken away from the final amplifier's RF output. Grid current also results in distortion in the final amplifier's output signal.

You say by connecting the 820's external ALC connection on the rear panel to the amplifier's ALC connection the amplifier's power output is 550 watts. If you remove the ALC connection between the 820 and the amplifier, power output soars to 800 watts. That's not a 45 watt difference but rather a "250 watt" difference. That 250 watt difference tells me the 820 is driving the amplifier with a lot more than 45 watts. That also tells me that it is quite possible the amplifier's output signal could easily be distorted because the level of ALC voltage being produced in the amplifier is significantly higher than it should be because of the much higher RF driving power the 820 is applying to the amplifier in sideband mode.

You didn't say what you have the 820's MIC gain set at. To achieve a difference of 250 watts based on the ALC connection between the amplifier and the 820, the MIC gain would have to be much higher than 2.

With the amplifier left in standby or turned OFF and the ALC connection between the 820 and the amplifier in place, tune the 820 up for maximum output in CW mode (100 watts). Switch to sideband and set the 820's meter switch to ALC. While talking 2 inches from the microphone in a normal tone of voice, adjust the MIC gain so the ALC meter just starts to flicker above zero then stop adjusting the MIC gain. Don't adjust the MIC gain any higher. This is the point of maximum peak RF output with very little, if any, distortion in the 820's output. Turn the amplifier on and your transmit signal with the amplifier, will be clean.

All too often hams today tend to adjust the MIC gain so they sound "LOUD" at the receiving end. When this happens, the RF output contains distortion which results in splatter causing adjacent frequency interference. Remember, it's not how LOUD you sound but how clean your transmit signal is.

Don't be fooled or convinced by others that you have to have a high ALC meter indication in sideband in order for your transmitter to be working properly. That's wrong. A higher ALC indication does not mean your transmitter is producing more power output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@...> wrote:
>
> when i tune in cw with 45 in to amp it shows 550watts . and when i go into ssb with it the amp only does 550watts but when i take the alc out of line it does 800watts so that tells me that the alc is only doing 45watts into amp .
> thanks Rick
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Rick,
> >
> > What do you mean when you say, "My alc is set for 45 watts"?
> >
> > How are you determining that a specific level of ALC is controlling the output to no more than 45 watts? Please explain how you are doing this.
> >
> > 73s
> > Mike
> > W5RKL
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> >
> > --- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@> wrote:
> > >
> > > My alc is set for 45 watts to drive a amp in my ts820 how do i get it to do more and is there a adjustment inside of radio to do this .
> > >
> > > Thanks Rick Kd5utc
> > >
> > >
>

30773. Keyer for my TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 12:47:25 UTC
From: ve3pcd
Topic: 30773 Message: 30773

I am looking for a code keyer kit to build for my TS-830S so that I can start to us CW again. I have a Bencher iambic key that I need to get some use of HI HI.

73,
Peter

30774. Re: Keyer for my TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 13:01:31 UTC
From: w5rkl
Topic: 30773 Message: 30774

Hello Peter,

MFJ sells a very nice 407D CW keyer that works very well with the hybrids as well as many other transmitters/transceivers. You need a 1/4" stereo plug connected to your paddle then plug the 1/4" stereo plug into the rear of the 407D keyer. You also need a shielded cable to connect the 407D keyer to the transmitter/transceiver. I use cheap stereo inter-connecting cables. The 830 has a 1/4" CW key socket on the rear panel. You will need a 1/4" mono plug or a 1/4" stereo plug, connected to the 2 conductor cable between the 830 and the keyer. The 407D keyer output is a 2 conductor RCA female socket.

The 407D keyer will operate from an external 12VDC power source or a 9 volt battery.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@...> wrote:
>
> I am looking for a code keyer kit to build for my TS-830S so that I can start to us CW again. I have a Bencher iambic key that I need to get some use of HI HI.
>
> 73,
> Peter
>

30775. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 13:17:53 UTC
From: Jim S
Topic: 30767 Message: 30775

Mike, you are being too much of a gentleman regarding this issue.

I am afraid that the confusion has entered the amateur radio ranks because another service has totally mis-construed how ALC controls power output, and how amplifiers are driven by transceivers being used as the exciter.

"All knobs full right" has become a mantra among many radio operators, and it is possible that this thread is an indication of what is being taught (or should I say mis-taught) to so many operators these days.

It cannot be emphasized enough that the proper operation of ALC is just a slight deflection of the indicator, be it a true mechanical meter, an electronic equivalent, or even a flashing light, as was used in the older TenTec radios.

Another thing which is not understood by a great number of operators, is the relationship between "peak" and "average" power as created by the human voice.

In CW mode, the peak and average power readings are going to be the same, or very close to the same, because a "key-down" carrier produces 100% of the power that the system can produce, for the whole time the carrier is on.

In SSB mode, because of the characteristics of the human voice, the peak power is going to be the same as the CW power, but the AVERAGE power reading, which most meters will show, is only 25-30 percent of that peak power.

Many operators try to get that average power reading higher, thinking that there is something "wrong" with their radio if they don't see higher numbers. This leads to many bad signals over the air.

The more one can do to educate these operators, the better the bands will sound. Unfortunately, at this point, it seems to be a loosing battle!

Jim AG3Y

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 11, 2011 8:03 AM
Subject: [TS-520_820_530_830] Re: how to adjust alc

Hello Rick,

Unfortunately ALC doesn't do 45 watts as you say. ALC itself does not produce any power output.

You cannot "preset" a maximum 45 watts RF output in CW mode by adjusting the CAR control then expect to see that same maximum 45 watts output when you switch to sideband mode. That's not how it works.

The CAR control is only used in CW and TUNE mode. When operating in sideband the CAR control is "disabled" and all power output is controlled by the MIC gain along with any ALC produced in the 820's final amplifier.

ALC is a gain control voltage that is produced and applied to earlier stages when the drive to the final amplifier causes grid current to flow. When grid current flows in the final amplifier, power is consumed in the final tube grids. That power consumed in the grids is taken away from the final amplifier's RF output. Grid current also results in distortion in the final amplifier's output signal.

You say by connecting the 820's external ALC connection on the rear panel to the amplifier's ALC connection the amplifier's power output is 550 watts. If you remove the ALC connection between the 820 and the amplifier, power output soars to 800 watts. That's not a 45 watt difference but rather a "250 watt" difference. That 250 watt difference tells me the 820 is driving the amplifier with a lot more than 45 watts. That also tells me that it is quite possible the amplifier's output signal could easily be distorted because the level of ALC voltage being produced in the amplifier is significantly higher than it should be because of the much higher RF driving power the 820 is applying to the amplifier in sideband mode.

You didn't say what you have the 820's MIC gain set at. To achieve a difference of 250 watts based on the ALC connection between the amplifier and the 820, the MIC gain would have to be much higher than 2.

With the amplifier left in standby or turned OFF and the ALC connection between the 820 and the amplifier in place, tune the 820 up for maximum output in CW mode (100 watts). Switch to sideband and set the 820's meter switch to ALC. While talking 2 inches from the microphone in a normal tone of voice, adjust the MIC gain so the ALC meter just starts to flicker above zero then stop adjusting the MIC gain. Don't adjust the MIC gain any higher. This is the point of maximum peak RF output with very little, if any, distortion in the 820's output. Turn the amplifier on and your transmit signal with the amplifier, will be clean.

All too often hams today tend to adjust the MIC gain so they sound "LOUD" at the receiving end. When this happens, the RF output contains distortion which results in splatter causing adjacent frequency interference. Remember, it's not how LOUD you sound but how clean your transmit signal is.

Don't be fooled or convinced by others that you have to have a high ALC meter indication in sideband in order for your transmitter to be working properly. That's wrong. A higher ALC indication does not mean your transmitter is producing more power output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@...> wrote:
>
> when i tune in cw with 45 in to amp it shows 550watts . and when i go into ssb with it the amp only does 550watts but when i take the alc out of line it does 800watts so that tells me that the alc is only doing 45watts into amp .
> thanks Rick
>

> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Rick,
> >
> > What do you mean when you say, "My alc is set for 45 watts"?
> >
> > How are you determining that a specific level of ALC is controlling the output to no more than 45 watts? Please explain how you are doing this.
> >
> > 73s
> > Mike
> > W5RKL
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> > --- In TS-520_820_530_830@yahoogroups.com, "kd5utc" <kd5utc@> wrote:
> > >
> > > My alc is set for 45 watts to drive a amp in my ts820 how do i get it to do more and is there a adjustment inside of radio to do this .
> > >
> > > Thanks Rick Kd5utc
> > >
> > >
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17270)
http://www.pctools.com
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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17270)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

30776. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 13:26:39 UTC
From: David Rust
Topic: 30767 Message: 30776

Have you noticed how signals sound on the bands nowdays? Too much audio, too much back ground noise. It seems as though you are suppose to run the audio wide open, the speech processer on way too high and the rit turned just a little bit. The manual explains all this, but I guess they get lost when the rig is unpacked.
W0DLR

[Non-text portions of this message have been removed]

30777. Re: Keyer for my TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 13:32:59 UTC
From: ve3pcd
Topic: 30773 Message: 30777

Thanks Mike, I will give that a look.

73

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Peter,
>
> MFJ sells a very nice 407D CW keyer that works very well with the hybrids as well as many other transmitters/transceivers. You need a 1/4" stereo plug connected to your paddle then plug the 1/4" stereo plug into the rear of the 407D keyer. You also need a shielded cable to connect the 407D keyer to the transmitter/transceiver. I use cheap stereo inter-connecting cables. The 830 has a 1/4" CW key socket on the rear panel. You will need a 1/4" mono plug or a 1/4" stereo plug, connected to the 2 conductor cable between the 830 and the keyer. The 407D keyer output is a 2 conductor RCA female socket.
>
> The 407D keyer will operate from an external 12VDC power source or a 9 volt battery.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@> wrote:
> >
> > I am looking for a code keyer kit to build for my TS-830S so that I can start to us CW again. I have a Bencher iambic key that I need to get some use of HI HI.
> >
> > 73,
> > Peter
> >
>

30778. Re: [TS-520_820_530_830] Keyer for my TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 15:06:32 UTC
From: Ruben Echevarria KA2HHB
Topic: 30773 Message: 30778

Ramsey has a kit .... I built one ... Works fine.
http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=CW7C

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: ve3pcd
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 11, 2011 8:47 AM
Subject: [TS-520_820_530_830] Keyer for my TS-830S

I am looking for a code keyer kit to build for my TS-830S so that I can start to us CW again. I have a Bencher iambic key that I need to get some use of HI HI.

73,
Peter

[Non-text portions of this message have been removed]

30779. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 18:06:05 UTC
From: pwrapsengineer
Topic: 30747 Message: 30779

Don, in the Database section of the group there is a folder giving dates for serial numbers which were submitted by original owners of these rigs. The TS-830 data that is there (it's sparse) is below and from this table you can see that the 1111111 number on your radio most likely is from 1980 or 1981. Keep in mind that the distribution chain from parts production to finished goods to distribution to retail outlet to customer could be well over a year, so the radio you have may have been built in 1980 and sold in 1981 or even 1982. Just bounding it to 1980-1981 may be about the best you'll really do.

1050150 TS-830S Oct 4,1981
2050969 TS-830S Feb 24 1982
3110217 TS-830S 05-12-1983

Cheers and 73
Larry, KS7J

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
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>
> Thanks Larry for your post
>
> I will do as you say and check it top and bottom since i have the covers off
> It's looking like it might be a 1980
>
> cheers
> Don
> ve2ud/ve2dzo
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> > You might look at the dates on caps, relays, etc., if you can't find an IC or two with readable codes.
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> > > Thank you for the great posting Larry
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> > > Can you tell me what this serial number is 1111111 yes seven one's
> > > I have sent him a few photo's of the radio for his site
> > > I can't see any dates on the ic's but maybe i am not reading it right
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> > > I have been in touch with Martin [Check G4FUI's site where he has some dating examples:
> > > > > > http://www.g4fui.net/rigs_frameset.html]
> > > This is what he had to say
> > > Hi Don,
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> > > The reason for the multipole Jones plug on the radio was to allow the
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> > > Hope this is of some interest
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> > > > If your Kenwood has not been modified or had modules swapped in a repair, the most
reliable way to date your radio is to read the date codes on the ICs or other date coded
components. Usually the ICs are the easiest to decode since most semiconductor
manufacturers date or lot code their parts for tracing in case there is a defect or test
issue in the manufacturing process. Also, most systems manufacturers, such as Kenwood, use
only relatively "fresh" IC components, not parts that have been on the shelf for several

years. This is why ICs are the best to use.
> > > >
> > > > In case you are not aware of the codeing process, one of the most common is a 4 digit code that has as the first two digits the year of manufacture and the next two digits are the week of the manufacturing. For example 8327 would be 1983, first week of July. Check several different types of parts and see if most are within a few weeks range. It is a good bet that the date of your Kenwood is about 3 months younger than the latest date codes you can find on the ICs. I am not certain if Kenwood stamped test or acceptance date codes on assemblies, but if they did that is a better approach or at least a great cross check.
> > > >
> > > > Hope this helps.
> > > > Larry, KS7J
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> > > > --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
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> > > > > Thank you Bill for that great info
> > > > > will check that out
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> > > > > > I found some help from another Kenwood Hybrid enthusiast and a fellow in GB when I had this same inquiry when I bought my TS-830S last summer.
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> > > > > > It seems like the first digit in the SN minus 2 gives the year and the next 2 the month and the last 4 the number of the radio that was made that month.Â
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> > > > > >
> > > > > > If you open the rig you should be able to locate IC date codes.Â The LSI chip in my radio was made the latter part of the year before any of the other date codes in my radio.Â So to make a long story (mine is way too long) short.Â Kenwood did not use a serial number date/manufacturing run method like Yaesu did.Â You can probably get close to the actual year or the year before using the serial number method.
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> > > > > > Check G4FUI's site where he has some dating examples:
> > > > > > http://www.g4fui.net/rigs_frameset.html
> > > > > >
> > > > > > 73,
> > > > > >
> > > > > > Bill
> > > > > >
> > > > > > AI4WM
> > > > > >

> > > > > > --- On Sat, 4/9/11, Don D <ve2ud@> wrote:
> > > > > >
> > > > > > From: Don D <ve2ud@>
> > > > > > Subject: [TS-520_820_530_830] Serial numbers
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Date: Saturday, April 9, 2011, 9:06 AM
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> > > > > > Hi again
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> > > > > > My 830s numbers are 1111111
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30780. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 18:25:04 UTC
From: KA5TRO
Topic: 30767 Message: 30780

David et al,

I agree with you guys about audio and ALC.

I'm not going to defend those who operate 'with the knobs all the way to the right'. However, you might want to remember that some of these guys may be compensating for what you might consider to be poor antenna installations with raw RF power or over-amplified/over-processed audio, especially if they live in CCR-restricted neighborhoods where they can't put up the antenna system they might otherwise.

Or, they just might want to splatter all over the bands and bust any pile-up no matter what, because they can.

I can't run the antenna system I'd like -- not because of CCR restrictions, but XYL restrictions -- so I do the best I can. It's not a bad discussion to have, especially considering that many newer amateur operators are 'discovering' the quality and capability of these older rigs while bringing with them some of the pre- or misconceptions from other services (as mentioned in a previous post).

Audio processing has been around for quite a while (remember the Vibratrol CA-300? I still have one, actually), and, when used properly it's a good thing. When. Used. Properly.

Anyhow, not trying to hijack the thread, just observing some possibilities. It's up to us as amateurs to educate our fellow amateurs on topics like this, in my humble opinion, and this is a good venue in which to do it.

Tony KA5TRO

----- Original Message -----
From: David Rust
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 11, 2011 8:26 AM
Subject: Re: [TS-520_820_530_830] Re: how to adjust alc

Have you noticed how signals sound on the bands nowdays? Too much audio, too much back ground noise. It seems as though you are suppose to run the audio wide open, the speech processer on way too high and the rit turned just a little bit. The manual explains all this, but I guess they get lost when the rig is unpacked.
W0DLR

[Non-text portions of this message have been removed]

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30781. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 19:31:04 UTC
From: Don D
Topic: 30747 Message: 30781

Thanks for that info
i will like most of the posts copy and paste it into my 830 files
yes i think 1980 would be very close
when did production end with the ts830s
thanks again for your time

73
Don
ve2ud/ve2dzo

--- In TS-520_820_530_830@yahoogroups.com, "pwrapsengineer" <larry.shorthill@...> wrote:
>
> Don, in the Database section of the group there is a folder giving dates for serial numbers which were submitted by original owners of these rigs. The TS-830 data that is there (it's sparse) is below and from this table you can see that the 1111111 number on your radio most likely is from 1980 or 1981. Keep in mind that the distribution chain from parts production to finished goods to distribution to retail outlet to customer could be well over a year, so the radio you have may have been built in 1980 and sold in 1981 or even 1982. Just bounding it to 1980-1981 may be about the best you'll really do.
>
> 1050150 TS-830S Oct 4,1981
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> Cheers and 73
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> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Date: Saturday, April 9, 2011, 9:06 AM
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30782. Re: Serial numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 20:30:42 UTC
From: james27613
Topic: 30747 Message: 30782

hi,

in the Database section of the group I have
setup a table for serial number, new purchase date and
model number.

73 james ke4dɪn

30783. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 22:07:17 UTC
From: Kevin Mahoney
Topic: 30767 Message: 30783

Mike,
That was a great very cohesive explanation. I am not too bright and I understood it. I have gotten so much conflicting advice about tuning the exciter (830S) and the amp that I have been left confused more than usual. This sounds like good technically backed advice. Thanks
Kevin
KD0ILM

[Non-text portions of this message have been removed]

30784. added photo's of the serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 22:18:22 UTC
From: Don D
Topic: 30784 Message: 30784

I have added 3 photos of the odd ball rig under photos

I always check the posters out on QRZ.COM
My photo was when i first got my license with my brand new Ts 520

73s
Don
ve2ud

30785. added photo's of the serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 22:45:06 UTC
From: Don D
Topic: 30784 Message: 30785

I have added 3 photos of the odd ball rig under photos

I always check the posters out on QRZ.COM
My photo was when i first got my license with my brand new Ts 520

73s
Don
ve2ud

30786. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 22:55:28 UTC
From: John Davidson
Topic: 30767 Message: 30786

I heard this over a local FM repeater;
"On a sideband radio you can turn the RI.T . to the right to get more power in your upper sideband and to the left to get more into the lower sideband." The speaker sounded sincere about this technical revelation.

From: David Rust <dlrust@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 11, 2011 9:26:39 AM
Subject: Re: [TS-520_820_530_830] Re: how to adjust alc

Have you noticed how signals sound on the bands nowdays? Too much audio, too much back ground noise. It seems as though you are suppose to run the audio wide open, the speech processer on way too high and the rit turned just a little bit. The manual explains all this, but I guess they get lost when the rig is unpacked.
W0DLR

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30787. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 22:59:22 UTC
From: mwusmm
Topic: 30755 Message: 30787

As Ger, PE1CZG indicated....I had the same ALC issue with my TS-830s. As detailed on the www.k4eaa.com site..... the RL-1 relay was replaced. Problem fixed.
Ken details how to test the relay on his web page also.

Best to you
73
Mike

> You need to examine relay RL-1. I replaced the relay with I ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
> >
> > Good luck and best 73's Ger, PE1CZG

--- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
Okay Ger and Mike...thanks for the replies and suggestions.

Mike,
> I did forget to mention that I use TUNE mode to pre-tune the 830 then switch to CWW to tune to the rig to 100 watts. I see absolutely no fluctuation in RF output at all. Its rock solid.
>
> I'll inspect R15 / R16 and also have a look at the foil runs from the PC boards. I'm guessing those aren't any particular easy fix if that turns out to be the problem.
>
> Ger,
> My meter isn't intermittent in any other position except ALC. The S-meter functions 100%. I'm not sure if this is the same issue that you had or not but, I'll look into it after checking those resistors out.
>
> 73 with regards,
>
> Joe
> WS8X
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Ger,
> >
> > You said you can tune the 830 up and get 100 watts output using an external watt meter. What mode are you using to achieve 100 watts output? The 830 will not produce 100 watts output in TUNE mode. In CW mode, however, you can achieve 100 watts output.
> >
> > If you are tuning the 830 up in CW mode and while watching you external watt meter, do you see any intermittent or instability in the RF output? If not then it's quite possible

the source of your problem is not the AF unit relay.
> >
> > Since you are not the original owner it's quite possible a previous owner may have experienced a similar problem and was instructed to replace R15 and R16 on the Rectifier Unit. If the previous owner's soldering skills were poor, there may be an intermittent poor solder connection to one or both resistors which is contributing to your intermittent problem. Therefore, I would check the solder connection to R15 and/or R16 before moving on to relay RL1 on the AF Unit board.
> >
> > I also would not discount a fractured foil run on a PC board either. The foil runs are very thin and easily broken if excessive heat is applied when soldering a component lead. This is common in these hybrids.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@> wrote:
> > >
> > > Joe,
> > >
> > > I had the same problem with mt TS-530SP: unstable ALC reading on the S-meter and sometimes S-meter reading itself.
> > > You need to examine relay RL-1. I replaced the relay with I ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
> > >
> > > Good luck and best 73's Ger, PE1CZG
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@> wrote:
> > > >
> > > > Hello to all on the group!
> > > >
> > > >
> > > > I just joined the a few weeks ago and this is my first post.
> > > >
> > > > I recently became the owner of a very nice TS-830S. I really like the transceiver very much! It is in very clean cosmetic condition and works exceptionally well. I have noticed one issue that I was hoping someone might be able to assist me with.
> > > >
> > > > There seems to be an intermittent problem with my meter in the ALC position. Sometimes the meter will not read any deflection in ALC mode. Other times it works fine. Even when this happens, I can still tune the transmitter to 100+ watts output on all bands (with plate current at about 225 mA.) I do this by using my external watt meter to peak the ALC in tune. My meter functions just fine in displaying the plate current, RF, compression, and HV.
> > > >
> > > > Again, this problem seems to be intermittent. Sometimes the meter will read ALC as it should, other times it will not. The issue does not seem to be band specific. In other

words, when the ALC isn't reading...it isn't reading on any band. Conversely, when it is working... it's working on all bands.
> > > >
> > > > Here's what I've done thus far to troubleshoot it... Replaced 12BY7A driver, no change at all. Sprayed DeOxit cleaner on the meter switch and exercised the switch liberally. Initially, I thought this may have helped, but after a day or two the problem has come back.
> > > >
> > > > Does anyone have any suggestions or ideas on how to fix this? I was hoping someone else may have had an issue similar to mine.
> > > >
> > > >
> > > > Many thanks!
> > > >
> > > > 73 DE WS8X
> > > >
> > > > Joe Loverti Jr.
> > > >
> > >
> >
>

30788. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:13:17 UTC
From: David Rust
Topic: 30767 Message: 30788

John, thats a new use for the RIT. Its a different world out there anymore.
Dave W0DLR

[Non-text portions of this message have been removed]

30789. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:16:34 UTC
From: w5rkl
Topic: 30767 Message: 30789

It would interesting to hear his explanation how "RIT" controls the transmit frequency especially since "RIT" stands for "Receiver Incremental Tuning" and has nothing to do with the transmit frequency.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@...> wrote:
>
> John, thats a new use for the RIT. Its a different world out there anymore.
> Dave W0DLR
>
> [Non-text portions of this message have been removed]
>

30790. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:20:16 UTC
From: w5rkl
Topic: 30767 Message: 30790

In addition to my last response, "RIT" is disabled in transmit. The next time he talks about this, ask him to explain, in detail, how RIT affects the transmit frequency. I would be interested in hearing his explanation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> It would interesting to hear his explanation how "RIT" controls the transmit frequency especially since "RIT" stands for "Receiver Incremental Tuning" and has nothing to do with the transmit frequency.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@> wrote:
> >
> > John, thats a new use for the RIT. Its a different world out there anymore.
> > Dave W0DLR
> >
> > [Non-text portions of this message have been removed]
> >
>

30791. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:20:29 UTC
From: jeffrey lord
Topic: 30767 Message: 30791

If you turned the RIT either fully right or left , all you would do is shift the tuned FREQ , and so not be able to understand the tramsmitting station,

It would not affect the output power of the transmitter .

Cheers,

Jeff
vk4fnrs

----- Original Message ----
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, 11 April, 2011 3:16:34 PM
Subject: [TS-520_820_530_830] Re: how to adjust alc

It would interesting to hear his explanation how "RIT" controls the transmit frequency especially since "RIT" stands for "Receiver Incremental Tuning" and has nothing to do with the transmit frequency.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@...> wrote:
>
> John, thats a new use for the RIT. Its a different world out there anymore.
> Dave W0DLR
>
> [Non-text portions of this message have been removed]
>

Yahoo! Groups Links

30792. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:30:27 UTC
From: David Rust
Topic: 30767 Message: 30792

Theres all kinds of theories out there isn't there? Maybe we ought to write a second Handbook just for grins. I can understand mistakes when someone just doesn't know, but I have heard some misunderstood ideas that almost turned into preaching on the air. I just move off frequency when these come up.

[Non-text portions of this message have been removed]

30793. Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:33:15 UTC
From: w5rkl
Topic: 30767 Message: 30793

The RIT pot varies a DC voltage that is applied to a varicap diode in the VFO. As the RIT control is rotated which varies the DC voltage, the varicap diode capacitance value changes resulting in a change in the VFO frequency. There are a few other "fixed value" components in addition to the varicap diode. These components contribute to the changing of the VFO frequency when RIT is enabled.

When switching to transmit, a relay terminal "disables" the RIT control, allowing the VFO to return to its original frequency. Switching back to receive, the relay terminal enables the RIT circuit etc.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> If you turned the RIT either fully right or left , all you would do is shift the
> tuned FREQ , and so not be able to understand the tramsmitting station,
>
> It would not affect the output power of the transmitter .
>
> Cheers,
>
> Jeff
> vk4fnrs
>
>
>
> ----- Original Message ----
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, 11 April, 2011 3:16:34 PM
> Subject: [TS-520_820_530_830] Re: how to adjust alc
>
> It would interesting to hear his explanation how "RIT" controls the transmit
> frequency especially since "RIT" stands for "Receiver Incremental Tuning" and
> has nothing to do with the transmit frequency.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@> wrote:
> >
> > John, thats a new use for the RIT. Its a different world out there anymore.

> > Dave W0DLR
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>

30794. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:49:21 UTC
From: pmarkavage@juno.com
Topic: 30767 Message: 30794

Ah Mike, he was probably referring to that little known, undocumented,
and secret tweak by activating the XIT button and then turning the
RIT/XIT control. Several active CB'ers told me about this revelation back
in the early 80's. They only spoke the truth and they believed they had
extremely high technical skills to come forth with this information.

Pete, wa2cwa

On Mon, 11 Apr 2011 23:20:16 -0000 "w5rkl" <w5rkl@...> writes:
> In addition to my last response, "RIT" is disabled in transmit. The
> next time he talks about this, ask him to explain, in detail, how
> RIT affects the transmit frequency. I would be interested in hearing
> his explanation.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...>
> wrote:
> >
> > It would interesting to hear his explanation how "RIT" controls
> the transmit frequency especially since "RIT" stands for "Receiver
> Incremental Tuning" and has nothing to do with the transmit
> frequency.
> >
> > 73s
> > Mike
> > W5RKL

30795. Hello/New TS-830S owner :)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-11 23:33:30 UTC
From: ktwhy2003
Topic: 30795 Message: 30795

Hello,

Just want to do a quick post since I just joined this group today after buying a TS-830S this morning. See her run at the sellers shack, but I have to wait til I get a suitable meter/tuner/dummyload before I can use it. (I'm current am using a TS-50S that's on loan to me)

So I'll try not to post too many dumb questions.. I said *try*...
I've been licensed just over a year now, and looking forward to getting on the air with my new used TS-830S. It just has one smallish problem, a broken power switch that's luckily in the ON position, bit I'll replace that in time.

Kent
VE3KNT

30796. Re: [TS-520_820_530_830] Hello/New TS-830S owner :)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 00:24:19 UTC
From: David Rust
Topic: 30795 Message: 30796

Ken...there is no such thing as a dumb question. Post any question you have, we'll try to help you. You will find some very knowledgable fellows on here that will come to your rescue.

Dave W0DLR

[Non-text portions of this message have been removed]

30797. Re: [TS-520_820_530_830] Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 01:18:35 UTC
From: Joe Loverti
Topic: 30755 Message: 30797

Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.

Very Best,

Joe
WS8X

Sent from my iPhone

On Apr 11, 2011, at 5:59 PM, "mwusmm" <mwusmm@yahoo.com> wrote:

> As Ger, PE1CZG indicated....I had the same ALC issue with my
> TS-830s. As detailed on the www.k4eaa.com site..... the RL-1 relay
> was replaced. Problem fixed.
> Ken details how to test the relay on his web page also.
>
> Best to you
> 73
> Mike
>
> > You need to examine relay RL-1. I replaced the relay with I
> ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
> > >
> > > Good luck and best 73's Ger, PE1CZG
>
> --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...>
> wrote:
> Okay Ger and Mike...thanks for the replies and suggestions.
>
> Mike,
> > I did forget to mention that I use TUNE mode to pre-tune the 830
> then switch to CWW to tune to the rig to 100 watts. I see absolutely
> no fluctuation in RF output at all. Its rock solid.
> >
> > I'll inspect R15 / R16 and also have a look at the foil runs from
> the PC boards. I'm guessing those aren't any particular easy fix if
> that turns out to be the problem.
> >
> > Ger,
> > My meter isn't intermittent in any other position except ALC. The
> S-meter functions 100%. I'm not sure if this is the same issue that
> you had or not but, I'll look into it after checking those resistors
> out.
> >
> > 73 with regards,
> >

> > Joe
> > WS8X
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Ger,
> > >
> > > You said you can tune the 830 up and get 100 watts output using
> an external watt meter. What mode are you using to achieve 100 watts
> output? The 830 will not produce 100 watts output in TUNE mode. In
> CW mode, however, you can achieve 100 watts output.
> > >
> > > If you are tuning the 830 up in CW mode and while watching you
> external watt meter, do you see any intermittent or instability in
> the RF output? If not then it's quite possible the source of your
> problem is not the AF unit relay.
> > >
> > > Since you are not the original owner it's quite possible a
> previous owner may have experienced a similar problem and was
> instructed to replace R15 and R16 on the Rectifier Unit. If the
> previous owner's soldering skills were poor, there may be an
> intermittent poor solder connection to one or both resistors which
> is contributing to your intermittent problem. Therefore, I would
> check the solder connection to R15 and/or R16 before moving on to
> relay RL1 on the AF Unit board.
> > >
> > > I also would not discount a fractured foil run on a PC board
> either. The foil runs are very thin and easily broken if excessive
> heat is applied when soldering a component lead. This is common in
> these hybrids.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@>
> wrote:
> > > >
> > > > Joe,
> > > >
> > > > I had the same problem with mt TS-530SP: unstable ALC reading
> on the S-meter and sometimes S-meter reading itself.
> > > > You need to examine relay RL-1. I replaced the relay with I
> ordered from K4EAA. See here his story about RL-1: http://www.k4eaa.com/RL-1.htm
> > > >

> > > > Good luck and best 73's Ger, PE1CZG
> > > >
> > > > --- In TS-520_820_530_830@...m, "joe" <joeloverti@>
> wrote:
> > > > >
> > > > > Hello to all on the group!
> > > > >
> > > > >
> > > > > I just joined the a few weeks ago and this is my first post.
> > > > >
> > > > > I recently became the owner of a very nice TS-830S. I really
> like the transceiver very much! It is in very clean cosmetic
> condition and works exceptionally well. I have noticed one issue
> that I was hoping someone might be able to assist me with.
> > > > >
> > > > > There seems to be an intermittent problem with my meter in
> the ALC position. Sometimes the meter will not read any deflection
> in ALC mode. Other times it works fine. Even when this happens, I
> can still tune the transmitter to 100+ watts output on all bands
> (with plate current at about 225 mA.) I do this by using my external
> watt meter to peak the ALC in tune. My meter functions just fine in
> displaying the plate current, RF, compression, and HV.
> > > > >
> > > > > Again, this problem seems to be intermittent. Sometimes the
> meter will read ALC as it should, other times it will not. The issue
> does not seem to be band specific. In other words, when the ALC
> isn't reading...it isn't reading on any band. Conversely, when it is
> working... it's working on all bands.
> > > > >
> > > > > Here's what I've done thus far to troubleshoot it...
> Replaced 12BY7A driver, no change at all. Sprayed DeOxit cleaner on
> the meter switch and exercised the switch liberally. Initially, I
> thought this may have helped, but after a day or two the problem has
> come back.
> > > > >
> > > > > Does anyone have any suggestions or ideas on how to fix
> this? I was hoping someone else may have had an issue similar to mine.
> > > > >
> > > > >
> > > > > Many thanks!
> > > > >
> > > > > 73 DE WS8X
> > > > >
> > > > > Joe Loverti Jr.
> > > > >
> > > >
> > > >
> > >
> >
>
>

[Non-text portions of this message have been removed]

30798. TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 02:57:49 UTC
From: Hagar
Topic: 30798 Message: 30798

Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?

Thanks Joe. KJ4ZQX

30799. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 12:59:03 UTC
From: w5rkl
Topic: 30798 Message: 30799

Hi Joe,

The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.

The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.

If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@...> wrote:
>
> Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
>
> Thanks Joe. KJ4ZQX
>

30800. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 13:44:53 UTC
From: w5rkl
Topic: 30755 Message: 30800

Hi Joe,

Connect the 830 to a dummy load, if you have one. Tune the 830 up to full output in CW then switch to sideband, either USB or LSB it doesn't matter, and set the meter switch to ALC.

Set the MIC gain to 11 o'clock, press the PTT button on the microphone, then speak into the microphone. Do you see any indication on the meter? If there is an indication on the meter, most likely mid to upper ALC scale or higher, then I doubt the AF Unit relay is the source of your problem.

This MIC gain setting should not be considered to be the normal setting. You will notice I said to set the MIC gain at 11 o'clock. This is to ensure the transmit audio will ensure ALC is produced during this simple test ONLY.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <joeloverti@...> wrote:
>
> Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.
>
> Very Best,
>
> Joe
> WS8X

30801. TS-801 Manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 11:16:07 UTC
From: nixievitro
Topic: 30801 Message: 30801

Anyone have a link for (or a copy of) an English Manual for this radio?
Thanks

30802. Re: TS-801 Manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 16:09:44 UTC
From: w5rkl
Topic: 30801 Message: 30802

Are sure you need a "TS-801" or a "TS-820"? I've never heard of a TS-801.

If you need a manual for a TS-820 then you can download it from Gordon's website

www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "nixievitro" <crm390@...> wrote:
>
> Anyone have a link for (or a copy of) an English Manual for this radio?
> Thanks
>

30803. Re: [TS-520_820_530_830] Re: TS-801 Manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 16:39:09 UTC
From: pmarkavage@juno.com
Topic: 30801 Message: 30803

Probably never sold in the U. S.:
http://www.mods.dk/picture.php?brandid=5&model=ts-801

Pete, wa2cwa

On Tue, 12 Apr 2011 16:09:44 -0000 "w5rkl" <w5rkl@...> writes:
> Are sure you need a "TS-801" or a "TS-820"? I've never heard of a
> TS-801.
>
> If you need a manual for a TS-820 then you can download it from
> Gordon's website
>
> www.n6wk.com/kenwood/
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "nixievitro" <crm390@...>
> wrote:
> >
> > Anyone have a link for (or a copy of) an English Manual for this
> radio?
> > Thanks

30804. Question About "IF Shift" Control

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 16:41:18 UTC
From: kd8hmo
Topic: 30804 Message: 30804

Can anyone tell me what the IF Shift control on my 530S does? This is the first radio that I have owned with this control.

30805. Re: TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 15:41:40 UTC
From: paulrshinn
Topic: 29570 Message: 30805

Excellent. Thank you! Will check.

Sorry for the delay. Been busy.

VY 73,

Paul

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> A quick way to tell if the PLL is the source of the frequency problem simply measure the VCO frequency at the RF Unit's VCO terminal. The VCO frequency should be the same whether in TX or RX. You will have to compare the RF Units' VCO frequency to the VCO frequencies in the 830 service manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "paulrshinn" <subscriptions@> wrote:
> >
> > My 830 TX and RX are off by a BUNCH. The displayed TX freq. is correct, but when it switches back into RX mode, the freq. display reads 7 kc. off. Actual RX freq. is OK, just the display is way off. How would I fix that? If I use RIT, then the display might read right, but then actual RX freq. is way off.
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >
> > > Hi Chris,
> > > That is very strange that the TX and RX frequencies don't match then.
> > > Have you checked the output with a freq counter and a loop around the
> > > coax? Does it match the Digital display on the 830?
> > > Never TX into the counter directly however :-)
> > > Maybe The only thing you could do is tweak the caps on the PLL board for
> > > USB and LSB to get them to be on, or maybe the 990 is off?
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> > > > >>> If not, you adjust VR2 until it is in LSB. Once that is set, then you
> > > > >>> adjust the TC2 LSB and TC3 USB for the proper frequency.
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> > > > >>>> On 1/02/11 10:20 AM, "Greg Anders" <greg.anders@
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> > > > >>>>> Greg
> > > > >>>>> KG6YV
> > > > >>>>>
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> > > > >>>> Parnell
> > > > >>>>> Sent: Monday, January 31, 2011 1:06 PM
> > > > >>>>> To: TS-520_820_530_830@yahoogroups.com
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> > > > >>>>> referring to the adjustment on the PLL board (TC2, TC3, VR2 and
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> > > > >>>>> memory)
> > > > >>>>>
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> > > > >>>> 0yahoogroup
> > > > >>>>> s.com>>
> > > > >>>>> Date: Mon, 31 Jan 2011 13:04:32 -0800
> > > > >>>>> To:
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> > > > >>>>>

> > > > >>>>> Yes sir Chris,
> > > > >>>>>
> > > > >>>>> It sounds like your carrier frequencies are off slightly but then
> > > > >> again
> > > > >>>>> perhaps you already set them to spec....
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> > > > >>>>> Subject: [TS-520_820_530_830] TS-830s alignment question.
> > > > >>>>>
> > > > >>>>> Hi Everyone,
> > > > >>>>>
> > > > >>>>> Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
> > > > >>>>> Voltmeter
> > > > >>>>> etc. All aligned really well and on-spec.
> > > > >>>>>
> > > > >>>>> The only issue I have is that on transmit, (monitoring on my
> > > > FT-990),
> > > > >>>> on

> > > > >>>>> USB
> > > > >>>>> I am slightly low on frequency and on LSB I am slightly high on
> > > > >>>> transmit
> > > > >>>>> frequency.
> > > > >>>>>
> > > > >>>>> Any ideas?
> > > > >>>>>
> > > > >>>>> Thanks, Chris ZL1CDP
> > > > >>>>>
> > > > >>>>> Sent from my iPhone
> > > > >>>>>
> > > > >>>>> [Non-text portions of this message have been removed]
> > > > >>>>>
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30806. Re: [TS-520_820_530_830] Question About "IF Shift" Control

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 17:10:54 UTC
From: Jim S
Topic: 30804 Message: 30806

The IF Shift control, moves the center frequency of the receiver's Intermediate Frequency Amplifier's passband. As you move the control away from the center position, you will notice that first the high frequencies disappear, leaving only the lower ones, and then as you move it in the other direction, the lows will disappear, leaving only the high tones or frequencies.

The control's most useful function is to eliminate interference that is either above or below the desired range of frequencies. For instance, if a carrier is making a lot of racket at 2.5Khz, you can turn the IF shift down so that frequencies only below 2.5Khz will come through. This will make an SSB signal sound a bit "muddy", but at least you will be able to copy the other station.

Another name for the IF shift is Variable Passband Tuning , but this is usually a more refined control, in which both the lows, highs and center frequency can be altered to suit the situation. IF shift generally moves the center frequency from one side to the other, and the passband only actually changes as the shift reaches the extremes of its influence. BTW, the IF shift does NOT change the actual center frequency. A 1000 Hz tone will remain a 1000 Hz tone, as long as it is within the passband, no matter how much above or below that tone is removed.

Hope this helps ! 73, Jim AG3Y

----- Original Message -----
From: kd8hmo
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 12, 2011 12:41 PM
Subject: [TS-520_820_530_830] Question About "IF Shift" Control

Can anyone tell me what the IF Shift control on my 530S does? This is the first radio that I have owned with this control.

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17290)
http://www.pctools.com
=======

=======
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(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17290)
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=======

[Non-text portions of this message have been removed]

30807. Re: TS-830s alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 17:41:58 UTC
From: w5rkl
Topic: 29570 Message: 30807

The PLL Unit's VCO frequency will change when you adjust the VFO but once you arrive at your operating frequency and stop adjusting the VFO, switching between receive and transmit the PLL Unit's VCO frequency should be stable, not change.

I assume the display is off the same amount on ALL bands.

Check the 830 service manual alignment section, step 8, and adjust as necessary to ensure the counter's reference oscillator is at 1Mhz.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "paulrshinn" <subscriptions@...> wrote:
>
> Excellent. Thank you! Will check.
>
> Sorry for the delay. Been busy.
>
> VY 73,
>
> Paul
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > A quick way to tell if the PLL is the source of the frequency problem simply measure the VCO frequency at the RF Unit's VCO terminal. The VCO frequency should be the same whether in TX or RX. You will have to compare the RF Units' VCO frequency to the VCO frequencies in the 830 service manual.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "paulrshinn" <subscriptions@> wrote:
> > >
> > > My 830 TX and RX are off by a BUNCH. The displayed TX freq. is correct, but when it switches back into RX mode, the freq. display reads 7 kc. off. Actual RX freq. is OK, just the display is way off. How would I fix that? If I use RIT, then the display might read right, but then actual RX freq. is way off.
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > >

> > > > Hi Chris,
> > > > That is very strange that the TX and RX frequencies don't match then.
> > > > Have you checked the output with a freq counter and a loop around the
> > > > coax? Does it match the Digital display on the 830?
> > > > Never TX into the counter directly however :-)
> > > > Maybe The only thing you could do is tweak the caps on the PLL board for
> > > > USB and LSB to get them to be on, or maybe the 990 is off?
> > > > How far off does your 990 show the 830 is?
> > > > I have never had this issue in any of the 830's I have aligned.
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> > > > > >>>>> It sounds like your carrier frequencies are off slightly but then
> > > > > >> again
> > > > > >>>>> perhaps you already set them to spec....
> > > > > >>>>>
> > > > > >>>>> Greg
> > > > > >>>>>
> > > > > >>>>> From:
> > > > > >>>>> TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >>>>
> > > > > >>>>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > > > >>>> 0yahoogroups
> > > > > >>>>> .com>
> > > > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >>>>> [mailto:TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
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> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > > > >>>> 0yah
> > > > > >>>>> oogroups.com>
> > > > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris
> > > > > >>>> Parnell
> > > > > >>>>> Sent: Monday, January 31, 2011 11:48 AM
> > > > > >>>>> To:
> > > > > >>>>> TS-520_820_530_830@yahoogroups.com
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >>>>

> > > > > >>>>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com><mailto:TS-520_820_530_830%4
> > > > > >>>> 0yahoogroups
> > > > > >>>>> .com>
> > > > > >>>>> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > >>>>> Subject: [TS-520_820_530_830] TS-830s alignment question.
> > > > > >>>>>
> > > > > >>>>> Hi Everyone,
> > > > > >>>>>
> > > > > >>>>> Aligned my TS-830s last night using Sig Gen, Frequency Counter, RF
> > > > > >>>>> Voltmeter
> > > > > >>>>> etc. All aligned really well and on-spec.
> > > > > >>>>>
> > > > > >>>>> The only issue I have is that on transmit, (monitoring on my
> > > > > FT-990),
> > > > > >>>> on
> > > > > >>>>> USB
> > > > > >>>>> I am slightly low on frequency and on LSB I am slightly high on
> > > > > >>> transmit
> > > > > >>>>> frequency.
> > > > > >>>>>
> > > > > >>>>> Any ideas?
> > > > > >>>>>
> > > > > >>>>> Thanks, Chris ZL1CDP
> > > > > >>>>>
> > > > > >>>>> Sent from my iPhone
> > > > > >>>>>
> > > > > >>>>> [Non-text portions of this message have been removed]
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30808. Re: TS-801 Manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 17:44:57 UTC
From: w5rkl
Topic: 30801 Message: 30808

That's a new one, at least for me. Thanks Pete, learn something new every day.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Probably never sold in the U. S.:
> http://www.mods.dk/picture.php?brandid=5&model=ts-801
>
> Pete, wa2cwa
>
> On Tue, 12 Apr 2011 16:09:44 -0000 "w5rkl" <w5rkl@...> writes:
> > Are sure you need a "TS-801" or a "TS-820"? I've never heard of a
> > TS-801.
> >
> > If you need a manual for a TS-820 then you can download it from
> > Gordon's website
> >
> > www.n6wk.com/kenwood/
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "nixievitro" <crm390@>
> > wrote:
> > >
> > > Anyone have a link for (or a copy of) an English Manual for this
> > radio?
> > > Thanks
>

30809. Re: Question About "IF Shift" Control

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 20:27:11 UTC
From: andy_westcott2004
Topic: 30804 Message: 30809

A useful control, especially if you have another station close by.

You can then shift the IF to move its passband away from the interfering station. The wanted signal will be affected, but the interfering station much more so.

Incidentlly, I didn't realise the 530 had this control - my lowly 520 doesn't, which is a bit of a pity.

30810. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 21:08:33 UTC
From: Ger
Topic: 30755 Message: 30810

Joe and all,

To be precise: my TS-530SP S-meter and ALC readings where intermittent interrupted: when I listen to a station with S9 or whatever reading, the S-meter drops to nil. In that situation I had no ALC reading as well. IP,RF and HV readings where still there.
Don't know what the relation was but exchanging RL-1 did the trick.

Best 73's Ger PE1CZG

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Joe,
>
> Connect the 830 to a dummy load, if you have one. Tune the 830 up to full output in CW then switch to sideband, either USB or LSB it doesn't matter, and set the meter switch to ALC.
>
> Set the MIC gain to 11 o'clock, press the PTT button on the microphone, then speak into the microphone. Do you see any indication on the meter? If there is an indication on the meter, most likely mid to upper ALC scale or higher, then I doubt the AF Unit relay is the source of your problem.
>
> This MIC gain setting should not be considered to be the normal setting. You will notice I said to set the MIC gain at 11 o'clock. This is to ensure the transmit audio will ensure ALC is produced during this simple test ONLY.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <joeloverti@> wrote:
> >
> > Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.
> >
> > Very Best,
> >
> > Joe
> > WS8X
>

30811. Re: [TS-520_820_530_830] Re: TS-801 Manual

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-12 21:09:58 UTC
From: pmarkavage@juno.com
Topic: 30801 Message: 30811

I have to know these things. Hi
Pete, wa2cwa
ManualMan

On Tue, 12 Apr 2011 17:44:57 -0000 "w5rkl" <w5rkl@...> writes:
> That's a new one, at least for me. Thanks Pete, learn something new
> every day.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
> >
> > Probably never sold in the U. S.:
> > http://www.mods.dk/picture.php?brandid=5&model=ts-801
> >
> > Pete, wa2cwa
> >
> > On Tue, 12 Apr 2011 16:09:44 -0000 "w5rkl" <w5rkl@...> writes:
> > > Are sure you need a "TS-801" or a "TS-820"? I've never heard of
> a
> > > TS-801.
> > >
> > > If you need a manual for a TS-820 then you can download it from
>
> > > Gordon's website
> > >
> > > www.n6wk.com/kenwood/
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "nixievitro"
> <crm390@>
> > > wrote:
> > > >
> > > > Anyone have a link for (or a copy of) an English Manual for
> this
> > > radio?
> > > > Thanks

30812. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 00:59:25 UTC
From: John Davidson
Topic: 30767 Message: 30812

The guy who made that statement about RIT probably had a VHF FM rig that only had a channel selector and volume control, maybe a squelch knob that he kept turned fully clockweise to make his signal louder ! :D

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 11, 2011 7:33:15 PM
Subject: [TS-520_820_530_830] Re: how to adjust alc

The RIT pot varies a DC voltage that is applied to a varicap diode in the VFO. As the RIT control is rotated which varies the DC voltage, the varicap diode capacitance value changes resulting in a change in the VFO frequency. There are a few other "fixed value" components in addition to the varicap diode. These components contribute to the changing of the VFO frequency when RIT is enabled.

When switching to transmit, a relay terminal "disables" the RIT control, allowing the VFO to return to its original frequency. Switching back to receive, the relay terminal enables the RIT circuit etc.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> If you turned the RIT either fully right or left , all you would do is shift
>the
>
> tuned FREQ , and so not be able to understand the tramsmitting station,
>
> It would not affect the output power of the transmitter .
>
> Cheers,
>
> Jeff
> vk4fnrs
>
>
>
> ----- Original Message ----
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, 11 April, 2011 3:16:34 PM
> Subject: [TS-520_820_530_830] Re: how to adjust alc
>

> It would interesting to hear his explanation how "RIT" controls the transmit
> frequency especially since "RIT" stands for "Receiver Incremental Tuning" and
> has nothing to do with the transmit frequency.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@> wrote:
> >
> > John, thats a new use for the RIT. Its a different world out there anymore.
>
> > Dave W0DLR
> >
> > [Non-text portions of this message have been removed]
> >
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>
> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

30813. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 01:22:07 UTC
From: w5rkl
Topic: 30755 Message: 30813

Hello Ger,

The new information about the S meter being intermittent changes things. I wasn't aware the S meter would fail, unless I missed it in a previous post/response. I only knew of the intermittent ALC. You said the meter switch positions IP, RF, and HV, in transmit, all worked as they should which didn't indicate a relay issue. You also said the 830 produced full stable RF output in CW mode. That's why I asked you to tune up the 830 for full output then switch to sideband and speaking into the microphone to see if the meter would display any ALC with the meter switch set to ALC.

A recommendation if any future problems occur, try to include as much information as possible, even if you don't think it is important.

Congratulations on fixing your 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "Ger" <ghoogendijk@...> wrote:
>
> Joe and all,
>
> To be precise: my TS-530SP S-meter and ALC readings where intermittent interrupted: when I listen to a station with S9 or whatever reading, the S-meter drops to nil. In that situation I had no ALC reading as well. IP,RF and HV readings where still there.
> Don't know what the relation was but exchanging RL-1 did the trick.
>
> Best 73's Ger PE1CZG
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Joe,
> >
> > Connect the 830 to a dummy load, if you have one. Tune the 830 up to full output in CW then switch to sideband, either USB or LSB it doesn't matter, and set the meter switch to ALC.
> >
> > Set the MIC gain to 11 o'clock, press the PTT button on the microphone, then speak into the microphone. Do you see any indication on the meter? If there is an indication on the meter, most likely mid to upper ALC scale or higher, then I doubt the AF Unit relay is the source of your problem.
> >
> > This MIC gain setting should not be considered to be the normal setting. You will notice I said to set the MIC gain at 11 o'clock. This is to ensure the transmit audio will ensure ALC is produced during this simple test ONLY.

> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <joeloverti@> wrote:
> > >
> > > Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.
> > >
> > > Very Best,
> > >
> > > Joe
> > > WS8X
> >
>

30814. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 01:52:55 UTC
From: joe
Topic: 30755 Message: 30814

Hello Mike, Ger, and ALL-

I think Mike (W5RKL) may have my original post with my question about an intermittent ALC indication on my TS-830S confused with Ger's post in response to mine. My S Meter, IP, COMP, and HV settings are working just fine. I believe it was Ger who mentioned that he had an intermittent meter that was fixed by a replacement of RL-1. No biggie, just wanted to clear the record.

Mike, I've followed your suggestions about tuning the rig up and speaking into the mic with the mic gain set at 11 o'clock. I have no ALC reading at all.

Today, I did the K4EAA recommended "tap test" on RL-1. At first I noticed no change in the meter. I tapped a couple more times and then, viola! ALC is back. It's been working fine all day. This leads me to believe the relay contacts weren't making sound contact or it was a sheer coincidence. Either way, I may end up just replacing the RL-1 as a precautionary measure.

Thanks for your assistance!

73 with regards,

Joe WS8X
--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Ger,
>
> The new information about the S meter being intermittent changes things. I wasn't aware the S meter would fail, unless I missed it in a previous post/response. I only knew of the intermittent ALC. You said the meter switch positions IP, RF, and HV, in transmit, all worked as they should which didn't indicate a relay issue. You also said the 830 produced full stable RF output in CW mode. That's why I asked you to tune up the 830 for full output then switch to sideband and speaking into the microphone to see if the meter would display any ALC with the meter switch set to ALC.
>
> A recommendation if any future problems occur, try to include as much information as possible, even if you don't think it is important.
>
> Congratulations on fixing your 830.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@> wrote:
> >

> > Joe and all,
> >
> > To be precise: my TS-530SP S-meter and ALC readings where intermittent interrupted: when I listen to a station with S9 or whatever reading, the S-meter drops to nil. In that situation I had no ALC reading as well. IP,RF and HV readings where still there.
> > Don't know what the relation was but exchanging RL-1 did the trick.
> >
> > Best 73's Ger PE1CZG
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Joe,
> > >
> > > Connect the 830 to a dummy load, if you have one. Tune the 830 up to full output in CW then switch to sideband, either USB or LSB it doesn't matter, and set the meter switch to ALC.
> > >
> > > Set the MIC gain to 11 o'clock, press the PTT button on the microphone, then speak into the microphone. Do you see any indication on the meter? If there is an indication on the meter, most likely mid to upper ALC scale or higher, then I doubt the AF Unit relay is the source of your problem.
> > >
> > > This MIC gain setting should not be considered to be the normal setting. You will notice I said to set the MIC gain at 11 o'clock. This is to ensure the transmit audio will ensure ALC is produced during this simple test ONLY.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <joeloverti@> wrote:
> > > >
> > > > Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.
> > > >
> > > > Very Best,
> > > >
> > > > Joe
> > > > WS8X
> > >
> > >
> >
>

30815. Re: TS-830S ALC meter issue?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 02:44:48 UTC
From: w5rkl
Topic: 30755 Message: 30815

It does appear I got you and Ger mixed up. Sorry about that.

As I said if you saw ALC during the simple test then the relay probably wasn't the source of your problem. However, as you found out by tapping on the relay it does appear the relay could possibly be the source of your problem.

You might also clean AF Unit plugs 7 and 10. Plug 7 is where the meter connects and plug 10 is where the ALC flows from. There are other circuits that flow through these plug but those 2 plugs, if dirty or making intermittent connections, can result in the same symptoms. Just another thought.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
>
> Hello Mike, Ger, and ALL-
>
> I think Mike (W5RKL) may have my original post with my question about an intermittent ALC indication on my TS-830S confused with Ger's post in response to mine. My S Meter, IP, COMP, and HV settings are working just fine. I believe it was Ger who mentioned that he had an intermittent meter that was fixed by a replacement of RL-1. No biggie, just wanted to clear the record.
>
> Mike, I've followed your suggestions about tuning the rig up and speaking into the mic with the mic gain set at 11 o'clock. I have no ALC reading at all.
>
> Today, I did the K4EAA recommended "tap test" on RL-1. At first I noticed no change in the meter. I tapped a couple more times and then, viola! ALC is back. It's been working fine all day. This leads me to believe the relay contacts weren't making sound contact or it was a sheer coincidence. Either way, I may end up just replacing the RL-1 as a precautionary measure.
>
> Thanks for your assistance!
>
> 73 with regards,
>
> Joe WS8X
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Ger,
> >
> > The new information about the S meter being intermittent changes things. I wasn't aware the S meter would fail, unless I missed it in a previous post/response. I only knew of the intermittent ALC. You said the meter switch positions IP, RF, and HV, in transmit, all

worked as they should which didn't indicate a relay issue. You also said the 830 produced full stable RF output in CW mode. That's why I asked you to tune up the 830 for full output then switch to sideband and speaking into the microphone to see if the meter would display any ALC with the meter switch set to ALC.
> >
> > A recommendation if any future problems occur, try to include as much information as possible, even if you don't think it is important.
> >
> > Congratulations on fixing your 830.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Ger" <ghoogendijk@> wrote:
> > >
> > > Joe and all,
> > >
> > > To be precise: my TS-530SP S-meter and ALC readings where intermittent interrupted: when I listen to a station with S9 or whatever reading, the S-meter drops to nil. In that situation I had no ALC reading as well. IP,RF and HV readings where still there.
> > > Don't know what the relation was but exchanging RL-1 did the trick.
> > >
> > > Best 73's Ger PE1CZG
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hi Joe,
> > > >
> > > > Connect the 830 to a dummy load, if you have one. Tune the 830 up to full output in CW then switch to sideband, either USB or LSB it doesn't matter, and set the meter switch to ALC.
> > > >
> > > > Set the MIC gain to 11 o'clock, press the PTT button on the microphone, then speak into the microphone. Do you see any indication on the meter? If there is an indication on the meter, most likely mid to upper ALC scale or higher, then I doubt the AF Unit relay is the source of your problem.
> > > >
> > > > This MIC gain setting should not be considered to be the normal setting. You will notice I said to set the MIC gain at 11 o'clock. This is to ensure the transmit audio will ensure ALC is produced during this simple test ONLY.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <joeloverti@> wrote:
> > > > >

> > > > > Thanks guys. Gonna do the "tap test" on RL-1 tomorrow.
> > > > >
> > > > > Very Best,
> > > > >
> > > > > Joe
> > > > > WS8X
> > > > >
> > > >
> > >
>

30816. Re: [TS-520_820_530_830] Re: how to adjust alc

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 03:32:31 UTC
From: KA5TRO
Topic: 30767 Message: 30816

Call it an off-handbook? hihi

Tony KA5TRO

----- Original Message -----
From: David Rust
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 11, 2011 6:30 PM
Subject: Re: [TS-520_820_530_830] Re: how to adjust alc

Theres all kinds of theories out there isn't there? Maybe we ought to write a second Handbook just for grins. I can understand mistakes when someone just doesn't know, but I have heard some misunderstood ideas that almost turned into preaching on the air. I just move off frequency when these come up.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30817. lost TS-8303's NB button cap

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 16:32:59 UTC
From: AL
Topic: 30817 Message: 30817

Hi there

I lost my TS-830's NB button cap. I am looking for a replacement. Does anybody have one for sale? or maybe somebody knows a source of a used one.
Please contact me off the list

Al
CX8AT

30818. Re: lost TS-8303's NB button cap

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-13 18:04:20 UTC
From: w5rkl
Topic: 30817 Message: 30818

Hi Al,

Check with Bob Mansker, ke5ftf at mail.com

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "AL" <cx8at@...> wrote:
>
> Hi there
>
> I lost my TS-830's NB button cap. I am looking for a replacement. Does anybody have one for sale? or maybe somebody knows a source of a used one.
> Please contact me off the list
>
> Al
> CX8AT
>

30819. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 01:12:55 UTC
From: Hagar
Topic: 30798 Message: 30819

Thanks Mike, It does have the digital display and works good except it fluctuates on ten meters. I guess it is pulling the 5VDC from some where else.

Joe
KJ4ZQX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Joe,
>
> The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.
>
> The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.
>
> If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.
>
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> >
> > Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
> >
> > Thanks Joe. KJ4ZQX
> >
>

30820. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 01:47:21 UTC
From: w5rkl
Topic: 30798 Message: 30820

Joe,

The Relay Unit has a zener diode, D1 (BZ-052), and a 220 ohm 2 watt resistor that produces 5VDC from the 14VDC supply. This 5VDC supply is applied to the PLL Unit from Relay Unit plug RL1 pin 13.

I don't believe the Relay Unit 5VDC supply is designed to power circuits in both the PLL unit and the Counter Unit at the same time.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@...> wrote:
>
> Thanks Mike, It does have the digital display and works good except it fluctuates on ten meters. I guess it is pulling the 5VDC from some where else.
>
> Joe
> KJ4ZQX
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Joe,
> >
> > The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.
> >
> > The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.
> >
> > If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.
> >
> >
> > 73s
> > Mike
> > W5RKL

> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > >
> > > Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
> > >
> > > Thanks Joe. KJ4ZQX
> > >
> >
>

30821. TS520 for sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 03:12:41 UTC
From: zuccolo.rm
Topic: 30821 Message: 30821

I am selling my Kenwood TS-520 (complete with a replica of MC35 microphone) plus a MFJ-816 SWR-wattmeter for 150$. I am selling it because I am relocating abroad.
The rig has an issue that I previously described in this post:
http://groups.yahoo.com/group/TS-520_820_530_830/message/26792
However the problem seems to be just related to the reading, since the rig outputs what it is supposed to. I use it on weekly bases it on 10, 15 and 20 meters receiving consistently good reports and easily making DX contacts just using a simple dipole. Rarely used 40 meters. Never tested it in transmission on 80 meters. I do not ship it, so if interested you have to come and pick it up (I live in Tucson, AZ). You are more than welcome to test the rig. If interested contact me at azuccolo@...

Thanks

Andrea

KE7CVC

30822. Filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 08:07:50 UTC
From: Dave
Topic: 11446 Message: 30822

Does anyone know what is the bandwidth of a YK-88S1 filter that is used in the hybrid Kenwoods and others? Is it 2.4 or 1,8 Khz? The nomenclature I am familiar with is a YK-88S being the 2.4 Khz filter and the YK-88SN used for the 1.8 Khz filter.

Dave WB2FTX

30823. Re: Filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 10:17:00 UTC
From: w5rkl
Topic: 11446 Message: 30823

Dave,

The YK-88S1 "2.4Khz" filter.

The YK-88SN1 "1.8Khz" filter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Dave" <wb2ftx@...> wrote:
>
> Does anyone know what is the bandwidth of a YK-88S1 filter that is used in the hybrid Kenwoods and others? Is it 2.4 or 1,8 Khz? The nomenclature I am familiar with is a YK-88S being the 2.4 Khz filter and the YK-88SN used for the 1.8 Khz filter.
>
> Dave WB2FTX
>

30824. Quality Microphone Connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 12:27:03 UTC
From: ae5uu
Topic: 30824 Message: 30824

Good morning everyone,

Can anyone give me a source for American made microphone connectors and panel jacks? These ubiquitous Chinese connectors are worse than useless; they do not provide good low resistance contact nor do they provide for positive orientation (e.g. a 4 pin microphone jack can be inserted 4 different ways.)

I require 4 pin and 6 pin panel jacks and connectors (plugs.)

73,

Russell
AE5UU

30825. Re: [TS-520_820_530_830] Quality Microphone Connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 17:07:31 UTC
From: Joseph Stiles
Topic: 30824 Message: 30825

Russell,

Try MOUSER ELECTRONICS

73's joe wb7uqu

From: ae5uu <nilsonrussell@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 14, 2011 5:27:03 AM
Subject: [TS-520_820_530_830] Quality Microphone Connectors

Good morning everyone,

Can anyone give me a source for American made microphone connectors and panel jacks? These ubiquitous Chinese connectors are worse than useless; they do not provide good low resistance contact nor do they provide for positive orientation (e.g. a 4 pin microphone jack can be inserted 4 different ways.)

I require 4 pin and 6 pin panel jacks and connectors (plugs.)

73,

Russell
AE5UU

[Non-text portions of this message have been removed]

30826. Re: [TS-520_820_530_830] Quality Microphone Connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 17:10:37 UTC
From: Chris Robinson
Topic: 30824 Message: 30826

Buy Amphenol!

On Thu, Apr 14, 2011 at 12:07 PM, Joseph Stiles <stilesjoseph@...>wrote:

>
>
> Russell,
>
> Try MOUSER ELECTRONICS
>
> 73's joe wb7uqu
>
> _____
> From: ae5uu <nilsonrussell@yahoo.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, April 14, 2011 5:27:03 AM
> Subject: [TS-520_820_530_830] Quality Microphone Connectors
>
>
> Good morning everyone,
>
> Can anyone give me a source for American made microphone connectors and
> panel
> jacks? These ubiquitous Chinese connectors are worse than useless; they do
> not
> provide good low resistance contact nor do they provide for positive
> orientation
> (e.g. a 4 pin microphone jack can be inserted 4 different ways.)
>
> I require 4 pin and 6 pin panel jacks and connectors (plugs.)
>
> 73,
>
> Russell
> AE5UU
>
> [Non-text portions of this message have been removed]
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

30827. Re: Quality Microphone Connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 21:38:50 UTC
From: kd8hmo
Topic: 30824 Message: 30827

Stay away from the Radio Shack stuff. Their stuff is now all cheap pot-metal garbage...

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Good morning everyone,
>
> Can anyone give me a source for American made microphone connectors and panel jacks? These ubiquitous Chinese connectors are worse than useless; they do not provide good low resistance contact nor do they provide for positive orientation (e.g. a 4 pin microphone jack can be inserted 4 different ways.)
>
> I require 4 pin and 6 pin panel jacks and connectors (plugs.)
>
> 73,
>
> Russell
> AE5UU
>

30828. Re: [TS-520_820_530_830] Quality Microphone Connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 21:48:59 UTC
From: John Becker
Topic: 30824 Message: 30828

At 12:10 PM 4/14/2011, you wrote:
>Buy Amphenol!

YES !

you will thank yourself later.

30829. TS-520s and Accessories FS

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-14 23:16:28 UTC
From: k3bmk
Topic: 30829 Message: 30829

For sale:

TS-520s and MC-50 desk mic. Transmits fine, had a audible tone on receive when AGC is set to off. I am told this is probably a capacitor issue, but do not have the time to dig into it. $150 plus shipping

SP-520 External speaker. Nice condition $50 plus shipping

VFO-520s Remote VFO. Nice condition $100 plus shipping

PC-1 Phone Patch Controller. Nice Condition $20 plus shipping

Please e-mail me direct for photos if interested.

k3bmk (at) comcast.net

73

Brian

30830. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 02:56:03 UTC
From: Hagar
Topic: 30798 Message: 30830

I traced it Mike. Didn't realize someone hadsoldered it directly to the 5V-AVR unit No wonder I saw no plug. I removed the "Counter Ass'y Unit" and cleaned the contacts between the boards. This improved the digital display, Now I can try to figure out why the display fluctuates on ten meters.

Thanks for the help.
73s
KJ4ZQX
Joe.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Joe,
>
> The Relay Unit has a zener diode, D1 (BZ-052), and a 220 ohm 2 watt resistor that produces 5VDC from the 14VDC supply. This 5VDC supply is applied to the PLL Unit from Relay Unit plug RL1 pin 13.
>
> I don't believe the Relay Unit 5VDC supply is designed to power circuits in both the PLL unit and the Counter Unit at the same time.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> >
> > Thanks Mike, It does have the digital display and works good except it fluctuates on ten meters. I guess it is pulling the 5VDC from some where else.
> >
> > Joe
> > KJ4ZQX
> >
> >
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Joe,
> > >
> > > The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.

> > >
> > > The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.
> > >
> > > If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > > >
> > > > Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
> > > >
> > > > Thanks Joe. KJ4ZQX
> > > >
> > >
> >
>

30831. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 17:02:58 UTC
From: w5rkl
Topic: 30798 Message: 30831

Hi Joe,

Now that's strange. The only reason I can think of to do that is if the plug failed. Those plugs do fail now and then, the plug's female metal socket that plugs into the board's pin, sometimes fail or the wire to the plug's female connector may have broken.

You might check the display's alignment steps in the service manual. I can't remember then right off the top of my head so check the service manual for details.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@...> wrote:
>
> I traced it Mike. Didn't realize someone hadsoldered it directly to the 5V-AVR unit No wonder I saw no plug. I removed the "Counter Ass'y Unit" and cleaned the contacts between the boards. This improved the digital display, Now I can try to figure out why the display fluctuates on ten meters.
>
> Thanks for the help.
> 73s
> KJ4ZQX
> Joe.
>
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>
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>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Joe,
> >
> > The Relay Unit has a zener diode, D1 (BZ-052), and a 220 ohm 2 watt resistor that produces 5VDC from the 14VDC supply. This 5VDC supply is applied to the PLL Unit from Relay Unit plug RL1 pin 13.
> >
> > I don't believe the Relay Unit 5VDC supply is designed to power circuits in both the PLL unit and the Counter Unit at the same time.
> >

> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > >
> > > Thanks Mike, It does have the digital display and works good except it fluctuates on ten meters. I guess it is pulling the 5VDC from some where else.
> > >
> > > Joe
> > > KJ4ZQX
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hi Joe,
> > > >
> > > > The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.
> > > >
> > > > The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.
> > > >
> > > > If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > > > >
> > > > > Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
> > > > >
> > > > > Thanks Joe. KJ4ZQX
> > > > >
> > > > >
> > > >
> > >

> >
>

30832. Another filter question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 21:47:55 UTC
From: KA5TRO
Topic: 30832 Message: 30832

So I now have both a TS-530SP and an -830S and am trying to figure out the filter 'options' between the two.

I have installed all three filters into my 530SP - the stock S, a C, and and SN. I have the jumpers set for A == CW and B == SSN, as I do more SSB phone than I do CW. My understanding is that the only thing I'm giving up with that is a wider CW filter bandwidth than I get with this setup (I give up 2.4kHz for 1.8kHz but still get 500Hz with NAR SW on).

However, now that I'm looking at setting up the filters in the 830S, I'm confused by the options. My 830S has the YK-88S1 filter installed in it (which I assume was standard) and no other (well, there is the Murata 455K filter in it, but I assume that's not germaine to this discussion). So, apparently, if I'm unerstanding this correctly, the 830 will support either the YK-88C/N or the YK-455C/N *but not both*.

So I'm left to assume that the filtering in the 830 is set up considerably differently than the 530, and that there is no option for wide/narrow SSB filtering -- that all is done with IF Shift and Notch, then? Or am I missing something?

Thanks and 73

Tony KA5TRO

[Non-text portions of this message have been removed]

30833. TS-830S Bias Adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 22:40:50 UTC
From: Charles Coffee
Topic: 30833 Message: 30833

Have a TS-830S on the bench. Initially found R15 (open) and R16 high - replaced both
with 5% 56K resistors.

However, I can not seem to get the bias adjustment set to 60ma now.
SG SW = On, Mode = USB, Meter = IP, Heater ON, FIX = ON,
Drive Control = Fully Clockwise.

No matter how I turn the Bias control pot on the rear, I can not get any reading on the meter.

Any Idea on what I am missing here ? The above is from pg 33 of the service manual, unless I have missed something.
Rig is connected through watt meter to a dummy load, no mike, no key.

Before I screwed with the bias pot, I had over 100 watts output on 40 Mtrs.

Thanks

Chuck, KJ4GU

[Non-text portions of this message have been removed]

30834. Re: TS-830S Bias Adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 23:18:25 UTC
From: w5rkl
Topic: 30833 Message: 30834

Hi Charles,

More than likely your problem is the relay on the AF Unit.

The AF unit relay controls the bias level when switching from receive to transmit.

If you have a DC volt meter, connect the Red lead to the AF Unit's "FG" terminal and the Black lead to chassis ground. Set the DC meter to measure at least 200VDC. The DC meter should show a high negative voltage around -96 to -110VDC. Key the transmitter with either the MIC PTT button or the SEND switch. Look at the DC meter. If the voltage remains the same as it did in receive, the relay on the AF Unit is most likely the source of your problem.

Ken, K4EAA, sells a direct replacement.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Charles Coffee <chascoffee@...> wrote:
>
> Have a TS-830S on the bench. Initially found R15 (open) and R16 high -
> replaced both
> with 5% 56K resistors.
>
> However, I can not seem to get the bias adjustment set to 60ma now.
> SG SW = On, Mode = USB, Meter = IP, Heater ON, FIX = ON,
> Drive Control = Fully Clockwise.
>
> No matter how I turn the Bias control pot on the rear, I can not get any
> reading on the meter.
>
> Any Idea on what I am missing here ? The above is from pg 33 of the
> service manual, unless I have missed something.
> Rig is connected through watt meter to a dummy load, no mike, no key.
>
> Before I screwed with the bias pot, I had over 100 watts output on 40 Mtrs.
>
> Thanks
>
> Chuck, KJ4GU
>
>
> [Non-text portions of this message have been removed]
>

30835. Re: TS-830S Bias Adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-15 23:26:59 UTC
From: Daniel TOESCA
Topic: 30833 Message: 30835

Charles,

I would check the new resistors you just wired with a good ohmmeter, just to be sure you didn't misread their values, it's quite easy with modern multi-colored resistors.

Just to be sure, I would also check th PA HV with the front panel meter, should be around 900 volts, the screen grid voltage, shoud be around 200-230 volts, and the grid voltage, should be around -130 volts in receive and -60 volts in transmit mode, key down. Check what you expect to find with the schematic or the service manual, just to be sure of my memories...

73

Daniel, ON5PY

[Non-text portions of this message have been removed]

30836. Re: Another filter question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 00:16:41 UTC
From: roberteleazer@rocketmail.com
Topic: 30832 Message: 30836

Tony:

I put a new SSB filter in my TS-820S last year and I explored the options then. Suggest you go over to the International radio (INRAD) website and look at what they have in the way of wide and narrow filters available for your 830S.

P.S. DO NOT BUY A USED FILTER! People who say that if they are Okay externally then they will work fine do not know what they are talking about. I have two stock Kenwood SSB filters I tried in my 820S. One only does USB and the other only does LSB; they both look fine externally but are defective.

Good Luck!

Wayne
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "KA5TRO" <ka5tro@...> wrote:
>
> So I now have both a TS-530SP and an -830S and am trying to figure out the filter 'options' between the two.
>
> I have installed all three filters into my 530SP - the stock S, a C, and and SN. I have the jumpers set for A == CW and B == SSN, as I do more SSB phone than I do CW. My understanding is that the only thing I'm giving up with that is a wider CW filter bandwidth than I get with this setup (I give up 2.4kHz for 1.8kHz but still get 500Hz with NAR SW on).
>
> However, now that I'm looking at setting up the filters in the 830S, I'm confused by the options. My 830S has the YK-88S1 filter installed in it (which I assume was standard) and no other (well, there is the Murata 455K filter in it, but I assume that's not germaine to this discussion). So, apparently, if I'm unerstanding this correctly, the 830 will support either the YK-88C/N or the YK-455C/N *but not both*.
>
> So I'm left to assume that the filtering in the 830 is set up considerably differently than the 530, and that there is no option for wide/narrow SSB filtering -- that all is done with IF Shift and Notch, then? Or am I missing something?
>
> Thanks and 73
>
> Tony KA5TRO
>
> [Non-text portions of this message have been removed]
>

30837. My New VFO 520S does not work!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 01:51:21 UTC
From: k4ynd
Topic: 30837 Message: 30837

I picked up a VFO520S to replace the VFO 520 I was using with my 520s.
There is a loud AC like hum coming out of the speaker. It does not matter what I set the switch at; the hum stays the same. It is quite loud. I know it is not the cable because the VFO520 works as it should?

Any suggestions? How much would K4eaa charge me (if he even works on them?)

By the way it sure looks good

73
k4ynd

30838. TS 830S S meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 02:08:35 UTC
From: k4ynd
Topic: 22531 Message: 30838

The S meter on my TS 830S seems a step slow and a bit on the low side.
Some signals make it dance, while others that sound like they would be strong dont move the needle at all?

The S meter on my 520SE really moves quickly and seems to show stronger readings.

any suggestions
K4YND

30839. need a good 520 tech

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 03:44:42 UTC
From: kev69691962
Topic: 30839 Message: 30839

I have a ts520se where the vfo is not stable,i need a good tech any suggestions...

WN9VMR

30840. Re: [TS-520_820_530_830] TS 830S S meter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 04:00:22 UTC
From: Joseph Stiles
Topic: 22531 Message: 30840

k4ynd,

Is rig new to you? If so....a good cleaning of all connectors/connections may be in order..if you have had the rig for sometime...clean the connectors/connections anyway. Does the meter seem to function OK when other functions are used...ALC, Ip, HV? Clean the meter switch too. When using the "CAL" signal...does your meter move up scale?
You can get "in the park" by: removing any antenna connected to the ANT connector on the back...locate VR2 & VR3(round white plastic things) on the IF BOARD...they are back by the 4 capacitors on the back end of the board. With the RF GAIN fully up (full clockwise) adjust VR2 for "ZERO." Dial up 14.175Mhz or so...turn "CAL" signal on....turn VFO knob and DRIVE control to get maximum reading...adjust VR3 for an S9 or maybe a bit more. Not perfect but it will get you close enough.

73's joe wb7uqu

From: k4ynd <k4ynd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 15, 2011 7:08:35 PM
Subject: [TS-520_820_530_830] TS 830S S meter

The S meter on my TS 830S seems a step slow and a bit on the low side.
Some signals make it dance, while others that sound like they would be strong dont move the needle at all?

The S meter on my 520SE really moves quickly and seems to show stronger readings.

any suggestions
K4YND

[Non-text portions of this message have been removed]

30841. Re: [TS-520_820_530_830] need a good 520 tech

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 04:21:00 UTC
From: Joseph Stiles
Topic: 30839 Message: 30841

wn9vmr,

when you say "not stable" what do you mean? Are you using a digital display(DG-5) or some other such device? Is it intermittent, drifts, or ??? These rigs have been around for a good number of years...and even though the VFO is mostly sealed...gunk can and does get in. Get yourself some good cleaner/lube....DEOXIT works well. Make sure rig is off & unplugged. Remove top cover...be careful of the speaker wire! The VFO is the "silver thing".....can't miss it. Put rig on its left side..there is a small panel, attached with two screws on the now " top" of the VFO. It's a pain..but you have to remove 1 screw (I usually do the rear one) and loosen the other..pivot it out of the way. Look at the inside back of the VFO with a BRIGHT light... you may have to turn the main VFO knob to get the plates out of the way....you will see a bowed piece of spring metal...it's a "wiper." Spray cleaner (sparingly) on this connection... operate VFO to the ends of its travel...both ways..several times..then spray cleaner.. do it again..you can also use some "canned air" to blow off the area after the cleaner is used. Check for operation..... if it doesn't work...it's a good place to to start...and can't hurt!..............good luck.

73's joe wb7uqu

From: kev69691962 <kev0609@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 15, 2011 8:44:42 PM
Subject: [TS-520_820_530_830] need a good 520 tech

I have a ts520se where the vfo is not stable,i need a good tech any suggestions...

WN9VMR

[Non-text portions of this message have been removed]

30842. Stubborn TS-820 voltage problems

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 06:36:56 UTC
From: ae5uu
Topic: 30842 Message: 30842

Good morning all,

I have been fighting a stubborn voltage problem for some time. I would appreciate some help.

First a new distraction with symptoms:

60ma idle is correct.

In TUN, no PLATE current registering on IP meter setting.

In CW, no current showing with adjustment of LOAD and PLATE controls

No transmit (NONE OF THESE SYMPTOMS WERE AN ISSUE UNTIL TODAY WHEN I REPLACED FINAL UNIT R-2, R-3, R-5, R-6. I ALSO REPLACED L-1 AS PER KIT VALUE (6.8UF, 500MA) SUPPLIED AS KIT FR-100 BY K4EAA, BUT NOW NOTICE THE THE VALUE FOR L-1 LISTED IN MY PARTS LIST IS 470UF, SO I WILL SWAP BACK L-1 AND HOPE FOR THE BEST)

ALL THE ABOVE IS NOT MY MAIN PROBLEM. MY MAIN PROBLEM IS DETAILED BELOW:

Meter does not increase reading when RF GAIN is rotated CCW (although the receive audio is reduced gradually as it should be.)

In TUN, no ALC reading with DRIVE control on ALC meter setting.

-6vdc bus reads +0.59vdc

+3.3vdc bus reads 3.3vdc with IF UNIT IF3 unplugged, +6.4vdc when IF Unit IF3 is plugged in.

No S Meter reading.

BELOW IS A LISTING FROM ALL MY VOLTAGE TEST POINTS. ALL APPEAR CORRECT WITH THE POSSIBLE EXCEPTION OF THE RECTIFIER UNIT "SG" AND "STB" AND THE HV UNIT "HV" TERMINAL (I DON'T KNOW WHAT THE VALUES SHOULD BE.)

+14vdc

AF-AVR board AF1 pin 3
IF Board IF1 pin 3
Fix-Vox Board FX3 pin 3
Relay Board RL1 pins 7-12
RF Board RF1 5
Rectifier Board Terminal "14"
ALL POINTS YIELD PROPER VOLTAGE

+9vdc

IF Unit IF1 pin 5
CAR Unit CJ2 (Mode switch set to TUN, CW, LSB, FSK,and SSB)
PLL Unit PLL2 pin 3
FIX VOX Unit FX3 pin 1
Relay Unit RL1 pins 1, 2, and 3
Relay Unit RL2 pins 10 & 14 (note: pin 14 has no wired connection)
RF Unit RF2 pin 1
VFO 2 pin plug Large pin
ALL POINTS YIELD PROPER VOLTAGE

+5vdc

Relay Unit RL1 pin 13
PLL Unit PLL2 pin 1
ALL POINTS YIELD PROPER VOLTAGE

+3.3vdc

AF-AVR Board AF2 pin 6
IF Board IF3 pin 8 (RFI)
RF Board RF3 pin 4 (RFI)
RF GAIN control Opposite end from R-2
ALL POINTS YIELD +6.4VDC WITH IF UNIT PLUGGED IN, 3.5VDC WITH IF UNIT UNPLUGGED

-6vdc

RF Board RF2 pin 2
IF Board IF3 pin 4, 5
Fix-Vox Board FX3 pin 14
ALL POINTS YIELD +0.59VDC

High Voltage

RF Unit RF2 -110vdc pin 7 (-C)

Rectifier Unit 800 Terminal +952vdc Receive, slightly less Transmit

300A Terminal +344vdc

300B Terminal +344vdc

210A Terminal +260vdc

210B Terminal +263vdc

-C Terminal -110vdc

SG Terminal -116vdc

STB Terminal +112vdc

14 Terminal +15.25VDC

HV Unit FSB Terminal +260vdc

210 Terminal +260vdc

800 Terminal +952vdc

HV Terminal +43vdc

Final Unit PD2 Terminal +260vdc

FG Terminal -100vdc Receive (spec.)
-100vdc (actual)
-55vdc Transmit (spec.)
-54vdc (actual)

SG Terminal +255vdc Receive (spec.)
+260vdc (actual
+210vdc Transmit (spec.)
+225vdc (actual)

The following parts have been replaced, in addition to all electrolytic capacitors on all boards:

1) AF-AVR Unit VR-1, VR-4, D-5, Q-4, Q-5, and Q-6
2) IF Unit Q-15, Q-16
3) IF Unit D-18, D-19, D-20, and D-21
4) IF Unit C-70, C-72, and C-142
5) IF Unit R-66, R-145, and R-146
6) PD Unit C-14, C-15
7) FIX-VOX Unit Q-13
8) HV capacitors C-21, C-22, R-6, R-7, and 2 each 0.01uf (C-14 through C-17 type)

Notes: AF-AVR Unit R-9 and R-26 not installed (jumpered by factory)
C-29 installed according to schematic (polarity is marked wrong on board)

FIX-VOX Unit C-32 replaced with 3.3uf, 50wv factory spec., was 1.0uf in my radio

IF Unit C-43 as built is electrolytic, not as listed in parts list

C-75 as built is 1.0uf, 50wv, not .01uf as listed in parts list

Firstly, I need to correct my +3.3vdc and -6.0vdc problem. Then I intend to look at Q-5 on the RF Unit. Measured at RF3, pin 6,the reading is 5.2vdc in Receive. In Transmit it changes with application of the DRIVE control. It does not change with application of the CAR control.

I know that this is a complex posting; your assistance would sure be appreciated before I pull the rest of my hair out.

73,

Russell
AE5UU

30843. "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 11:43:04 UTC
From: Terry Wagoner
Topic: 30843 Message: 30843

Just got a nice TS-830s. All my hybrid experience has been with a TS-530SP. I use an MC-60 mike. On the TS-530 I set mic gain to around 10:30 and speak about 2 inches from mike to just see occaisional ALC indication (blip). With the TS-830 using same mike I have to set the mike gain to around 1:00 and "eat" the mike to get same occaisional "blip" on ALC meter position. I have monitored with headphones and the audio sounds good. Peak reading wattmeter indicates good RF output. Having to "eat" the mike probably helps eliminate background noise from the shack, but it is very different from how my TS-530SP operates.

Anyone running same TS-830/MC-60 combination? What do you consider "normal" mic gain setting? Should I start taking voltage readings around Q19?

Thanks
Terry K9TW

30844. Re: [TS-520_820_530_830] Re: TS-830S Bias Adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 12:43:48 UTC
From: Charles Coffee
Topic: 30833 Message: 30844

Daniel,
Thanks for the reply, I always check resistors before I install them in a
circuit to make
sure they are the correct resistance and within tolerance. Burned too many
times
in the past. HV on the meter was around 850V, and a bit higher on the DMM
when reading off the HV to the finals. Still have to check the other
voltages
and check the AF Relay as Mike suggested (also Thank you Mike for the tip).

Chuck, KJ4GU

On Fri, Apr 15, 2011 at 7:26 PM, Daniel TOESCA <ON5PY1967@...> wrote:

> Charles,
>
> I would check the new resistors you just wired with a good ohmmeter, just
> to
> be sure you didn't misread their values, it's quite easy with modern
> multi-colored resistors.
>
> Just to be sure, I would also check th PA HV with the front panel meter,
> should be around 900 volts, the screen grid voltage, shoud be around
> 200-230
> volts, and the grid voltage, should be around -130 volts in receive and -60
> volts in transmit mode, key down. Check what you expect to find with the
> schematic or the service manual, just to be sure of my memories...
>
> 73
>
> Daniel, ON5PY
>
>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

30845. Re: "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 13:21:42 UTC
From: w5rkl
Topic: 30843 Message: 30845

Hello Terry,

You didn't say whether you are using any transmit audio processing with both transceivers (Processor switch turned ON). You also didn't say whether the MC-60's internal amplifier is turned ON or OFF.

Since both transceivers have the same 500 to 50K ohm microphone impedance, it doesn't really matter what impedance setting the MC-60 is set at.

The TS-530 transmit audio processing is an "ON/OFF" setting, no front panel processing level adjustment other than the MIC Gain. The TS-830 on the other hand, has a separate audio processing adjustment, upper left corner above the meter, to vary the level of audio processing. Therefore, the 830's audio processing adjustment should be set with the MC-60's internal amplifier turned OFF.

If the MC-60 internal amplifier is turned ON and both transceivers have transmit audio processing turned ON, that's not a good combination. Use either one or the other, not both.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Just got a nice TS-830s. All my hybrid experience has been with a TS-530SP. I use an MC-60 mike. On the TS-530 I set mic gain to around 10:30 and speak about 2 inches from mike to just see occaisional ALC indication (blip). With the TS-830 using same mike I have to set the mike gain to around 1:00 and "eat" the mike to get same occaisional "blip" on ALC meter position. I have monitored with headphones and the audio sounds good. Peak reading wattmeter indicates good RF output. Having to "eat" the mike probably helps eliminate background noise from the shack, but it is very different from how my TS-530SP operates.
>
> Anyone running same TS-830/MC-60 combination? What do you consider "normal" mic gain setting? Should I start taking voltage readings around Q19?
>
> Thanks
> Terry K9TW
>

30846. Re: My New VFO 520S does not work!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 13:43:06 UTC
From: w5rkl
Topic: 30837 Message: 30846

Have you opened up the VFO-520S and looked for a broken ground on the 9 pin socket and/or else where? The differences between the VFO-520 and VFO-520S is cosmetic. The internal VFO and support circuits are the same.

If you don't have the VFO-520 manual you can download it at Gordon's website, www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "k4ynd" <k4ynd@...> wrote:
>
> I picked up a VFO520S to replace the VFO 520 I was using with my 520s.
> There is a loud AC like hum coming out of the speaker. It does not matter what I set the switch at; the hum stays the same. It is quite loud. I know it is not the cable because the VFO520 works as it should?
>
> Any suggestions? How much would K4eaa charge me (if he even works on them?)
>
> By the way it sure looks good
>
> 73
> k4ynd
>

30847. Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 14:13:39 UTC
From: Terry Wagoner
Topic: 30843 Message: 30847

Hi Mike--I intentionally did not mention the "processor" settings. What I described is with the processors off on both 530 and 830. My MC-60 has no internal pre-amp. I believe the MC-60A mic has an internal pre-amp? I have used both processors on both rigs and they both work well. I set the 830 processor pot to around 1200 to get around 6db on the "compression" scale of the meter. I have monitored and it clearly adds punch, but would be easy to overdrive.

I just wanted to find out where 830 owners using an MC-60 mic typically set their mic gain at without any processing. As I mentioned at 1:00 (6) setting on mic gain pot I have to "eat" mike to get ALC meter to begin (blip) up. This is much higher setting than is required on my 530SP. This may be normal? I will take a closer look at the two mike pre-amp circuits to see if there is a design reason for this. I see that the processors are very different with the 830 using RF clipping.

Mike --appreciate your questions and quick response. It is not a big problem. I just want to make sure rig is operating as it should as I have no operational experience with 830s. Someone told me I should be using a MC-50 mike with the 830. Doesnt sound right to me. Maybe I will inject 1000hz audio from audio generator into mike jack and run some comparisons?

TNX--Terry

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 16, 2011 9:21:42 AM
Subject: [TS-520_820_530_830] Re: "Normal" Mic Gain

Hello Terry,

You didn't say whether you are using any transmit audio processing with both transceivers (Processor switch turned ON). You also didn't say whether the MC-60's internal amplifier is turned ON or OFF.

Since both transceivers have the same 500 to 50K ohm microphone impedance, it doesn't really matter what impedance setting the MC-60 is set at.

The TS-530 transmit audio processing is an "ON/OFF" setting, no front panel processing level adjustment other than the MIC Gain. The TS-830 on the other hand, has a separate audio processing adjustment, upper left corner above the meter, to vary the level of audio processing. Therefore, the 830's audio processing adjustment should be set with the MC-60's internal amplifier turned OFF.

If the MC-60 internal amplifier is turned ON and both transceivers have transmit audio processing turned ON, that's not a good combination. Use either one or the

other, not both.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Just got a nice TS-830s. All my hybrid experience has been with a TS-530SP. I
>use an MC-60 mike. On the TS-530 I set mic gain to around 10:30 and speak
>about 2 inches from mike to just see occaisional ALC indication (blip). With the
>TS-830 using same mike I have to set the mike gain to around 1:00 and "eat" the
>mike to get same occaisional "blip" on ALC meter position. I have monitored with
>headphones and the audio sounds good. Peak reading wattmeter indicates good RF
>output. Having to "eat" the mike probably helps eliminate background noise from
>the shack, but it is very different from how my TS-530SP operates.
>
>
> Anyone running same TS-830/MC-60 combination? What do you consider "normal" mic
>gain setting? Should I start taking voltage readings around Q19?
>
> Thanks
> Terry K9TW
>

[Non-text portions of this message have been removed]

30848. Re: need a good 520 tech

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 16:47:50 UTC
From: roberteleazer@rocketmail.com
Topic: 30839 Message: 30848

Does the frequency jump suddely by 500 khz or so when you are tuning the radio? I had that problem on my TS-820S. It means that the tuning cap is shorting out due to dirt, spiderwebs, corrosion, etc.

The fix is simple although not that easy. You take the VFO out, open it up, and spray the tuning cap with an electrical contact cleaner, such as CRC Lectra-Motive. Clean up any corrosion you see at the pivot points with Deoxit, and then lubricate the pivot points with LPS-1.

Now, there is also a tantalum capacitor problem in the VCO/PD module of the TS-820 that can cause some instability as well but I don't know if a similar problem with the 520SE.

Good luck!

Robert
WB5WSV
-- In TS-520_820_530_830@yahoogroups.com, "kev69691962" <kev0609@...> wrote:
>
> I have a ts520se where the vfo is not stable,i need a good tech any suggestions...
>
> WN9VMR
>

30849. TS-520S and Straight Key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 18:39:07 UTC
From: randyinaura
Topic: 30849 Message: 30849

Any suggestions, hints or warnings on hooking up a straight key to a Kenwood TS-520S? I notice that the jack on the radio is a tip/ring/sleeve type. I'm assuming that the sleeve goes to one side of the key and the tip goes to the other. Is that correct? The key I'm using is an AT&T 1A although that shouldn't make any difference. Any help is appreciated.

73 de K8HRO - Randy

30850. Re: [TS-520_820_530_830] TS-520S and Straight Key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 18:52:35 UTC
From: Joseph Stiles
Topic: 30849 Message: 30850

Randy,

I have been using an old brass straight key for years on the 520/530/830 series of radios. You can use shielded cable if you want. 1/4" MONO plug, with one wire to the "tip" and the other to the "sleeve" should be satisfactory.

73's joe wb7uqu

From: randyinaura <rfb13@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 16, 2011 11:39:07 AM
Subject: [TS-520_820_530_830] TS-520S and Straight Key

Any suggestions, hints or warnings on hooking up a straight key to a Kenwood TS-520S? I notice that the jack on the radio is a tip/ring/sleeve type. I'm assuming that the sleeve goes to one side of the key and the tip goes to the other. Is that correct? The key I'm using is an AT&T 1A although that shouldn't make any difference. Any help is appreciated.

73 de K8HRO - Randy

[Non-text portions of this message have been removed]

30851. TS 520S with alc trouble

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 17:57:01 UTC
From: DaveS
Topic: 30851 Message: 30851

Hello,
I have a TS 520S that works with good output, The processor works fine, but when I switch to alc, it is intermittent in output. It works sometimes, and then as you talk, it slowly drops in output. Sometimes you have to get real close to the mic to get any output at all, yet when I switch it to RF, there is plenty of power out. Also the S meter will not zero even when you set VR1, can't set it on zero with the antenna disconnected. I am using a dummy load for adjusting the radio. can anyone help with troubleshooting this problem?
Thanks for reading this post, Hope to hear from someone, 73.
KC8PCL

30852. Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 19:13:27 UTC
From: Blake
Topic: 29670 Message: 30852

Hi again Bruce, it just dawned on me that I had also communicated with Mike W5RKL on the Yahoo board about the Kenwood some time ago,and after watching his continued answers to other peoples questions about a consortium of different problems he might also be a real help with the display problem, at least you guys can communicate one tech to the other and understand each other. Here is an old email that he had answered to me on the yahoo groups. He seems really helpful when people talk with him. Maybe he could add something. Good Luck and thanks again Bruce, sorry for this problem, Ha you wont ever want to see a Kenwood again, ;-)) Blake N7BLZ
----- Original Message -----
From: Blake
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 06, 2011 10:01 AM
Subject: Re: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Wow, thanks for such a detailed explanation Mike, you can't know just how much it is appreciated. I was truly hoping that this problem was not a major mechanical issue as much as an adjustment issue. (although I am not afraid to tackle either) I am burring my head into the service manual and will study it extensively before trying to do any adjustments. Thanks for pointing me into what appears to be the right direction. I guess I just never had any idea that someone would ever change something to receive the CB" bands, at least not on one of these beautiful pcs. of history. LOL oh well, I learn something new everyday of my life. I guess that what makes living so great. Thanks again Mike, Blake KF7HHC
http://www.pnwmetalcrafters.com/Commercial.html

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, February 06, 2011 5:31 AM
Subject: [TS-520_820_530_830] Re: TS-820 with Digital display, 10 meter display fluctuating and wont stop.

Hello Joe and Blake,

If the PLL Unit become unlocked, for what ever reason, the digital display will be dark, nothing displayed, and both transmit and receive will fail.

TC1 on the IF Unit sets the level of the CAR Unit signal to the digital display. Adjusting TC1 will not fix the problem you are experiencing on 10 meters. Although the CAR Unit signal is used on all bands, the CAR Unit signal is not band specific, meaning there isn't a different CAR signal for each band. Adjusting TC1 on the IF Unit will not fix the problem you are experiencing on 10 meter. Adjusting TC1 will affect ALL bands simultaneously as you have found out.

The problem you are experiencing on 10 meters appears to be an improperly adjusted VCO Unit 10 meter (all 10 meter settings) VCO Oscillator in the PLL Unit. The VCO Unit adjustments are covered on page 52 of the 820 service manual under "Adjustment of VCO unit". Table 2 on page 53 lists all of the VCO oscillator frequencies and each VCO oscillator coil. The 10 meter VCO oscillator coils are T7 thru 10.

Each band has an individual VCO crystal that is selected by the band switch. The 10 meter VCO crystals are located on the PD Unit and their individual crystal frequencies are as follows:

28.0 = 33.5Mhz
28.5 = 34Mhz
29.0 = 34.5Mhz
29.5 = 35Mhz

I recommend pulling the PLL Unit and checking each 10 meter VCO crystal on the PD Unit to ensure the crystals for all 10 meter positions have the same frequencies listed above. If the 10 meter VCO crystal are "lower" in frequency then a previous owner had the 820 modified to operate on 11 meters or a frequency band other than the ham bands.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Blake,
>
> When the frequency(s) jump around, as you say...are they indicating...say at
> least the correct MHz range..ie: 28 = 28.xxxx etc? I just got done removing
> some CB hacks from 2 820S's and they did that to. I suspect that the "PLL" has
> become "unlocked" for those bands. Check in the service manual, Pg 52, Section
> 5-2. Maybe Mike(w5rkl) or Gordon(n6wk) may have other pointers...they are way
> more knowledgeable than me! Good luck.................
>
> 73's joe wb7uqu
>
>
>
>
>
> _____
> From: bfabman <mobilefab@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, February 5, 2011 7:54:09 PM
> Subject: [TS-520_820_530_830] TS-820 with Digital display, 10 meter display
> fluctuating and wont stop.
>
>
> Hello all, I hope there is someone out there that has had a similar problem with
> their 820 and found a remedy. My TS820 with digital display(not TS-820S)
> although with the display is essentially the same transceiver I believe, has a

> fluctuating display problem when I turn the band switch to any of the 10 meter
> settings. The 28, 28.5, 29, and 29.5 settings simply jump up and down on the
> digital display without stopping, and during this action the VFO has absolutely
> no affect on the display if I turn it CCW or CW. I have tried to very carefully
> adjust the TC1 screw on the IF board and by doing this I can actually make all
> of the bands scroll up and down, but cannot adjust the TC1 so that once the
> lower bands stop schooling and the VFO has control of them normally again, the
> 10 meter band does its random up and down scrolling without VFO control. I have
> located Ken's K4EAA very nicely documented band switch repair on his website,
> http://www.k4eaa.com/bandswitch.html , but was wondering if anyone here could
> offer any other suggestions that might possibly have an effect on this problem
> before I start this repair on the radio. I have used spray electrical cleaner on
> all of the contacts hoping that would do it, but it has had no affect so far.
> Any suggestions would be greatly appreciated. Thank you so much, Blake
>
>
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30853. Re: TS 520S with alc trouble

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 20:09:38 UTC
From: w5rkl
Topic: 30851 Message: 30853

Hello David,

A "constant" ALC indication while operating sideband (USB or LSB) is not required. If you have been lead to believe there should be a constant display of ALC during sideband transmissions then you have been mislead.

ALC is produced ONLY when grid current flows in the final tubes and this can ONLY occur when the level of RF from the driver tube is at a level that causes the grids of the final tubes to swing "positive". Then and ONLY then will ALC be produced.

When operating sideband, set the meter switch to ALC and while speaking into the microphone from a distance of 1 to 2 inches in a normal level of voice, adjust the MIC gain so the ALC meter just "starts" to "flicker" above zero. This is the point of maximum peak RF output. Any further increase in the MIC gain will produce ALC which will cause a "reduction" in RF output, NOT an "increase" in RF output. ALC is there to help keep from over driving the final amplifier and causing splatter (adjacent frequency interference).

Don't be fooled because your watt meter may NOT be displaying FULL OUTPUT. Only PEAK watt meter can display PEAK output. Most watt meters are average watt meters and when the transmitter is adjusted properly the typical RF output displayed on the average watt meter will be 20 to 30 watts at most. This is normal and should NOT be considered a problem or improperly adjusted transmitter.

As for the S meter not zeroing when adjust VR1 on the IF board, either R41 (15K 1/2 watt) has changed values or VR1 is bad. Clean VR1 and readjust as stated in the 520 service manual. Did you perform the complete S meter adjustments in the 520 service manual or just adjust VR1?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "DaveS" <kc8pcl@...> wrote:
>
> Hello,
> I have a TS 520S that works with good output, The processor works fine, but when I switch to alc, it is intermittent in output. It works sometimes, and then as you talk, it slowly drops in output. Sometimes you have to get real close to the mic to get any output at all, yet when I switch it to RF, there is plenty of power out. Also the S meter will not zero even when you set VR1, can't set it on zero with the antenna disconnected. I am using a dummy load for adjusting the radio. can anyone help with troubleshooting this problem? Thanks for reading this post, Hope to hear from someone, 73.
> KC8PCL
>

30854. Re: [TS-520_820_530_830] TS-520S and Straight Key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 21:55:44 UTC
From: John Davidson
Topic: 30849 Message: 30854

The jack is actually a shorting jack that closes (grounds) the keying line in the radio when you remove the plug.
A radio with no key plugged in will key constantly when you are in transmit mode with vox or transmit switch on.
The plug is a simple onc circuit plug, sleeve ground & tip key hot.

From: randyinaura <rfb13@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 16, 2011 2:39:07 PM
Subject: [TS-520_820_530_830] TS-520S and Straight Key

Any suggestions, hints or warnings on hooking up a straight key to a Kenwood TS-520S? I notice that the jack on the radio is a tip/ring/sleeve type. I'm assuming that the sleeve goes to one side of the key and the tip goes to the other. Is that correct? The key I'm using is an AT&T 1A although that shouldn't make any difference. Any help is appreciated.

73 de K8HRO - Randy

[Non-text portions of this message have been removed]

30855. Re: TS-520S and Straight Key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-16 22:52:03 UTC
From: w5rkl
Topic: 30849 Message: 30855

Randy,

Forget about the "Tip", "Ring" and "Sleeve". All you need is a cheap simple 1/4" MONO plug with the key wired across the plug. A 1/4" mono plug will only have a "TIP" and a "SLEEVE".

If you have a 1/4" "stereo" plug, wire the key across the "TIP" and the "SLEEVE", the same as you would a 1/4" MONO plug.

It doesn't matter which straight key terminals you connect to the 1/4" mono or 1/4" stereo plug terminals. The key simply operates as a SPST "N.O." switch.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> The jack is actually a shorting jack that closes (grounds) the keying line in
> the radio when you remove the plug.
> A radio with no key plugged in will key constantly when you are in transmit mode
> with vox or transmit switch on.
> The plug is a simple onc circuit plug, sleeve ground & tip key hot.
>
>
>
>
> _____
> From: randyinaura <rfb13@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, April 16, 2011 2:39:07 PM
> Subject: [TS-520_820_530_830] TS-520S and Straight Key
>
> Â
> Any suggestions, hints or warnings on hooking up a straight key to a Kenwood
> TS-520S? I notice that the jack on the radio is a tip/ring/sleeve type. I'm
> assuming that the sleeve goes to one side of the key and the tip goes to the
> other. Is that correct? The key I'm using is an AT&T 1A although that shouldn't
> make any difference. Any help is appreciated.
>
> 73 de K8HRO - Randy
>
>
>
>
> [Non-text portions of this message have been removed]
>

30856. convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 06:05:14 UTC
From: jeffrey lord
Topic: 30856 Message: 30856

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

30857. Re: [TS-520_820_530_830] TS-520S and Straight Key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 14:08:25 UTC
From: Chris and Alex
Topic: 30849 Message: 30857

I've wondered about this at times. The manual specifies using a screened lead for the key but the the screen is used as a conductor. So how does it act as a screen?
Guitar lead works well as it's nice and flexy.

Chris SV0XBQ/9

On 16 April 2011 20:39, randyinaura <rfb13@...> wrote:

>
>
> Any suggestions, hints or warnings on hooking up a straight key to a
> Kenwood TS-520S? I notice that the jack on the radio is a tip/ring/sleeve
> type. I'm assuming that the sleeve goes to one side of the key and the tip
> goes to the other. Is that correct? The key I'm using is an AT&T 1A although
> that shouldn't make any difference. Any help is appreciated.
>
> 73 de K8HRO - Randy
>
>
>

[Non-text portions of this message have been removed]

30858. Re: convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 14:31:11 UTC
From: kd8hmo
Topic: 30856 Message: 30858

I have not owned a Ringo myself, but they have had an excellent reputation in my area for decades. I found a tech support e-mail address for you.

Email cushcraft@...

--- In TS-520_820_530_830@...m, jeffrey lord <jc_2aussie@...> wrote:
>
> Hi all,
>
> I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
>
> I would like your suggestions
>
> Jeff
>
> VK4FNRS
>

30859. Re: convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 14:27:45 UTC
From: kd8hmo
Topic: 30856 Message: 30859

I have not had any experience with the Ringo myself, but they have had an excellent reputation in my area for decades. I found a tech support e-mail address for you.

Email cushcraft@...

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Hi all,
>
> I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
>
> I would like your suggestions
>
> Jeff
>
> VK4FNRS
>

30860. Re: convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 14:35:49 UTC
From: kd8hmo
Topic: 30856 Message: 30860

Yahoo wont seem to let me post an e-mail address. The address for Cushcraft tech support is Email cushcraft at mfjenterprises.com

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo" <delta5_oh@...> wrote:
>
> I have not had any experience with the Ringo myself, but they have had an excellent reputation in my area for decades. I found a tech support e-mail address for you.
>
> Email cushcraft@...
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@> wrote:
> >
> > Hi all,
> >
> > I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
> >
> > I would like your suggestions
> >
> > Jeff
> >
> > VK4FNRS
> >
>

30861. Re: TS 520S with alc trouble

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:21:43 UTC
From: DaveS
Topic: 30851 Message: 30861

Thanks for responding Mike
I will check out the VR 1 circuit for that problem, I will keep you posted, Thanks again, 73.
Dave

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello David,
>
> A "constant" ALC indication while operating sideband (USB or LSB) is not required. If you have been lead to believe there should be a constant display of ALC during sideband transmissions then you have been mislead.
>
> ALC is produced ONLY when grid current flows in the final tubes and this can ONLY occur when the level of RF from the driver tube is at a level that causes the grids of the final tubes to swing "positive". Then and ONLY then will ALC be produced.
>
> When operating sideband, set the meter switch to ALC and while speaking into the microphone from a distance of 1 to 2 inches in a normal level of voice, adjust the MIC gain so the ALC meter just "starts" to "flicker" above zero. This is the point of maximum peak RF output. Any further increase in the MIC gain will produce ALC which will cause a "reduction" in RF output, NOT an "increase" in RF output. ALC is there to help keep from over driving the final amplifier and causing splatter (adjacent frequency interference).
>
> Don't be fooled because your watt meter may NOT be displaying FULL OUTPUT. Only PEAK watt meter can display PEAK output. Most watt meters are average watt meters and when the transmitter is adjusted properly the typical RF output displayed on the average watt meter will be 20 to 30 watts at most. This is normal and should NOT be considered a problem or improperly adjusted transmitter.
>
> As for the S meter not zeroing when adjust VR1 on the IF board, either R41 (15K 1/2 watt) has changed values or VR1 is bad. Clean VR1 and readjust as stated in the 520 service manual. Did you perform the complete S meter adjustments in the 520 service manual or just adjust VR1?
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "DaveS" <kc8pcl@> wrote:
> >
> > Hello,
> > I have a TS 520S that works with good output, The processor works fine, but when I

switch to alc, it is intermittent in output. It works sometimes, and then as you talk, it slowly drops in output. Sometimes you have to get real close to the mic to get any output at all, yet when I switch it to RF, there is plenty of power out. Also the S meter will not zero even when you set VR1, can't set it on zero with the antenna disconnected. I am using a dummy load for adjusting the radio. can anyone help with troubleshooting this problem? Thanks for reading this post, Hope to hear from someone, 73.
> > KC8PCL
> >
>

30862. Re: My New VFO 520S does not work!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:35:31 UTC
From: calihambone
Topic: 30837 Message: 30862

I couldn't tell if you were talking about a remote VFO or not.

The TS-520 series do not have a three prong Edison Plug on them this they depend on the installer connnecting earth(ground) to each chassis.

Each TS Series component needs an earth connection from the rear chassis wing nut ground connection to earth(ground).

You might have some stray voltage running around causing a ground loop which you hear thru the speaker.

Please post the fix when you figure it out.

Good luck.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Have you opened up the VFO-520S and looked for a broken ground on the 9 pin socket and/or else where? The differences between the VFO-520 and VFO-520S is cosmetic. The internal VFO and support circuits are the same.
>
> If you don't have the VFO-520 manual you can download it at Gordon's website, www.n6wk.com/kenwood/
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "k4ynd" <k4ynd@> wrote:
> >
> > I picked up a VFO520S to replace the VFO 520 I was using with my 520s.
> > There is a loud AC like hum coming out of the speaker. It does not matter what I set the switch at; the hum stays the same. It is quite loud. I know it is not the cable because the VFO520 works as it should?
> >
> > Any suggestions? How much would K4eaa charge me (if he even works on them?)
> >
> > By the way it sure looks good
> >
> > 73
> > k4ynd
> >
>

30863. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:36:27 UTC
From: Gene Henderson
Topic: 30856 Message: 30863

Jeff Have you tried to shorten the antenna ? I would slide it together about one inch at a time and check where it is resonant at using the MFJ 259 or by other means. Gene WB9HLA
----- Original Message -----
From: jeffrey lord
To: yahoo group
Sent: Sunday, April 17, 2011 02:05
Subject: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

[Non-text portions of this message have been removed]

30864. TS-520 12V Operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:22:34 UTC
From: calihambone
Topic: 30864 Message: 30864

I have a TS-520 with the 12V-120V option installed.

I have the instructions for jumping the 120V socket for 12V operation but it doesn't make sense to me, (it doesn't take much to confuse me these days...lol

Does anyone have a more detail tutorial or pics on how to wire a 12V plug for 12V operation of a TS-520. I searched the site and didn't find an old post addressing this topic.

Thanks for your help.

30865. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:45:20 UTC
From: Leslie Smith
Topic: 30856 Message: 30865

Hello Jeff,
What part of VK4 do you live in?
I'm VK2 - near Newcastle, just north from Sydney.

Best radio greetings, (eg 73s and all that stuff)

Les

--
Leslie Smith
[1]vk2bcu@...
(end)

On Sat, 16 Apr 2011 23:05 -0700, "jeffrey lord"
<jc_2aussie@...> wrote:

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for
28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

References

1. mailto:vk2bcu@...m
2. mailto:jc_2aussie@...?subject=Re%3A%20convert%2027Mhz%20RINGO%20to%2028%2E5Mhz
3. mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20convert%2027Mhz%20RINGO%20to%
2028%2E5Mhz
4. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxYWduN2tmBF9TAzk3MzU5
NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwODU2BHNlYwNmdHIEc2xrA3JwbHkEc3
RpbWUDMTMwMzAyMDMyNQ--?act=reply&messageNum=30856
5. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlY2g0MmYyBF9TAzk3MzU5
NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTMwMzAyMD
MyNQ--
6. http://groups.yahoo.com/group/TS-520_820_530_830/message/30856;_ylc=X3oDMTM2aWVjNG84BF9
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3Z0cGMEc3RpbWUDMTMwMzAyMDMyNQR0cGNJZAMzMDg1Ng--
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wMjAzMjU-?o=6
8. http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmdW1wYzh1BF9TAzk3MzU
5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDMwM
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9. http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlMDVub2w2BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMzAyMDMyNQ--
10. http://global.ard.yahoo.com/SIG=15o5cmo1h/M=493064.14543979.14365478.13298430/D=groups/S=1705063108:MKP1/Y=YAHOO/EXP=1303027526/L=b0675882-68b8-11e0-91c4-935f06e52a7b/B=oM.5BkwNPOI-/J=1303020326455565/K=EZdF8PhuuOB7zyOgHSFJbw/A=6060255/R=0/SIG=1194m4keh/*http://us.toolbar.yahoo.com/?.cpdl=grpj
11. http://global.ard.yahoo.com/SIG=15o344hmr/M=493064.14543977.14365476.10835568/D=groups/S=1705063108:MKP1/Y=YAHOO/EXP=1303027526/L=b0675882-68b8-11e0-91c4-935f06e52a7b/B=oc.5BkwNPOI-/J=1303020326455565/K=EZdF8PhuuOB7zyOgHSFJbw/A=6078812/R=0/SIG=114ae4ln1/*http://dogandcatanswers.yahoo.com/
12. http://groups.yahoo.com/;_ylc=X3oDMTJkc205ZHBxBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAzMDIwMzI1
13. mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
14. mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
15. mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe
16. http://docs.yahoo.com/info/terms/

--
http://www.fastmail.fm - Send your email first class

[Non-text portions of this message have been removed]

30866. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 16:48:28 UTC
From: Gene Henderson
Topic: 30856 Message: 30866

Jeff
I looked on the MFJ site 28.4 200 Inches 28.8 192" 29.3 182" that should put in the ballpark Gene

----- Original Message -----
From: jeffrey lord
To: yahoo group
Sent: Sunday, April 17, 2011 02:05
Subject: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

[Non-text portions of this message have been removed]

30867. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 17:06:34 UTC
From: KD5SFA
Topic: 30856 Message: 30867

You may also need to adjust the "ring" some
and if is is like the one I have for 6m there
is a small coax stub that may need trimming as
well.

Sent from mobile device...

On Apr 17, 2011, at 11:48, "Gene Henderson" <wb9hla@...> wrote:

> Jeff
> I looked on the MFJ site 28.4 200 Inches 28.8 192" 29.3 182" that should put in the ballpark Gene
>
> ----- Original Message -----
> From: jeffrey lord
> To: yahoo group
> Sent: Sunday, April 17, 2011 02:05
> Subject: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz
>
> Hi all,
>
> I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
>
> I would like your suggestions
>
> Jeff
>
> VK4FNRS
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

30868. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 13:56:27 UTC
From: Dennis Kippa
Topic: 30856 Message: 30868

Jeff will the top section of the Ringo adjust longer and shorter?. In other words will it slide in and out of the larger diameter tubing or is your Ringo constructed with one piece of tubing it's entire length?

If it is adjustable I would shorten it a few inches and then check SWR or use a antenna analyzer. The matching devise will take some adjustment also.

That's your starting point, now its time to experiment. Good luck..

I had forgotten that the CB frequencies were popular in Australia

On Sun, Apr 17, 2011 at 1:05 AM, jeffrey lord <jc_2aussie@...> wrote:

>
>
> Hi all,
>
> I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
>
> I would like your suggestions
>
> Jeff
>
> VK4FNRS
>
>
>

[Non-text portions of this message have been removed]

30869. Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 17:13:41 UTC
From: Simon Taylor
Topic: 30869 Message: 30869

Hi guys, I have owned a ts520 for some months now and am really enjoying it! I have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz. However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when trying to peak the drive control. Is it time to replace the drivere tube?

I am sorry if this has been discovered in previous years/months.

Kind regards,

Simon

30870. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 17:40:36 UTC
From: w5rkl
Topic: 30869 Message: 30870

Hi Simon,

Perform the following with the 520 connected to a 50 ohm dummy load that has a power rating of at least 300 watts.

What power output do you get on any 10 meter segment (band switch setting)?

You can tune the transmitter in CW mode. If you have a CW key plugged into the CW socket, either remove it from the CW socket and flip the SEND switch UP or turn VOX ON and press and hold the CW key down (transmitter will activate either way).

Set the CAR control between 10 and 11 o'clock.

Set the meter switch to IP.

Key the transmitter using one of the methods indicated above and quickly adjust the DRIVE control for maximum IP indication.

Adjust the PLATE control for a "dip" (reduction in IP current). At this point you see power output indicated on your watt meter, if your dummy load has a watt meter. If not, switch the 520's meter switch to RF and the meter should indicate a higher than zero indication. None of the meter scales are used with the meter switch set to RF. The meter "pointer" simply rises above zero (far left) as power output increases and falls back towards zero with RF power output decreases. The "RF VOLT" control on the side of the 520 controls the meter's RF setting but the "RF VOLT" control does NOT control the actual RF output from the 520's transmitter.

Alternate between the PLATE control (dip) and LOAD control (Peak RF output), until there is no further reduction in IP current (PLATE control dip adjustment) and no further increase in RF output (LOAD control adjustment). At that point the transmitter is fully loaded and ready for use.

Release the CW key or flip the SEND switch DOWN (unkeys the transmitter), depending on which method you use to key the transmitter in CW mode.

Again, what power output do you see on any 10 meter segment?

The above tuning procedure should be accomplished "quickly" since full screen voltage is applied to the final tubes in CW mode. If necessary, unkey the transmitter between steps to allow the final tubes to cool down, typically 30 to 60 seconds is sufficient to cool the final tubes.

Since you have normal RF output and what appears to be normal stable ALC indication on the other bands, the driver tube does not need replacing nor do the final tubes need replacing.

You may consider performing the DRIVER COIL adjustment on the COIL PACK Unit. This adjustment must be performed as outlined in the 520 service manual. You can't just adjust 10 meter driver coils, there is a sequence of steps you must follow. If you adjust only the

10 meter coils without following the sequence, the other bands will be affected resulting in a change, reduction, in RF output on the other bands. Therefore, perform the procedure as outlined in the service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@...> wrote:
>
> Hi guys, I have owned a ts520 for some months now and am really enjoying it! I have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz. However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when trying to peak the drive control. Is it time to replace the drivere tube?
>
> I am sorry if this has been discovered in previous years/months.
>
> Kind regards,
>
> Simon
>

30871. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 18:04:47 UTC
From: John Davidson
Topic: 30856 Message: 30871

I had a six meter Ringo and the top section was slid into the lower section
and secured with a clamp.
If you have a good match on the original operating frequency you should not
touch the matching device.
All you need to do is shorten the top a few inches at a time, checking each
time, until your SWR minimum is where you want to be on the band.

From: Dennis Kippa <n5dpk1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 17, 2011 9:56:27 AM
Subject: Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Jeff will the top section of the Ringo adjust longer and shorter?. In other
words will it slide in and out of the larger diameter tubing or is your
Ringo constructed with one piece of tubing it's entire length?

If it is adjustable I would shorten it a few inches and then check SWR or
use a antenna analyzer. The matching devise will take some adjustment also.

That's your starting point, now its time to experiment. Good luck..

I had forgotten that the CB frequencies were popular in Australia

On Sun, Apr 17, 2011 at 1:05 AM, jeffrey lord <jc_2aussie@...> wrote:

>
>
> Hi all,
>
> I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz
>
> I would like your suggestions
>
> Jeff
>
> VK4FNRS
>
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30872. Re: [TS-520_820_530_830] Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 18:14:02 UTC
From: John Davidson
Topic: 30869 Message: 30872

My TS520 had hardly any ALC reading on 10M when it was new out of the box, adding another 40 years to lthat and it only puts out about 55-60 watts on 10M, I tune it with the Plate Current position of the meter and a watt meter. It does fine.

From: Simon Taylor <m3set@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 17, 2011 1:13:41 PM
Subject: [TS-520_820_530_830] Now meter deflection when peaking the alc/drive

Hi guys, I have owned a ts520 for some months now and am really enjoying it! I have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz. However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when trying to peak the drive control. Is it time to replace the drivere tube?

I am sorry if this has been discovered in previous years/months.

Kind regards,

Simon

[Non-text portions of this message have been removed]

30873. RE: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 18:14:30 UTC
From: brad
Topic: 30856 Message: 30873

T's not all that hard to do. It will probably work fine just the way it is, but if you want to bring it closer to the 10 meter band you simply slide the pieces to make it shorter. Checking with a VSWR meter will be fine. Now what kind of coax do you have running to it and how much is there? Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jeffrey lord
Sent: Sunday, April 17, 2011 02:05
To: yahoo group
Subject: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

[Non-text portions of this message have been removed]

30874. Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 20:52:54 UTC
From: jeffrey lord
Topic: 30856 Message: 30874

Brad,

Using RG58 but i am waiting for a new secondhand mast to arrive and be set up,.

Cheers,

Jeff
----- Original Message -----
From: brad <kb2chy@frontiernet.net>
To: TS-520_820_530_830@yahoogroups.com
Cc:
Sent: Sunday, 17 April 2011 10:14 AM
Subject: Re: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

T's not all that hard to do. It will probably work fine just the way it is,
but if you want to bring it closer to the 10 meter band you simply slide the
pieces to make it shorter. Checking with a VSWR meter will be fine. Now what
kind of coax do you have running to it and how much is there? Brad KB2CHY

From: TS-520_820_530_830@...m
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jeffrey lord
Sent: Sunday, April 17, 2011 02:05
To: yahoo group
Subject: [TS-520_820_530_830] convert 27Mhz RINGO to 28.5Mhz

Hi all,

I have a RINGO for 27Mhz, which I would like to convert for 28.500 Mhz

I would like your suggestions

Jeff

VK4FNRS

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

30875. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 20:34:38 UTC
From: Simon Taylor
Topic: 30869 Message: 30875

Hi Mike,

I can manage between 40 and 50 watts on the band. I shall take on board yourt other advice regarding the coil adjustment. I am only starting out in the world of amateur radio, so shall speak with a local elmer who may be able to assist.

Regards,

Simon.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Simon,
>
> Perform the following with the 520 connected to a 50 ohm dummy load that has a power rating of at least 300 watts.
>
> What power output do you get on any 10 meter segment (band switch setting)?
>
> You can tune the transmitter in CW mode. If you have a CW key plugged into the CW socket, either remove it from the CW socket and flip the SEND switch UP or turn VOX ON and press and hold the CW key down (transmitter will activate either way).
>
> Set the CAR control between 10 and 11 o'clock.
>
> Set the meter switch to IP.
>
> Key the transmitter using one of the methods indicated above and quickly adjust the DRIVE control for maximum IP indication.
>
> Adjust the PLATE control for a "dip" (reduction in IP current). At this point you see power output indicated on your watt meter, if your dummy load has a watt meter. If not, switch the 520's meter switch to RF and the meter should indicate a higher than zero indication. None of the meter scales are used with the meter switch set to RF. The meter "pointer" simply rises above zero (far left) as power output increases and falls back towards zero with RF power output decreases. The "RF VOLT" control on the side of the 520 controls the meter's RF setting but the "RF VOLT" control does NOT control the actual RF output from the 520's transmitter.
>
> Alternate between the PLATE control (dip) and LOAD control (Peak RF output), until there is no further reduction in IP current (PLATE control dip adjustment) and no further increase in RF output (LOAD control adjustment). At that point the transmitter is fully loaded and ready for use.
>
> Release the CW key or flip the SEND switch DOWN (unkeys the transmitter), depending on which method you use to key the transmitter in CW mode.

>
> Again, what power output do you see on any 10 meter segment?
>
> The above tuning procedure should be accomplished "quickly" since full screen voltage is applied to the final tubes in CW mode. If necessary, unkey the transmitter between steps to allow the final tubes to cool down, typically 30 to 60 seconds is sufficient to cool the final tubes.
>
> Since you have normal RF output and what appears to be normal stable ALC indication on the other bands, the driver tube does not need replacing nor do the final tubes need replacing.
>
> You may consider performing the DRIVER COIL adjustment on the COIL PACK Unit. This adjustment must be performed as outlined in the 520 service manual. You can't just adjust 10 meter driver coils, there is a sequence of steps you must follow. If you adjust only the 10 meter coils without following the sequence, the other bands will be affected resulting in a change, reduction, in RF output on the other bands. Therefore, perform the procedure as outlined in the service manual.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@> wrote:
> >
> > Hi guys, I have owned a ts520 for some months now and am really enjoying it! I have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz. However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when trying to peak the drive control. Is it time to replace the drivere tube?
> >
> > I am sorry if this has been discovered in previous years/months.
> >
> > Kind regards,
> >
> > Simon
> >
>

30876. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 20:27:20 UTC
From: Simon Taylor
Topic: 30869 Message: 30876

Hi John,

Thank you for your reply. I can manage around 50 watts maximum. Do you think this could be improved with a new set of valves?

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> My TS520 had hardly any ALC reading on 10M when it was new out of the box,
> adding another 40Â years to lthat and it only puts out about 55-60 watts on 10M,
> I tune it with the Plate Current position of the meter and a watt meter.Â It does
> fine.Â
>
>
>
>
> _____
> From: Simon Taylor <m3set@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 17, 2011 1:13:41 PM
> Subject: [TS-520_820_530_830] Now meter deflection when peaking the alc/drive
>
> Â
> Hi guys, I have owned a ts520 for some months now and am really enjoying it! I
> have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz.
> However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when
> trying to peak the drive control. Is it time to replace the drivere tube?
>
> I am sorry if this has been discovered in previous years/months.
>
> Kind regards,
>
> Simon
>
>
>
>
> [Non-text portions of this message have been removed]
>

30877. alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 17:21:54 UTC
From: Simon Taylor
Topic: 30877 Message: 30877

Hi guys,

I purchased a ts520 several months ago and have had great fun operating on the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle improving, I thought I would try my hand on 10 metres.

However, when peaking the drive/alc in the tune up proceedure on the 28, 28.5 and 29.1 bands, I cannot get any deflection on the meter, even with the carrier control fully advanced. IP is correct at 60ma and HV reads around 750.

What do you guys think the problem may be? Is it time for a new set of tubes?

I am sorry if this topic has been covered many times before, but I would appreciate your help.

Regards,

Simon

30878. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 23:32:52 UTC
From: w5rkl
Topic: 30869 Message: 30878

Simon,

Did you try the COIL PACK adjustment I suggested earlier in the 520 service manual yet? Don't buy new tubes just yet before you check and if necessary, perform the COIL PACK adjustments in the 520 service manual.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@...> wrote:
>
> Hi John,
>
> Thank you for your reply. I can manage around 50 watts maximum. Do you think this could be improved with a new set of valves?
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > My TS520 had hardly any ALC reading on 10M when it was new out of the box,
> > adding another 40Â years to lthat and it only puts out about 55-60 watts on 10M,
> > I tune it with the Plate Current position of the meter and a watt meter.Â It does
> > fine.Â
> > >
> > >
> > >
> > >
> > > _____
> > > From: Simon Taylor <m3set@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sun, April 17, 2011 1:13:41 PM
> > > Subject: [TS-520_820_530_830] Now meter deflection when peaking the alc/drive
> > >
> > > Â
> > > Hi guys, I have owned a ts520 for some months now and am really enjoying it! I
> > > have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz.
> > > However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when
> > > trying to peak the drive control. Is it time to replace the drivere tube?
> > >
> > > I am sorry if this has been discovered in previous years/months.
> > >
> > > Kind regards,
> > >
> > > Simon
> > >
> > >

> >
> >
> > [Non-text portions of this message have been removed]
> >
>

30879. Re: [TS-520_820_530_830] alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-17 23:11:25 UTC
From: Chris Robinson
Topic: 30877 Message: 30879

I am going to sit on the sidelines and follow this one, as I just bought this radio as well a month or so ago, and am still learning my way around. Took me three days to check for the darn jumper on back between pin 8 and 9. Now I am trying to figure out how to interface to computer for better use.

On topic though, have you a copy of the service manual as well as the operating manual? If so I would work through that first. Have you had the cover popped open yet? I had to remove a couple crystals cause of some dumb IDIOT insisted on using this on 11 meters, while it was tuned for it, it gave me hell getting back to proper setup.

On Sun, Apr 17, 2011 at 12:21 PM, Simon Taylor <m3set@...> wrote:

>
>
> Hi guys,
>
> I purchased a ts520 several months ago and have had great fun operating on
> the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle improving, I
> thought I would try my hand on 10 metres.
>
> However, when peaking the drive/alc in the tune up proceedure on the 28,
> 28.5 and 29.1 bands, I cannot get any deflection on the meter, even with the
> carrier control fully advanced. IP is correct at 60ma and HV reads around
> 750.
>
> What do you guys think the problem may be? Is it time for a new set of
> tubes?
>
> I am sorry if this topic has been covered many times before, but I would
> appreciate your help.
>
> Regards,
>
> Simon
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

30880. Re: TS-520 12V Operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 01:27:01 UTC
From: Bob
Topic: 30864 Message: 30880

--- In TS-520_820_530_830@yahoogroups.com, "calihambone" <ficfam1@...> wrote:
>
> I have a TS-520 with the 12V-120V option installed.
>
> I have the instructions for jumping the 120V socket for 12V operation but it doesn't make sense to me, (it doesn't take much to confuse me these days...lol
>
> Does anyone have a more detail tutorial or pics on how to wire a 12V plug for 12V operation of a TS-520. I searched the site and didn't find an old post addressing this topic.
>
> Thanks for your help.
>

You will need the DS-1A converter installed on the back...
You then rewire an AC Jones to a DC Jones by the instructions in the manual...
Bob

30881. Re: [TS-520_820_530_830] Re: TS-520 12V Operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 01:45:47 UTC
From: Jojo Vicencio DU1VHY
Topic: 30864 Message: 30881

i acquired the 12 volt plug and used the dwg in the manual as guide. works well
but trvcr by default, shifts to 50w when on battery power.

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

_____
From: Bob <ke5ftf@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 18, 2011 9:27:01 AM
Subject: [TS-520_820_530_830] Re: TS-520 12V Operation

--- In TS-520_820_530_830@yahoogroups.com, "calihambone" <ficfam1@...> wrote:
>
> I have a TS-520 with the 12V-120V option installed.
>
> I have the instructions for jumping the 120V socket for 12V operation but it
>doesn't make sense to me, (it doesn't take much to confuse me these days...lol
>
> Does anyone have a more detail tutorial or pics on how to wire a 12V plug for
>12V operation of a TS-520. I searched the site and didn't find an old post
>addressing this topic.
>
> Thanks for your help.
>

You will need the DS-1A converter installed on the back...
You then rewire an AC Jones to a DC Jones by the instructions in the manual...
Bob

[Non-text portions of this message have been removed]

30882. Re: alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 13:18:31 UTC
From: roberteleazer@rocketmail.com
Topic: 30877 Message: 30882

Simon:

Kenwood Service Bulletin No.21 from 1977 says:

"No ALC meter action on 10 meters: This is normal for TS-520."

My own TS-520 has no ALC indication in tune mode on 10M at all. And nonetheless it puts out 95W on CW into my dummy load on 10M with an SWR indication of 1.4 and a CAR setting less than halfway up the dial.

Now, some people claim they get all kinds of ALC in Tune mode on 10M. But if it works I would not worry about no ALC on the meter.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@...> wrote:
>
> Hi guys,
>
> I purchased a ts520 several months ago and have had great fun operating on the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle improving, I thought I would try my hand on 10 metres.
>
> However, when peaking the drive/alc in the tune up proceedure on the 28, 28.5 and 29.1 bands, I cannot get any deflection on the meter, even with the carrier control fully advanced. IP is correct at 60ma and HV reads around 750.
>
> What do you guys think the problem may be? Is it time for a new set of tubes?
>
> I am sorry if this topic has been covered many times before, but I would appreciate your help.
>
> Regards,
>
> Simon
>

30883. Re: alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 13:28:26 UTC
From: w5rkl
Topic: 30877 Message: 30883

Hello Chris, Simon, and others,

More often than not operators tend to jump to conclusions in situations such as this and focus primarily on tube replacement. While there are some cases where tube replacement is warranted, quite often tube replacement is not the source of the problem.

A weak driver tube will exhibit the same symptoms on all bands, not just one band. A symptom of a weak driver tube is instability in the drive signal to the final amplifier. That means as the tube warms up (typically after 5 to 10 minutes) the RF output will become less which leads to lower RF drive to the final tubes, hence a reduction in RF output to the antenna. A quick way to tell if the driver tube is weak, watch the ALC meter in TUNE mode "AFTER" the DRIVE control achieves a peak ALC indication. If the ALC meter starts to fall back toward zero either quickly or slowly, the driver tube is weak, replace it. If the ALC meter remains stable and does not fall back towards zero the driver tube is good and does NOT need to be replaced.

Simon, you said the 520 appears to be operating fine on the lower bands, 80, 40, 20, and 15, but not so on 10 meters. I take that to mean the 520 is producing good ALC in TUNE mode on those bands when adjusting the DRIVE control for a peak meter indication. What you did not say is whether or not the ALC indication in TUNE mode on the lower bands after achieving the peak ALC indication was stable or not. You should tune the 520 up on those lower bands and watch the ALC meter for a few seconds after you achieve the peak ALC indication to determine whether the ALC indication is stable or whether it starts to fall back towards zero either slowly or somewhat fast. This will tell you whether or not the driver tube is good or bad.

If you find the peak ALC indication in TUNE mode is stable on the lower bands then the driver tube is not the source of your problem.

As I said you should check the ALC indications as I outlined them above plus the driver's COIL PACK alignment adjustments in the service manual before spending any money on tube replacement.

The final amplifier 60ma "IP" meter indication and final amplifier's HV indication has nothing to do with the driver tube's ability to produce sufficient RF signal to the final tubes for an ALC indication in TUNE mode.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Robinson <kf6nfw@...> wrote:
>
> I am going to sit on the sidelines and follow this one, as I just bought
> this radio as well a month or so ago, and am still learning my way around.
> Took me three days to check for the darn jumper on back between pin 8 and 9.
> Now I am trying to figure out how to interface to computer for better use.

>
> On topic though, have you a copy of the service manual as well as the
> operating manual? If so I would work through that first. Have you had the
> cover popped open yet? I had to remove a couple crystals cause of some dumb
> IDIOT insisted on using this on 11 meters, while it was tuned for it, it
> gave me hell getting back to proper setup.
>
>
>
> On Sun, Apr 17, 2011 at 12:21 PM, Simon Taylor <m3set@...> wrote:
>
> >
> >
> > Hi guys,
> >
> > I purchased a ts520 several months ago and have had great fun operating on
> > the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle improving, I
> > thought I would try my hand on 10 metres.
> >
> > However, when peaking the drive/alc in the tune up proceedure on the 28,
> > 28.5 and 29.1 bands, I cannot get any deflection on the meter, even with the
> > carrier control fully advanced. IP is correct at 60ma and HV reads around
> > 750.
> >
> > What do you guys think the problem may be? Is it time for a new set of
> > tubes?
> >
> > I am sorry if this topic has been covered many times before, but I would
> > appreciate your help.
> >
> > Regards,
> >
> > Simon
> >
> >
> >
>
>
>
> --
> Mr.C.Robinson
> 73 DE KF6NFW

30884. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 08:04:12 UTC
From: Simon Taylor
Topic: 30869 Message: 30884

Hi Mike,

I will try the coil pack adjustment first. This will have to wait a week or two. I am busy with work and the XYL has me decorating the house this coming Easter weekend. Then we have a public holiday and street party for the forthcoming royal wedding. Followed by me attending my local radio club's field trip to Tywyn in north west Wales to operate GB8MD for International Marconi Day. It is one very busy month!

However, thank you for the advice and I shall cvertainly try this before spending any hard earned cash!

73

Simon

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Simon,
>
> Did you try the COIL PACK adjustment I suggested earlier in the 520 service manual yet? Don't buy new tubes just yet before you check and if necessary, perform the COIL PACK adjustments in the 520 service manual.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@> wrote:
> >
> > Hi John,
> >
> > Thank you for your reply. I can manage around 50 watts maximum. Do you think this could be improved with a new set of valves?
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> > >
> > > My TS520 had hardly any ALC reading on 10M when it was new out of the box,
> > > adding another 40Â years to lthat and it only puts out about 55-60 watts on 10M,
> > > I tune it with the Plate Current position of the meter and a watt meter.Â It does
> > > fine.Â
> > >
> > >
> > >
> > >
> > > _____

> > > From: Simon Taylor <m3set@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sun, April 17, 2011 1:13:41 PM
> > > Subject: [TS-520_820_530_830] Now meter deflection when peaking the alc/drive
> > >
> > > Â
> > > Hi guys, I have owned a ts520 for some months now and am really enjoying it! I
> > > have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz.
> > > However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when
> > > trying to peak the drive control. Is it time to replace the drivere tube?
> > >
> > > I am sorry if this has been discovered in previous years/months.
> > >
> > > Kind regards,
> > >
> > > Simon
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

30885. Re: alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 08:06:52 UTC
From: Simon Taylor
Topic: 30877 Message: 30885

Hi Chris,

Yes I have the service manual, thanks. At least working through that will give me something to do with my spare time 'hi'.

I shall keep you guys informed on how I get on.

73

Simon

--- In TS-520_820_530_830@yahoogroups.com, Chris Robinson <kf6nfw@...> wrote:
>
> I am going to sit on the sidelines and follow this one, as I just bought
> this radio as well a month or so ago, and am still learning my way around.
> Took me three days to check for the darn jumper on back between pin 8 and 9.
> Now I am trying to figure out how to interface to computer for better use.
>
> On topic though, have you a copy of the service manual as well as the
> operating manual? If so I would work through that first. Have you had the
> cover popped open yet? I had to remove a couple crystals cause of some dumb
> IDIOT insisted on using this on 11 meters, while it was tuned for it, it
> gave me hell getting back to proper setup.
>
>
>
> On Sun, Apr 17, 2011 at 12:21 PM, Simon Taylor <m3set@...> wrote:
>
> >
> >
> > Hi guys,
> >
> > I purchased a ts520 several months ago and have had great fun operating on
> > the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle improving, I
> > thought I would try my hand on 10 metres.
> >
> > However, when peaking the drive/alc in the tune up proceedure on the 28,
> > 28.5 and 29.1 bands, I cannot get any deflection on the meter, even with the
> > carrier control fully advanced. IP is correct at 60ma and HV reads around
> > 750.
> >
> > What do you guys think the problem may be? Is it time for a new set of
> > tubes?
> >
> > I am sorry if this topic has been covered many times before, but I would
> > appreciate your help.

> >
> > Regards,
> >
> > Simon
> >
> >
> >
>
>
>
> --
> Mr.C.Robinson
> 73 DE KF6NFW
>
>
> [Non-text portions of this message have been removed]
>

30886. Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 20:09:23 UTC
From: barrie@eos.net
Topic: 30843 Message: 30886

I use an 830 and a MC-60 with the audio amp off. I am at work, and can't recall the knob settings, but I don't have to eat the MC-60.
Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 16 Apr 2011 07:13:39
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

Hi Mike--I intentionally did not mention the "processor" settings. What I described is with the processors off on both 530 and 830. My MC-60 has no internal pre-amp. I believe the MC-60A mic has an internal pre-amp? I have used both processors on both rigs and they both work well. I set the 830 processor pot to around 1200 to get around 6db on the "compression" scale of the meter. I have monitored and it clearly adds punch, but would be easy to overdrive.

I just wanted to find out where 830 owners using an MC-60 mic typically set their mic gain at without any processing. As I mentioned at 1:00 (6) setting on mic gain pot I have to "eat" mike to get ALC meter to begin (blip) up. This is much higher setting than is required on my 530SP. This may be normal? I will take a closer look at the two mike pre-amp circuits to see if there is a design reason for this. I see that the processors are very different with the 830 using RF clipping.

Mike --appreciate your questions and quick response. It is not a big problem. I just want to make sure rig is operating as it should as I have no operational experience with 830s. Someone told me I should be using a MC-50 mike with the 830. Doesnt sound right to me. Maybe I will inject 1000hz audio from audio generator into mike jack and run some comparisons?

TNX--Terry

_____
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 16, 2011 9:21:42 AM
Subject: [TS-520_820_530_830] Re: "Normal" Mic Gain

Hello Terry,

You didn't say whether you are using any transmit audio processing with both transceivers (Processor switch turned ON). You also didn't say whether the MC-60's internal amplifier is turned ON or OFF.

Since both transceivers have the same 500 to 50K ohm microphone impedance, it doesn't really matter what impedance setting the MC-60 is set at.

The TS-530 transmit audio processing is an "ON/OFF" setting, no front panel processing level adjustment other than the MIC Gain. The TS-830 on the other hand, has a separate audio processing adjustment, upper left corner above the meter, to vary the level of audio processing. Therefore, the 830's audio processing adjustment should be set with the MC-60's internal amplifier turned OFF.

If the MC-60 internal amplifier is turned ON and both transceivers have transmit audio processing turned ON, that's not a good combination. Use either one or the other, not both.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Just got a nice TS-830s. All my hybrid experience has been with a TS-530SP. I
>use an MC-60 mike. On the TS-530 I set mic gain to around 10:30 and speak
>about 2 inches from mike to just see occaisional ALC indication (blip). With the
>TS-830 using same mike I have to set the mike gain to around 1:00 and "eat" the
>mike to get same occaisional "blip" on ALC meter position. I have monitored with
>headphones and the audio sounds good. Peak reading wattmeter indicates good RF
>output. Having to "eat" the mike probably helps eliminate background noise from
>the shack, but it is very different from how my TS-530SP operates.
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> Anyone running same TS-830/MC-60 combination? What do you consider "normal" mic
>gain setting? Should I start taking voltage readings around Q19?
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30887. Re: [TS-520_820_530_830] Re: TS-830S Bias Adjustment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 20:17:36 UTC
From: barrie@eos.net
Topic: 30833 Message: 30887

I just took the cover off and gave the contacts a squirt of DeOxit and it had worked great ever since
Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: Charles Coffee <chascoffee@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 16 Apr 2011 08:43:48
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Bias Adjustment

Daniel,
Thanks for the reply, I always check resistors before I install them in a circuit to make
sure they are the correct resistance and within tolerance. Burned too many times
in the past. HV on the meter was around 850V, and a bit higher on the DMM when reading off the HV to the finals. Still have to check the other voltages
and check the AF Relay as Mike suggested (also Thank you Mike for the tip).

Chuck, KJ4GU

On Fri, Apr 15, 2011 at 7:26 PM, Daniel TOESCA <ON5PY1967@...> wrote:

> Charles,
>
> I would check the new resistors you just wired with a good ohmmeter, just
> to
> be sure you didn't misread their values, it's quite easy with modern
> multi-colored resistors.
>
> Just to be sure, I would also check th PA HV with the front panel meter,
> should be around 900 volts, the screen grid voltage, shoud be around
> 200-230
> volts, and the grid voltage, should be around -130 volts in receive and -60
> volts in transmit mode, key down. Check what you expect to find with the
> schematic or the service manual, just to be sure of my memories...
>
> 73
>
> Daniel, ON5PY

>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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30888. Re: [TS-520_820_530_830] Re: alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 19:35:20 UTC
From: Chris Robinson
Topic: 30877 Message: 30888

I did not know that about the ALC for 10M, thanks, now I wont panic when I pay attention to that portion.of the radio. I tend to monitor my voltage more then anything else. I definitely notice this isnt the FT-101E I originally had!

On Mon, Apr 18, 2011 at 3:06 AM, Simon Taylor <m3set@...> wrote:

>
>
> Hi Chris,
>
> Yes I have the service manual, thanks. At least working through that will
> give me something to do with my spare time 'hi'.
>
> I shall keep you guys informed on how I get on.
>
> 73
>
> Simon
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Robinson <kf6nfw@...>
> wrote:
> >
> > I am going to sit on the sidelines and follow this one, as I just bought
> > this radio as well a month or so ago, and am still learning my way
> around.
> > Took me three days to check for the darn jumper on back between pin 8 and
> 9.
> > Now I am trying to figure out how to interface to computer for better
> use.
> >
> > On topic though, have you a copy of the service manual as well as the
> > operating manual? If so I would work through that first. Have you had the
> > cover popped open yet? I had to remove a couple crystals cause of some
> dumb
> > IDIOT insisted on using this on 11 meters, while it was tuned for it, it
> > gave me hell getting back to proper setup.
> >
> >
> >
> > On Sun, Apr 17, 2011 at 12:21 PM, Simon Taylor <m3set@...> wrote:
> >
> > > >
> > > >

> > > Hi guys,
> > >
> > > I purchased a ts520 several months ago and have had great fun operating
> on
> > > the 3.5, 7, 14 and 21 mhz bands. However with the sunspot cycle
> improving, I
> > > thought I would try my hand on 10 metres.
> > >
> > > However, when peaking the drive/alc in the tune up proceedure on the
> 28,
> > > 28.5 and 29.1 bands, I cannot get any deflection on the meter, even
> with the
> > > carrier control fully advanced. IP is correct at 60ma and HV reads
> around
> > > 750.
> > >
> > > What do you guys think the problem may be? Is it time for a new set of
> > > tubes?
> > >
> > > I am sorry if this topic has been covered many times before, but I
> would
> > > appreciate your help.
> > >
> > > Regards,
> > >
> > > Simon
> > >
> > >
> > >
> >
> >
> >
> > --
> > Mr.C.Robinson
> > 73 DE KF6NFW
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

30889. Re: [TS-520_820_530_830] Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 21:43:24 UTC
From: John Davidson
Topic: 30869 Message: 30889

Start with the IPA tube (12BY7) it seems to help most on 10M low drive problems.. Do a touch up on the alignment of the 10 M coils also.
I worked many VK/ZL/S. Pacific islands with the 520 running 60 W on 10M SSB here in MI.

_____
From: Simon Taylor <m3set@....uk>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 17, 2011 4:27:20 PM
Subject: [TS-520_820_530_830] Re: Now meter deflection when peaking the alc/drive

Hi John,

Thank you for your reply. I can manage around 50 watts maximum. Do you think this could be improved with a new set of valves?

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> My TS520 had hardly any ALC reading on 10M when it was new out of the box,
> adding another 40Â years to lthat and it only puts out about 55-60 watts on
>10M,
>
> I tune it with the Plate Current position of the meter and a watt meter.Â It
>does
>
> guys, I have owned a ts520 for some months now and am really enjoying it! I
> have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz.
> However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when
> trying to peak the drive control. Is it time to replace the drivere tube?

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.

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30890. Re: [TS-520_820_530_830] alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 21:48:47 UTC
From: John Davidson
Topic: 30877 Message: 30890

There is no way you can control the TS520 with a computer, like most modern rigs do.
Even my TS440s, 20 years neklwer, requires mods with a special IC set to do computer control.
My 520 has worked fine for almost 40 years with no computer attached :D

From: Chris Robinson <kf6nfw@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 17, 2011 7:11:25 PM
Subject: Re: [TS-520_820_530_830] alc/drive problem with ts520

 am still learning my way around.
Took me three days to check for the darn jumper on back between pin 8 and 9.
Now I am trying to figure out how to interface to computer for better use.
>
> What do you guys think the problem may be? Is it time for a new set of
> tubes?
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> I am sorry if this topic has been covered many times before, but I would
> appreciate your help.
>
> Regards,
>
> Simon
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

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30891. Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 21:52:33 UTC
From: Terry Wagoner
Topic: 30843 Message: 30891

Jim--Thanks. If you get a chance I would appreciate knowing where you set the mic gain pot. I have mine set at No.6 or 1:00 to get occasional ALC "flicker". My MC60 has no pre-amp. I am assuming the pre-amp version and my version have the same cartridge? I was a little disappointed getting very few responses. Surely there are many fellows out there running 830s with a MC60 non-amplified mikes. People may be reluctant to engage due to it being a very subjective subject and hams have very differing (some times passionate) opinions on how much ALC and how much Compression equates to "good audio". I didnt want to get into that. I am just trying to figure out if my new to me 830 is working OK based on it being different than my 530SP experience. Thanks Terry K9TW

From: "barrie@..." <barrie@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 18, 2011 4:09:23 PM
Subject: Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

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Jim
WA8SDF

Sent via BlackBerry from T-Mobile

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From: Terry Wagoner <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 16 Apr 2011 07:13:39
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

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Mike --appreciate your questions and quick response. It is not a big problem. I just want to make sure rig is operating as it should as I have no operational experience with 830s. Someone told me I should be using a MC-50 mike with the 830. Doesnt sound right to me. Maybe I will inject 1000hz audio from audio generator into mike jack and run some comparisons?

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From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, April 16, 2011 9:21:42 AM
Subject: [TS-520_820_530_830] Re: "Normal" Mic Gain

Hello Terry,

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other, not both.

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Mike
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>output. Having to "eat" the mike probably helps eliminate background noise from

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30892. Re: [TS-520_820_530_830] Re: TS-520 12V Operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 21:53:05 UTC
From: John Davidson
Topic: 30864 Message: 30892

For several years I ran my TS520 mobile and never saw much less than full power with the motor running and charging the battery.

From: Jojo Vicencio DU1VHY <jojo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, April 17, 2011 9:45:47 PM
Subject: Re: [TS-520_820_530_830] Re: TS-520 12V Operation

i acquired the 12 volt plug and used the dwg in the manual as guide. works well but trvcr by default, shifts to 50w when on battery power.

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

>

You will need the DS-1A converter installed on the back...
You then rewire an AC Jones to a DC Jones by the instructions in the manual...
Bob

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[Non-text portions of this message have been removed]

30893. Re: [TS-520_820_530_830] Re: TS-520 12V Operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 22:15:42 UTC
From: Jojo Vicencio DU1VHY
Topic: 30864 Message: 30893

Oh really? Wow. Never did mobile ops. Always lugged the battery to the site where we will operate. I will have to look again when I do that. Thank you for the remarks. 73,

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

From: John Davidson <k8jd@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 19, 2011 5:53:05 AM
Subject: Re: [TS-520_820_530_830] Re: TS-520 12V Operation

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30894. Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 23:07:17 UTC
From: barrie@eos.net
Topic: 30843 Message: 30894

Hi Terry. I'll check the settings on my 830 and send them to you when I get home.
I bet there isn't a lot of 830 users out there anymore; even less who even know about this group.
Jim
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 18 Apr 2011 14:52:33
To: <TS-520_820_530_830@yahoogroups.com>
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Subject: Re: [TS-520_820_530_830] Re: "Normal" Mic Gain

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30895. WTB Power Cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-18 22:39:05 UTC
From: Dennis
Topic: 30895 Message: 30895

I am picking up a basket case TS 520 later this week. I will need a power cord at least to do a evaluation. Does only one have one in their junk pile of wire?

I know where I can get a new one but I have to try this first.

Thanks
Dennis n5dpk

30896. good operating practive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 02:12:06 UTC
From: kevin
Topic: 30896 Message: 30896

I am trying to get a handle on good operating practice concerning the Mic setting of my rigs. I have NOT used processing at all because I am afraid that I will overdo it until I understand it better. I am a fairly new ham and learning more everyday.

On my 830 with a MC50 I do not need to turn the MIC knob up too much to get the ALC needle to start to flicker, In the past I have adjusted it so that is stays within the band on the meter. As I now understand it that is far too much and I should adjust it downward. Am I correct when it looks on a PEP meter that I am not getting as much wattage out when it is turned lower? If I am right am I trading good correct audio for wattage and coming out ahead?

I have a 520S that I use in a second QTH and I am using a Heil Pro Set Elite with and I have to turn the MIC knob up quite a bit further to get the needle to move. I assume this is because they are two different mikes with different operating characteristics.

Once I get this figured out what do I need to know about using compression?
Kevin
KD0ILM

30897. Re: [TS-520_820_530_830] WTB Power Cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 02:20:26 UTC
From: Lou Blasco
Topic: 30895 Message: 30897

Try here

http://www.k4eaa.com/

Lou
VK3ALB

At 08:39 19/04/2011, you wrote:
>I am picking up a basket case TS 520 later this week. I will need a
>power cord at least to do a evaluation. Does only one have one in
>their junk pile of wire?
>
>I know where I can get a new one but I have to try this first.
>
>Thanks
>Dennis n5dpk

30898. Re: [TS-520_820_530_830] good operating practive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 02:39:55 UTC
From: Lou Blasco
Topic: 30896 Message: 30898

Hi Kevin,

You're not trading good audio as much as reducing splatter.
Regardless of your audio quality once your ALC meter starts
indicating significant or constant deflection your PA is being
controlled by the ALC circuit and your output power IS being reduced.
I spent the weekend on my TS520S working 40m all over Australia with
reports of excellent audio quality and 5x9+ signal reports and the
ALC meter was barely registering. Please take a look at W5RKL's
excellent ALC explanation from April 17 on this forum.

With regard to compression, as long as you've set your mic gain
correctly the compression will also be OK. If you're unsure get on
air with someone you trust and ask them to give you a fair and
unbiased report on your audio with and without compression. Ask them
to listen off frequency a little and see if your signal gets wider
with compression on.

Lou
VK3ALB

At 12:12 19/04/2011, you wrote:
>I am trying to get a handle on good operating practice concerning
>the Mic setting of my rigs. I have NOT used processing at all
>because I am afraid that I will overdo it until I understand it
>better. I am a fairly new ham and learning more everyday.
>
>On my 830 with a MC50 I do not need to turn the MIC knob up too much
>to get the ALC needle to start to flicker, In the past I have
>adjusted it so that is stays within the band on the meter. As I now
>understand it that is far too much and I should adjust it downward.
>Am I correct when it looks on a PEP meter that I am not getting as
>much wattage out when it is turned lower? If I am right am I trading
>good correct audio for wattage and coming out ahead?
>
>I have a 520S that I use in a second QTH and I am using a Heil Pro
>Set Elite with and I have to turn the MIC knob up quite a bit
>further to get the needle to move. I assume this is because they are
>two different mikes with different operating characteristics.
>
>Once I get this figured out what do I need to know about using compression?
>Kevin
>KD0ILM
>
>
>

>------------------------------------
>
>Yahoo! Groups Links
>
>
>

30899. Re: [TS-520_820_530_830] WTB Power Cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 04:06:00 UTC
From: Dennis Kippa
Topic: 30895 Message: 30899

Thanks Lou

73 Dennis

On Mon, Apr 18, 2011 at 9:20 PM, Lou Blasco <radio@ozemail.com.au> wrote:

>
>
> Try here
>
> http://www.k4eaa.com/
>
> Lou
> VK3ALB
>
>
> At 08:39 19/04/2011, you wrote:
> >I am picking up a basket case TS 520 later this week. I will need a
> >power cord at least to do a evaluation. Does only one have one in
> >their junk pile of wire?
> >
> >I know where I can get a new one but I have to try this first.
> >
> >Thanks
> >Dennis n5dpk
>
>
>

[Non-text portions of this message have been removed]

30900. Re: [TS-520_820_530_830] alc/drive problem with ts520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 04:44:35 UTC
From: Chris Robinson
Topic: 30877 Message: 30900

I am sorry, I meant for digi modes, through Mic plug. I already know the radio well enough to know It isnt being controlled by anything other then a loose nut at the controls!
I miss my old Yaesu FT-101E, but this has some temperament of its own as well.

On Mon, Apr 18, 2011 at 4:48 PM, John Davidson <k8jd@...> wrote:

>
>
> There is no way you can control the TS520 with a computer, like most
> modern
> rigs do.
> Even my TS440s, 20 years neklwer, requires mods with a special IC set to
> do
> computer control.
> My 520 has worked fine for almost 40 years with no computer attached :D
>
> _____
> From: Chris Robinson <kf6nfw@gmail.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, April 17, 2011 7:11:25 PM
> Subject: Re: [TS-520_820_530_830] alc/drive problem with ts520
>
>
> am still learning my way around.
> Took me three days to check for the darn jumper on back between pin 8 and
> 9.
> Now I am trying to figure out how to interface to computer for better use.
> >
> > What do you guys think the problem may be? Is it time for a new set of
> > tubes?
> >
> > I am sorry if this topic has been covered many times before, but I would
> > appreciate your help.
> >
> > Regards,
> >
> > Simon
> >
> >
> >
>
> --
> Mr.C.Robinson

> 73 DE KF6NFW
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

30901. Re: good operating practive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 15:03:15 UTC
From: kevin
Topic: 30896 Message: 30901

What does "Splatter" sound like?

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Kevin,
>
> You're not trading good audio as much as reducing splatter.
> Regardless of your audio quality once your ALC meter starts
> indicating significant or constant deflection your PA is being
> controlled by the ALC circuit and your output power IS being reduced.
> I spent the weekend on my TS520S working 40m all over Australia with
> reports of excellent audio quality and 5x9+ signal reports and the
> ALC meter was barely registering. Please take a look at W5RKL's
> excellent ALC explanation from April 17 on this forum.
>
> With regard to compression, as long as you've set your mic gain
> correctly the compression will also be OK. If you're unsure get on
> air with someone you trust and ask them to give you a fair and
> unbiased report on your audio with and without compression. Ask them
> to listen off frequency a little and see if your signal gets wider
> with compression on.

>

30902. Re: [TS-520_820_530_830] Re: Splatter from overdriven SSB Transmitter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 16:13:49 UTC
From: John Davidson
Topic: 30896 Message: 30902

It sounds like buckshot repeatedly hitting the signal you are trying to copy.
From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 19, 2011 11:03:15 AM
Subject: [TS-520_820_530_830] Re: good operating practive
What does "Splatter" sound like?
--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Kevin,
>
> You're not trading good audio as much as reducing splatter.
>
Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use
.

[Non-text portions of this message have been removed]

30903. Re: [TS-520_820_530_830] Re: Splatter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 16:15:55 UTC
From: John Davidson
Topic: 30896 Message: 30903

Splatter sounds like buckshot repeatedly hitting the signal you are trying to copy !

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 19, 2011 11:03:15 AM
Subject: [TS-520_820_530_830] Re: good operating practive

What does "Splatter" sound like?

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Kevin,
>
> You're not trading good audio as much as reducing splatter.
Messages in this topic (3)

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.

[Non-text portions of this message have been removed]

30904. Low Pass filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 16:26:05 UTC
From: kevin
Topic: 30904 Message: 30904

I am putting an SB-200 amp into my system being driven by my 830S. I picked up a Kenwood Low Pass filter. The manual suggests that if you are running an amp. to put one filter between the 830 and the amp and another one between the amp and the antenna. Any suggestions?
Kevin
KD0ILM

30905. TS-830 - 60ma idle current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 19:18:44 UTC
From: Charles Coffee
Topic: 30905 Message: 30905

Mike;
In the service manual, page 33, when I go through all of the steps for setting the base current adjustment,
am I supposed to hit the "send" switch? When I do, I can then set the bias to the 60ma level.
AF Relay is ok, but when I was taking this all apart to pull the AF board and the relay out, I found
electrical tape with a cut wire taped up but not connected - This went to AF Connector #6,
pin 4 (dark Blue wire) ((TOF??)). Fixed that with some solder and heat shrink and look like
this is now working.

Thanks again for the tip on the AF Relay - what lead me to the cut wire.

Chuck, KJ4GU

[Non-text portions of this message have been removed]

30906. Re: [TS-520_820_530_830] TS-830 - 60ma idle current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 19:39:00 UTC
From: Ken Winterling
Topic: 30905 Message: 30906

Chuck,

That cut wire enables transmit on the WARC bands. The WARC band mod instructions are on page 28 of the manual I have. It is under section 6.5 TRANSMITTING ON WARC BANDS. By restoring that connection you have disabled the ability to transmit on the WARC bands.

BTW, you aren't the first one to find that cut wire and restore it!

73,

Ken, WA2LBI

On Tue, Apr 19, 2011 at 15:18, Charles Coffee <chascoffee@...> wrote:

> Mike;
> In the service manual, page 33, when I go through all of the steps for
> setting the base current adjustment,
> am I supposed to hit the "send" switch? When I do, I can then set the bias
> to the 60ma level.
> AF Relay is ok, but when I was taking this all apart to pull the AF board
> and the relay out, I found
> electrical tape with a cut wire taped up but not connected - This went to
> AF
> Connector #6,
> pin 4 (dark Blue wire) ((TOF??)). Fixed that with some solder and heat
> shrink and look like
> this is now working.
>
> Thanks again for the tip on the AF Relay - what lead me to the cut wire.
>
> Chuck, KJ4GU
>

[Non-text portions of this message have been removed]

30907. Re: good operating practive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 20:12:13 UTC
From: w5rkl
Topic: 30896 Message: 30907

Kevin,

Tune across the bands and find a very loud station, especially a station that sounds as though the operate is talking much louder than normal and the audio sounds as though the operator has the microphone pressed up against his/her lips. Tune above or below that station's frequency until you can no longer understand them. Continue tuning slowly and you will no longer hear the audio but you will hear a rather "raspy" sound as the station continues to transmit. The "raspy" sound is splatter. When the station no longer is transmitting the "raspy" sound will disappear until that station begins transmitting again. I hear stations splatter quite often on 80 and 40 meters.

When you tune onto a loud splattering station's frequency you can easily hear the distortion in their signal. When I say "loud" I'm not referring to the station's signal strength but rather the loudness of the audio. For what ever reason these stations tend to believe the LOUDER the BETTER! If you're lucky and start listening at the beginning of the round table conversation, you will hear one or more stations tell the LOUD offending station, "you sound great!!". I have listened to stations like that and even heard one station in the group tell the offending station their audio is too loud and distorted, to back off the microphone gain and talk farther away from the microphone.

Operator's need to start learning how to operate their station properly. Operators also need to start paying attention to what the ALC meter is actually telling them. Operators also need to learn what ALC is, when and how it is produced, and what ALC is actually used for. Unfortunately, the operator's manual is misleading in its brief description of the ALC meter switch setting. I believe many, not all, inexperienced operators become mislead by the brief and incomplete discussion of ALC in the operator's manual. As I always say, it's not how LOUD you are but how clean your transmit signal is. There's absolutely no excuse for an operator to improperly operate their amateur radio station!!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kevin" <kmx888@...> wrote:
>
> What does "Splatter" sound like?
>
> --- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@> wrote:
> >
> > Hi Kevin,
> >
> > You're not trading good audio as much as reducing splatter.
> > Regardless of your audio quality once your ALC meter starts
> > indicating significant or constant deflection your PA is being
> > controlled by the ALC circuit and your output power IS being reduced.
> > I spent the weekend on my TS520S working 40m all over Australia with

> > reports of excellent audio quality and 5x9+ signal reports and the
> > ALC meter was barely registering. Please take a look at W5RKL's
> > excellent ALC explanation from April 17 on this forum.
> >
> > With regard to compression, as long as you've set your mic gain
> > correctly the compression will also be OK. If you're unsure get on
> > air with someone you trust and ask them to give you a fair and
> > unbiased report on your audio with and without compression. Ask them
> > to listen off frequency a little and see if your signal gets wider
> > with compression on.
>
>
> >
>

30908. Re: [TS-520_820_530_830] Low Pass filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-19 21:15:47 UTC
From: jeffrey lord
Topic: 30904 Message: 30908

Kevin

At the REDCLIFFE RADIO CLUB where i am a member, they built STUB FILTERS FOR the JOHN MOYLE compition day .

These are placed between the AMP and the antenna. and really work at reducing harmonic interference and noise.

however they are band specific, and will only work on aspecific frequency . You would require 1 for each band being operated on.

Jeff
VK4FNRS

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, 19 April 2011 8:26 AM
Subject: Re: [TS-520_820_530_830] Low Pass filter

I am putting an SB-200 amp into my system being driven by my 830S. I picked up a Kenwood Low Pass filter. The manual suggests that if you are running an amp. to put one filter between the 830 and the amp and another one between the amp and the antenna. Any suggestions?
Kevin
KD0ILM

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[Non-text portions of this message have been removed]

30909. lightening arrestor?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 05:45:40 UTC
From: ktwhy2003
Topic: 30909 Message: 30909

Maybe a dumb question, but other then a easy way to connect the ground to your coax, does a lightening arrestor have anything else in it?

I have ground to my radios, meter, power supply.. etc.. Would adding a lightening arrestor do anything that the existing grounds don't give me?

Thanks
Kent.

30910. Re: [TS-520_820_530_830] lightening arrestor?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 11:13:43 UTC
From: Chris and Alex
Topic: 30909 Message: 30910

Hi Kent,

In normal operation the lightning arrestor doesn't connect your cable to ground. It's only when....., sorry, if, there is a lightning strike, the lightning arrestor provides an easy path to ground instead of the full strike travelling to your station. You can use commercially made gas filled units but if you don't want to pay anything at all, an old vehicle sparkplug in a waterproof housing will do the trick.

Chris SV0XBQ/9

On Wed, Apr 20, 2011 at 7:45 AM, ktwhy2003 <ktwhy2003@...> wrote:

>
>
> Maybe a dumb question, but other then a easy way to connect the ground to
> your coax, does a lightening arrestor have anything else in it?
>
> I have ground to my radios, meter, power supply.. etc.. Would adding a
> lightening arrestor do anything that the existing grounds don't give me?
>
> Thanks
> Kent.
>
>
>

[Non-text portions of this message have been removed]

30911. TS-820 Voltage Problem on IF Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 11:19:06 UTC
From: ae5uu
Topic: 30911 Message: 30911

Good morning all,

This is a resubmission of my post of last week; I did not get any responses, and I sure could use some help. Thank you for taking the time to read this.

I have been fighting a stubborn voltage problem for some time. I would appreciate some help.

First a new distraction with symptoms:

60ma idle is correct.

In TUN, no PLATE current registering on IP meter setting.

In CW, no current showing with adjustment of LOAD and PLATE controls

No transmit (NONE OF THESE SYMPTOMS WERE AN ISSUE UNTIL TODAY WHEN I REPLACED FINAL UNIT R-2, R-3, R-5, R-6. I ALSO REPLACED L-1 AS PER KIT VALUE (6.8UF, 500MA) SUPPLIED AS KIT FR-100 BY K4EAA, BUT NOW NOTICE THE THE VALUE FOR L-1 LISTED IN MY PARTS LIST IS 470UF, SO I WILL SWAP BACK L-1 AND HOPE FOR THE BEST)

ALL THE ABOVE IS NOT MY MAIN PROBLEM. MY MAIN PROBLEM IS DETAILED BELOW:

Meter does not increase reading when RF GAIN is rotated CCW (although the receive audio is reduced gradually as it should be.)

In TUN, no ALC reading with DRIVE control on ALC meter setting.

-6vdc bus reads +0.59vdc

+3.3vdc bus reads 3.3vdc with IF UNIT IF3 unplugged, +6.4vdc when IF Unit IF3 is plugged in.

No S Meter reading.

BELOW IS A LISTING FROM ALL MY VOLTAGE TEST POINTS. ALL APPEAR CORRECT WITH THE POSSIBLE EXCEPTION OF THE RECTIFIER UNIT "SG" AND "STB" AND THE HV UNIT "HV" TERMINAL (I DON'T KNOW WHAT THE VALUES SHOULD BE.)

+14vdc

AF-AVR board AF1 pin 3
IF Board IF1 pin 3
Fix-Vox Board FX3 pin 3
Relay Board RL1 pins 7-12
RF Board RF1 5
Rectifier Board Terminal "14"
ALL POINTS YIELD PROPER VOLTAGE

+9vdc

IF Unit IF1 pin 5
CAR Unit CJ2 (Mode switch set to TUN, CW, LSB, FSK,and SSB)
PLL Unit PLL2 pin 3
FIX VOX Unit FX3 pin 1
Relay Unit RL1 pins 1, 2, and 3
Relay Unit RL2 pins 10 & 14 (note: pin 14 has no wired connection)
RF Unit RF2 pin 1
VFO 2 pin plug Large pin
ALL POINTS YIELD PROPER VOLTAGE

+5vdc

Relay Unit RL1 pin 13
PLL Unit PLL2 pin 1
ALL POINTS YIELD PROPER VOLTAGE

+3.3vdc

AF-AVR Board AF2 pin 6
IF Board IF3 pin 8 (RFI)
RF Board RF3 pin 4 (RFI)
RF GAIN control Opposite end from R-2
ALL POINTS YIELD +6.4VDC WITH IF UNIT PLUGGED IN, 3.5VDC WITH IF UNIT UNPLUGGED

-6vdc

RF Board RF2 pin 2
IF Board IF3 pin 4, 5
Fix-Vox Board FX3 pin 14
ALL POINTS YIELD +0.59VDC

High Voltage

RF Unit RF2 -110vdc pin 7 (-C)

Rectifier Unit 800 Terminal +952vdc Receive, slightly less Transmit

300A Terminal +344vdc

300B Terminal +344vdc

210A Terminal +260vdc

210B Terminal +263vdc

-C Terminal -110vdc

SG Terminal -116vdc

STB Terminal +112vdc

14 Terminal +15.25VDC

HV Unit FSB Terminal +260vdc

210 Terminal +260vdc

800 Terminal +952vdc

HV Terminal +43vdc

Final Unit PD2 Terminal +260vdc

FG Terminal -100vdc Receive (spec.)
-100vdc (actual)
-55vdc Transmit (spec.)
-54vdc (actual)

SG Terminal +255vdc Receive (spec.)
+260vdc (actual
+210vdc Transmit (spec.)
+225vdc (actual)

The following parts have been replaced, in addition to all electrolytic capacitors on all boards:

1) AF-AVR Unit VR-1, VR-4, D-5, Q-4, Q-5, and Q-6
2) IF Unit Q-15, Q-16
3) IF Unit D-18, D-19, D-20, and D-21
4) IF Unit C-70, C-72, and C-142
5) IF Unit R-66, R-145, and R-146
6) PD Unit C-14, C-15
7) FIX-VOX Unit Q-13
8) HV capacitors C-21, C-22, R-6, R-7, and 2 each 0.01uf (C-14 through C-17 type)

Notes: AF-AVR Unit R-9 and R-26 not installed (jumpered by factory)
C-29 installed according to schematic (polarity is marked wrong on board)

FIX-VOX Unit C-32 replaced with 3.3uf, 50wv factory spec., was 1.0uf in my radio

IF Unit C-43 as built is electrolytic, not as listed in parts list

C-75 as built is 1.0uf, 50wv, not .01uf as listed in parts list

Firstly, I need to correct my +3.3vdc and -6.0vdc problem. Then I intend to look at Q-5 on the RF Unit. Measured at RF3, pin 6,the reading is 5.2vdc in Receive. In Transmit it changes with application of the DRIVE control. It does not change with application of the CAR control.

I know that this is a complex posting; your assistance would sure be appreciated before I pull the rest of my hair out.

73,

Russell
AE5UU

Sat Apr 16, 2011 1:36 am

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"ae5uu" <nilsonrussell@...>
ae5uu
Offline Offline
Send Email Send Email

30912. Re: lightening arrestor?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 11:19:37 UTC
From: w5rkl
Topic: 30909 Message: 30912

Hi Kent,

W8JI has an excellent write up about grounding.

http://w8ji.com/ground_systems.htm

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> Maybe a dumb question, but other then a easy way to connect the ground to your coax, does a lightening arrestor have anything else in it?
>
> I have ground to my radios, meter, power supply.. etc.. Would adding a lightening arrestor do anything that the existing grounds don't give me?
>
> Thanks
> Kent.
>

30913. TS-830S serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 09:48:55 UTC
From: Paul
Topic: 30913 Message: 30913

My TS-830S serial number is 1041966.
How old could be it ?
I bought it few years ago but it was already second or third hand.
However it still is a good one.
Paul i8ixo

30914. Re: TS-820 Voltage Problem on IF Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 14:02:07 UTC
From: w5rkl
Topic: 30911 Message: 30914

Hello Russell,

You have changed a significant number of components which is going to make it very difficult to diagnose your problems.

You are incorrectly referring to RF chokes using the wrong unit of measure "uf". "uf" is "microfarad" which is what the typical unit of measure for capacitors. Inductors unit of measure is the "uh" (microhenry) which includes RF Choke, air and iron core coils. This may seem trivial but when referring to component's unit of measure it's important to use the correct unit of measure.

You indicated that you changes the RF chokes in the Final Unit using Ken's (K4EAA) final amplifier rebuild kit components. Were the original RF chokes found to be bad (overheated, burnt, cracked, broken coils etc)? If not then I would not recommend replacing them just because a kit you purchased from Ken included an RF choke. Choke L1 on the Final Unit's sole purpose in life is to keep RF off of the bias supply "FG" connection between the Final Unit and the RF Unit. It serves no other purpose what so ever.

The -6VDC you say is missing, originates from the FIX VOX Unit's DC to DC converter which consist of Q13 and T2. You might check Page 59 in the TS-820 service manual.

"STB" is the CW Side Tone Bias voltage that is applied to the FIX VOX Unit (X5--1350-00). The only time STB is required is to bias the CW side tone oscillator in CW mode. The Mode switch, when placed in CW mode, enables the CW side tone. Shorting the CW key terminals (CW key pressed) at the CW socket causes the CW side tone oscillator to produce an audio tone that is fed from the FIX VOX Unit to the AF AVR Unit so the operator can hear his/her fist. If the STB voltage is missing at the FIX VOX Unit plug FIX3 pin 10 then the CW side tone oscillator will not work, providing all other CW side tone enable voltages/settings are correct.

You said you have 60ma of IP idling current yet you then say there is no IP current in TUNE and CW mode. If you have 60ma of idling current then the final amplifier bias circuit is working and you should see idling current in TUNE and CW mode. Naturally the idling current level will be less in TUNE mode since resistor's R5 and R6 (56k 1/2 watt each) lower the final tube screen voltage. In CW mode, with the transmitter keyed but the CW key is not pressed, the idling current will be slightly higher, approximately 70ma, which is normal.

The final amplifier's bias voltage is controlled by the state of RF Unit's "RLK". "RLK", when the Relay Unit's relay terminals "RL-13" are switched (relay energized), grounds the "VR3" terminal of the bias pot. This cause a change in the bias voltage to the final amplifier grids to become "less negative", turning both final tubes ON. If you have not measured the bias voltage on the final tubes in ALL modes between receive and transmit then I recommend you do that. You can measure it at the final unit's "FG" terminal. All you have to do is place the Mode switch in each position and flip the "SEND" switch UP for transmit and DOWN for receive. The voltage at the "FG" terminal should be approximate -98VDC or so in receive and -60VDC or so in transmit. This voltage will be stable, no vary, when there is no RF applied to the final tubes. If this is what you see then the bias voltage is

switching as it should. The meter is not only controlled by the meter switch in transmit but also by the T/R relay terminal RL-3. The T/R relay is located on the bottom between the final amplifier PC board and the rear panel inside a metal enclosure.

You say rotating the RF gain control in receive to remain at zero but the receiver itself appears to have less sensitivity (lower audio output). The Relay Unit relay terminals RL-14 control what is displayed on the meter, S unit and movement of the meter by rotating the RF Gain control and meter switch positions in transmit.

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http://www.k4eaa.com/820_main.pdf

I recommend using it in conjunction with the 820 service manual's individual schematics to diagnose your problems.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Good morning all,
>
> This is a resubmission of my post of last week; I did not get any responses, and I sure could use some help. Thank you for taking the time to read this.
>
> I have been fighting a stubborn voltage problem for some time. I would
> appreciate some help.
>
> First a new distraction with symptoms:
>
> 60ma idle is correct.
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> In TUN, no PLATE current registering on IP meter setting.
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> In CW, no current showing with adjustment of LOAD and PLATE controls
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> No transmit (NONE OF THESE SYMPTOMS WERE AN ISSUE UNTIL TODAY WHEN I REPLACED
> FINAL UNIT R-2, R-3, R-5, R-6. I ALSO REPLACED L-1 AS PER KIT VALUE (6.8UF,
> 500MA) SUPPLIED AS KIT FR-100 BY K4EAA, BUT NOW NOTICE THE THE VALUE FOR L-1
> LISTED IN MY PARTS LIST IS 470UF, SO I WILL SWAP BACK L-1 AND HOPE FOR THE BEST)
>
> ALL THE ABOVE IS NOT MY MAIN PROBLEM. MY MAIN PROBLEM IS DETAILED BELOW:
>

> Meter does not increase reading when RF GAIN is rotated CCW (although the
> receive audio is reduced gradually as it should be.)
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> -6vdc bus reads +0.59vdc
>
> +3.3vdc bus reads 3.3vdc with IF UNIT IF3 unplugged, +6.4vdc when IF Unit IF3 is
> plugged in.
>
> No S Meter reading.
>
> BELOW IS A LISTING FROM ALL MY VOLTAGE TEST POINTS. ALL APPEAR CORRECT WITH THE
> POSSIBLE EXCEPTION OF THE RECTIFIER UNIT "SG" AND "STB" AND THE HV UNIT "HV"
> TERMINAL (I DON'T KNOW WHAT THE VALUES SHOULD BE.)
>
>
> +14vdc
>
> AF-AVR board AF1 pin 3
> IF Board IF1 pin 3
> Fix-Vox Board FX3 pin 3
> Relay Board RL1 pins 7-12
> RF Board RF1 5
> Rectifier Board Terminal "14"
> ALL POINTS YIELD PROPER VOLTAGE
>
> +9vdc
>
> IF Unit IF1 pin 5
> CAR Unit CJ2 (Mode switch set to TUN, CW, LSB, FSK,and SSB)
> PLL Unit PLL2 pin 3
> FIX VOX Unit FX3 pin 1
> Relay Unit RL1 pins 1, 2, and 3
> Relay Unit RL2 pins 10 & 14 (note: pin 14 has no wired connection)
> RF Unit RF2 pin 1
> VFO 2 pin plug Large pin
> ALL POINTS YIELD PROPER VOLTAGE
>
> +5vdc
>
> Relay Unit RL1 pin 13
> PLL Unit PLL2 pin 1
> ALL POINTS YIELD PROPER VOLTAGE
>
> +3.3vdc
>
> AF-AVR Board AF2 pin 6
> IF Board IF3 pin 8 (RFI)
> RF Board RF3 pin 4 (RFI)

> RF GAIN control Opposite end from R-2
> ALL POINTS YIELD +6.4VDC WITH IF UNIT PLUGGED IN, 3.5VDC WITH IF UNIT UNPLUGGED
>
> -6vdc
>
> RF Board RF2 pin 2
> IF Board IF3 pin 4, 5
> Fix-Vox Board FX3 pin 14
> ALL POINTS YIELD +0.59VDC
>
> High Voltage
>
> RF Unit RF2 -110vdc pin 7 (-C)
>
> Rectifier Unit 800 Terminal +952vdc Receive, slightly less Transmit
>
> 300A Terminal +344vdc
>
> 300B Terminal +344vdc
>
> 210A Terminal +260vdc
>
> 210B Terminal +263vdc
>
> -C Terminal -110vdc
>
> SG Terminal -116vdc
>
> STB Terminal +112vdc
>
> 14 Terminal +15.25VDC
>
> HV Unit FSB Terminal +260vdc
>
> 210 Terminal +260vdc
>
> 800 Terminal +952vdc
>
> HV Terminal +43vdc
>
> Final Unit PD2 Terminal +260vdc
>
> FG Terminal -100vdc Receive (spec.)
> -100vdc (actual)
> -55vdc Transmit (spec.)
> -54vdc (actual)
>
> SG Terminal +255vdc Receive (spec.)
> +260vdc (actual
> +210vdc Transmit (spec.)

> +225vdc (actual)
>
> The following parts have been replaced, in addition to all electrolytic
> capacitors on all boards:
>
> 1) AF-AVR Unit VR-1, VR-4, D-5, Q-4, Q-5, and Q-6
> 2) IF Unit Q-15, Q-16
> 3) IF Unit D-18, D-19, D-20, and D-21
> 4) IF Unit C-70, C-72, and C-142
> 5) IF Unit R-66, R-145, and R-146
> 6) PD Unit C-14, C-15
> 7) FIX-VOX Unit Q-13
> 8) HV capacitors C-21, C-22, R-6, R-7, and 2 each 0.01uf
> (C-14 through C-17 type)
>
> Notes: AF-AVR Unit R-9 and R-26 not installed (jumpered by
> factory)
> C-29 installed according to schematic
> (polarity is marked wrong on board)
>
> FIX-VOX Unit C-32 replaced with 3.3uf, 50wv factory
> spec., was 1.0uf in my radio
>
> IF Unit C-43 as built is electrolytic, not
> as listed in parts list
>
> C-75 as built is 1.0uf, 50wv, not
> .01uf as listed in parts list
>
> Firstly, I need to correct my +3.3vdc and -6.0vdc problem. Then I intend to look
> at Q-5 on the RF Unit. Measured at RF3, pin 6,the reading is 5.2vdc in Receive.
> In Transmit it changes with application of the DRIVE control. It does not
> change with application of the CAR control.
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> I know that this is a complex posting; your assistance would sure be appreciated
> before I pull the rest of my hair out.
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> 73,
>
> Russell
> AE5UU
>
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>
> Sat Apr 16, 2011 1:36 am
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> Show Message Option

> View Source
> Use Fixed Width Font
> Unwrap Lines
> "ae5uu" <nilsonrussell@...>
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> Offline Offline
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30915. Re: [TS-520_820_530_830] TS-830S serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 12:27:02 UTC
From: tnnyswy@yahoo.com
Topic: 30913 Message: 30915

Paul, there has been a discussion on this very same subject less than two weeks ago. Take a look in the archives.

73 > Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: "Paul" <copa054@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Wed, 20 Apr 2011 09:48:55
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS-830S serial number

My TS-830S serial number is 1041966.
How old could be it ?
I bought it few years ago but it was already second or third hand.
However it still is a good one.
Paul i8ixo

[Non-text portions of this message have been removed]

30916. Re: TS-820 Voltage Problem on IF Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 14:17:37 UTC
From: w5rkl
Topic: 30911 Message: 30916

Since you have replaced a lot of components not only on the Final Unit both but also on other boards, I recommend you closely inspect the PC board foil runs and use an ohm meter to check continuity between components. For example, if you replace a diode and the cathode end of that diode connects to a resistor elsewhere on the board. You should check continuity between the diodes cathode lead and the resistor to ensure that foil runs is not cracked/broken. It doesn't take much to break/crack the foil runs. Bending the board slightly when handling, for example, can crate a break in a foil run. Pushing too hard or rocking/bending board pins back and forth can also create breaks in foil runs. I recently worked on an IF board in a 530 where one plug socket "rocked" back and forth on the board. I checked continuity between the pins and found broken foil runs all because the socket rocked back and forth. The break was at the socket pins themselves and no matter how much I cleaned the connection and applied proper solder to the pin(s) the break was still there. I had to use a short piece of wire to "jumper" the broken foil run to fix the problem. The problem "appeared" to be a bad switch contact or faulty capacitor. The problem symptom was the receiver's "SLOW" AGC switch setting didn't work. This could have easily caused one to replace the switch OR replace the capacitor which would have NOT fixed the problem. The problem was the broken foil run on the plug's pin. This is why it's very important to ensure components are actually bad before replacing them.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Russell,
>
> You have changed a significant number of components which is going to make it very difficult to diagnose your problems.
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> You are incorrectly referring to RF chokes using the wrong unit of measure "uf". "uf" is "microfarad" which is what the typical unit of measure for capacitors. Inductors unit of measure is the "uh" (microhenry) which includes RF Choke, air and iron core coils. This may seem trivial but when referring to component's unit of measure it's important to use the correct unit of measure.
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> You indicated that you changes the RF chokes in the Final Unit using Ken's (K4EAA) final amplifier rebuild kit components. Were the original RF chokes found to be bad (overheated, burnt, cracked, broken coils etc)? If not then I would not recommend replacing them just because a kit you purchased from Ken included an RF choke. Choke L1 on the Final Unit's sole purpose in life is to keep RF off of the bias supply "FG" connection between the Final Unit and the RF Unit. It serves no other purpose what so ever.
>
> The -6VDC you say is missing, originates from the FIX VOX Unit's DC to DC converter which consist of Q13 and T2. You might check Page 59 in the TS-820 service manual.

>
> "STB" is the CW Side Tone Bias voltage that is applied to the FIX VOX Unit (X5--1350-00). The only time STB is required is to bias the CW side tone oscillator in CW mode. The Mode switch, when placed in CW mode, enables the CW side tone. Shorting the CW key terminals (CW key pressed) at the CW socket causes the CW side tone oscillator to produce an audio tone that is fed from the FIX VOX Unit to the AF AVR Unit so the operator can hear his/her fist. If the STB voltage is missing at the FIX VOX Unit plug FIX3 pin 10 then the CW side tone oscillator will not work, providing all other CW side tone enable voltages/settings are correct.
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> http://www.k4eaa.com/820_main.pdf
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> I recommend using it in conjunction with the 820 service manual's individual schematics

to diagnose your problems.
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> 73s
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> W5RKL
>
>
>
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> > TERMINAL (I DON'T KNOW WHAT THE VALUES SHOULD BE.)
> >
> >

> > +14vdc
> >
> > AF-AVR board AF1 pin 3
> > IF Board IF1 pin 3
> > Fix-Vox Board FX3 pin 3
> > Relay Board RL1 pins 7-12
> > RF Board RF1 5
> > Rectifier Board Terminal "14"
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +9vdc
> >
> > IF Unit IF1 pin 5
> > CAR Unit CJ2 (Mode switch set to TUN, CW, LSB, FSK,and SSB)
> > PLL Unit PLL2 pin 3
> > FIX VOX Unit FX3 pin 1
> > Relay Unit RL1 pins 1, 2, and 3
> > Relay Unit RL2 pins 10 & 14 (note: pin 14 has no wired connection)
> > RF Unit RF2 pin 1
> > VFO 2 pin plug Large pin
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +5vdc
> >
> > Relay Unit RL1 pin 13
> > PLL Unit PLL2 pin 1
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +3.3vdc
> >
> > AF-AVR Board AF2 pin 6
> > IF Board IF3 pin 8 (RFI)
> > RF Board RF3 pin 4 (RFI)
> > RF GAIN control Opposite end from R-2
> > ALL POINTS YIELD +6.4VDC WITH IF UNIT PLUGGED IN, 3.5VDC WITH IF UNIT UNPLUGGED
> >
> > -6vdc
> >
> > RF Board RF2 pin 2
> > IF Board IF3 pin 4, 5
> > Fix-Vox Board FX3 pin 14
> > ALL POINTS YIELD +0.59VDC
> >
> > High Voltage
> >
> > RF Unit RF2 -110vdc pin 7 (-C)
> >
> > Rectifier Unit 800 Terminal +952vdc Receive, slightly less Transmit
> >
> > 300A Terminal +344vdc

> >
> > 300B Terminal +344vdc
> >
> > 210A Terminal +260vdc
> >
> > 210B Terminal +263vdc
> >
> > -C Terminal -110vdc
> >
> > SG Terminal -116vdc
> >
> > STB Terminal +112vdc
> >
> > 14 Terminal +15.25VDC
> >
> > HV Unit FSB Terminal +260vdc
> >
> > 210 Terminal +260vdc
> >
> > 800 Terminal +952vdc
> >
> > HV Terminal +43vdc
> >
> > Final Unit PD2 Terminal +260vdc
> >
> > FG Terminal -100vdc Receive (spec.)
> > -100vdc (actual)
> > -55vdc Transmit (spec.)
> > -54vdc (actual)
> >
> > SG Terminal +255vdc Receive (spec.)
> > +260vdc (actual
> > +210vdc Transmit (spec.)
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> > (C-14 through C-17 type)
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> > Notes: AF-AVR Unit R-9 and R-26 not installed (jumpered by
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> > C-29 installed according to schematic
> > (polarity is marked wrong on board)
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> > spec., was 1.0uf in my radio
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> > IF Unit C-43 as built is electrolytic, not
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> >
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> > Russell
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> >
> > Sat Apr 16, 2011 1:36 am
> >
> > Show Message Option
> > View Source
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> > "ae5uu" <nilsonrussell@>
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>

30917. Re: TS-820 Voltage Problem on IF Unit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 15:13:14 UTC
From: w5rkl
Topic: 30911 Message: 30917

I tried posting an additional comment to my previous response but it appears it got lost in the "bit bucket" behind the processor.

Another thing you should look for is breaks/cracks in the PC foil runs. The breaks/cracks can occur at pins under the solder connection, along the foil run itself, or just a centimeter from the component junction/connection to the board. Finding these cracks and breaks can be a time consuming task. If I suspect a break in a foil run I use an ohm meter. For example, if I suspect a break between a diode's cathode and a resistor, I check continuity between the diode's cathode lead and the resistor. If there's a break/crack in the foil, I look at the entire foil run using a bright light shown on the component side and view the foil run using a magnifying glass. Some, not all, breaks/cracks in the foil runs can be found this way. If I can't see a break then I check continuity between the actual component leads which will tell you if the foil run between the 2 component leads is good or bad. If found bad a small gauge wire is used to jumper across the break and fix the problem.

Another area is broken wire connections in the plugs themselves. This can happen without you noticing it. The wires are connected by "crimping". If the wire breaks at the crimp then there a good chance the connection will be lost.

Bad/poor soldering at pins on the boards can also affect the connection. The pin connections on each board should be thoroughly checked to ensure the connection is good. Loss of one simply "control" voltage can affect a number of circuits.

That's why replacing components should only be done when a component has been found to be defective/bad during troubleshooting. Replacing components in a "willy nilly" fashion will, in many cases, not change the symptoms nor will it fix the problem.

73s
Mike
W5RKL

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>
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>
> You have changed a significant number of components which is going to make it very difficult to diagnose your problems.
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> You said you have 60ma of IP idling current yet you then say there is no IP current in TUNE and CW mode. If you have 60ma of idling current then the final amplifier bias circuit is working and you should see idling current in TUNE and CW mode. Naturally the idling current level will be less in TUNE mode since resistor's R5 and R6 (56k 1/2 watt each) lower the final tube screen voltage. In CW mode, with the transmitter keyed but the CW key is not pressed, the idling current will be slightly higher, approximately 70ma, which is normal.
>
> The final amplifier's bias voltage is controlled by the state of RF Unit's "RLK". "RLK", when the Relay Unit's relay terminals "RL-13" are switched (relay energized), grounds the "VR3" terminal of the bias pot. This cause a change in the bias voltage to the final amplifier grids to become "less negative", turning both final tubes ON. If you have not measured the bias voltage on the final tubes in ALL modes between receive and transmit then I recommend you do that. You can measure it at the final unit's "FG" terminal. All you have to do is place the Mode switch in each position and flip the "SEND" switch UP for transmit and DOWN for receive. The voltage at the "FG" terminal should be approximate -98VDC or so in receive and -60VDC or so in transmit. This voltage will be stable, no vary, when there is no RF applied to the final tubes. If this is what you see then the bias voltage is switching as it should. The meter is not only controlled by the meter switch in transmit but also by the T/R relay terminal RL-3. The T/R relay is located on the bottom between the final amplifier PC board and the rear panel inside a metal enclosure.
>
> You say rotating the RF gain control in receive to remain at zero but the receiver itself appears to have less sensitivity (lower audio output). The Relay Unit relay terminals RL-14 control what is displayed on the meter, S unit and movement of the meter by rotating the RF Gain control and meter switch positions in transmit.
>
> The 820 is noted for having plug and pin connection problems. The wire connections in the plugs can quite often fail which are very difficult to find. This can lead you in the wrong direction, replacing components that don't need to be replaced and chasing your tail. The pins on the boards themselves can also have breaks in the PC board foil runs, it doesn't take much to create a break/crack in a foil fun. I recommend you cease replacing components and thoroughly check the plug to pin connections as well as look for cracked/broken PC

board foil runs from the board pins. Use the individual schematics and the high resolution schematic available at Gordon's website and also from Ken's website. Ken has a 3meg high resolution main schematic for the 820.
>
> http://www.k4eaa.com/820_main.pdf
>
> I recommend using it in conjunction with the 820 service manual's individual schematics to diagnose your problems.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@...m, "ae5uu" <nilsonrussell@> wrote:
> >
> > Good morning all,
> >
> > This is a resubmission of my post of last week; I did not get any responses, and I sure could use some help. Thank you for taking the time to read this.
> >
> > I have been fighting a stubborn voltage problem for some time. I would
> > appreciate some help.
> >
> > First a new distraction with symptoms:
> >
> > 60ma idle is correct.
> >
> > In TUN, no PLATE current registering on IP meter setting.
> >
> > In CW, no current showing with adjustment of LOAD and PLATE controls
> >
> > No transmit (NONE OF THESE SYMPTOMS WERE AN ISSUE UNTIL TODAY WHEN I REPLACED
> > FINAL UNIT R-2, R-3, R-5, R-6. I ALSO REPLACED L-1 AS PER KIT VALUE (6.8UF,
> > 500MA) SUPPLIED AS KIT FR-100 BY K4EAA, BUT NOW NOTICE THE THE VALUE FOR L-1
> > LISTED IN MY PARTS LIST IS 470UF, SO I WILL SWAP BACK L-1 AND HOPE FOR THE BEST)
> >
> > ALL THE ABOVE IS NOT MY MAIN PROBLEM. MY MAIN PROBLEM IS DETAILED BELOW:
> >
> > Meter does not increase reading when RF GAIN is rotated CCW (although the
> > receive audio is reduced gradually as it should be.)
> >
> > In TUN, no ALC reading with DRIVE control on ALC meter setting.
> >
> > -6vdc bus reads +0.59vdc
> >
> > +3.3vdc bus reads 3.3vdc with IF UNIT IF3 unplugged, +6.4vdc when IF Unit IF3 is
> > plugged in.
> >

> > No S Meter reading.
> >
> > BELOW IS A LISTING FROM ALL MY VOLTAGE TEST POINTS. ALL APPEAR CORRECT WITH THE
> > POSSIBLE EXCEPTION OF THE RECTIFIER UNIT "SG" AND "STB" AND THE HV UNIT "HV"
> > TERMINAL (I DON'T KNOW WHAT THE VALUES SHOULD BE.)
> >
> >
> > +14vdc
> >
> > AF-AVR board AF1 pin 3
> > IF Board IF1 pin 3
> > Fix-Vox Board FX3 pin 3
> > Relay Board RL1 pins 7-12
> > RF Board RF1 5
> > Rectifier Board Terminal "14"
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +9vdc
> >
> > IF Unit IF1 pin 5
> > CAR Unit CJ2 (Mode switch set to TUN, CW, LSB, FSK,and SSB)
> > PLL Unit PLL2 pin 3
> > FIX VOX Unit FX3 pin 1
> > Relay Unit RL1 pins 1, 2, and 3
> > Relay Unit RL2 pins 10 & 14 (note: pin 14 has no wired connection)
> > RF Unit RF2 pin 1
> > VFO 2 pin plug Large pin
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +5vdc
> >
> > Relay Unit RL1 pin 13
> > PLL Unit PLL2 pin 1
> > ALL POINTS YIELD PROPER VOLTAGE
> >
> > +3.3vdc
> >
> > AF-AVR Board AF2 pin 6
> > IF Board IF3 pin 8 (RFI)
> > RF Board RF3 pin 4 (RFI)
> > RF GAIN control Opposite end from R-2
> > ALL POINTS YIELD +6.4VDC WITH IF UNIT PLUGGED IN, 3.5VDC WITH IF UNIT UNPLUGGED
> >
> > -6vdc
> >
> > RF Board RF2 pin 2
> > IF Board IF3 pin 4, 5
> > Fix-Vox Board FX3 pin 14
> > ALL POINTS YIELD +0.59VDC
> >

> > High Voltage
> >
> > RF Unit RF2 -110vdc pin 7 (-C)
> >
> > Rectifier Unit 800 Terminal +952vdc Receive, slightly less Transmit
> >
> > 300A Terminal +344vdc
> >
> > 300B Terminal +344vdc
> >
> > 210A Terminal +260vdc
> >
> > 210B Terminal +263vdc
> >
> > -C Terminal -110vdc
> >
> > SG Terminal -116vdc
> >
> > STB Terminal +112vdc
> >
> > 14 Terminal +15.25VDC
> >
> > HV Unit FSB Terminal +260vdc
> >
> > 210 Terminal +260vdc
> >
> > 800 Terminal +952vdc
> >
> > HV Terminal +43vdc
> >
> > Final Unit PD2 Terminal +260vdc
> >
> > FG Terminal -100vdc Receive (spec.)
> > -100vdc (actual)
> > -55vdc Transmit (spec.)
> > -54vdc (actual)
> >
> > SG Terminal +255vdc Receive (spec.)
> > +260vdc (actual
> > +210vdc Transmit (spec.)
> > +225vdc (actual)
> >
> > The following parts have been replaced, in addition to all electrolytic
> > capacitors on all boards:
> >
> > 1) AF-AVR Unit VR-1, VR-4, D-5, Q-4, Q-5, and Q-6
> > 2) IF Unit Q-15, Q-16
> > 3) IF Unit D-18, D-19, D-20, and D-21
> > 4) IF Unit C-70, C-72, and C-142
> > 5) IF Unit R-66, R-145, and R-146

> > 6) PD Unit C-14, C-15
> > 7) FIX-VOX Unit Q-13
> > 8) HV capacitors C-21, C-22, R-6, R-7, and 2 each 0.01uf
> > (C-14 through C-17 type)
> >
> > Notes: AF-AVR Unit R-9 and R-26 not installed (jumpered by
> > factory)
> > C-29 installed according to schematic
> > (polarity is marked wrong on board)
> >
> > FIX-VOX Unit C-32 replaced with 3.3uf, 50wv factory
> > spec., was 1.0uf in my radio
> >
> > IF Unit C-43 as built is electrolytic, not
> > as listed in parts list
> >
> > C-75 as built is 1.0uf, 50wv, not
> > .01uf as listed in parts list
> >
> > Firstly, I need to correct my +3.3vdc and -6.0vdc problem. Then I intend to look
> > at Q-5 on the RF Unit. Measured at RF3, pin 6,the reading is 5.2vdc in Receive.
> > In Transmit it changes with application of the DRIVE control. It does not
> > change with application of the CAR control.
> >
> > I know that this is a complex posting; your assistance would sure be appreciated
> > before I pull the rest of my hair out.
> >
> > 73,
> >
> > Russell
> > AE5UU
> >
> >
> >
> >
> >
> >
> >
> > Sat Apr 16, 2011 1:36 am
> >
> > Show Message Option
> > View Source
> > Use Fixed Width Font
> > Unwrap Lines
> > "ae5uu" <nilsonrussell@>
> > ae5uu
> > Offline Offline
> > Send Email Send Email
> >
>

30918. Re: [TS-520_820_530_830] TS-830S serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 17:03:31 UTC
From: Michael D'Antignac AE6JL
Topic: 30913 Message: 30918

On Wed, Apr 20, 2011 at 2:48 AM, Paul <copa054@...> wrote:

>
>
> My TS-830S serial number is 1041966.
> How old could be it ?
> I bought it few years ago but it was already second or third hand.
> However it still is a good one.
> Paul i8ixo
>
>
>

Although I bought my TS-830S used I got all the documents including the
warranty card that indicated the following

Purchase Date 3-1-1985
Serial Number 4100139

There is a serial number close to yours in the following database:

http://groups.yahoo.com/group/TS-520_820_530_830/database?method=reportRows&tbl=4

That indicates the following:

1050150
TS-830S
Oct 4,1981

--
Michael D'Antignac AE6JL
DM13bx

[Non-text portions of this message have been removed]

30919. Poor eyesight, big thumbs and a TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 20:53:54 UTC
From: Robin
Topic: 30919 Message: 30919

My father's TS-820 consistently reads 4kHz too high on the analogue scale, which is annoying. I tried to adjust the VFO according to p48 in the Service Manual I downloaded, but I can't figure out how to put a frequency meter across Pin 13 without disconnecting everything else. Not that it matters, as I can't see how I get into the VFO to change L1 or TC1 in the first place. So: what is the accepted way to measure voltages on those pins? And how do I get into the VFO, please? 73 de Robin ZL4IG

30920. Re: [TS-520_820_530_830] Poor eyesight, big thumbs and a TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-20 23:17:16 UTC
From: John Davidson
Topic: 30919 Message: 30920

If the knob is like my TS520, just hold the center part still when you get the frequency set with the marker or WWV and carefully rotate the numbered outer ring until the proper frequency mark lines up with the pointer.

From: Robin <r.mcneill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, April 20, 2011 4:53:54 PM
Subject: [TS-520_820_530_830] Poor eyesight, big thumbs and a TS-820s

My father's TS-820 consistently reads 4kHz too high on the analogue scale, which is annoying. I tried to adjust the VFO according to p48 in the Service Manual I downloaded, but I can't figure out how to put a frequency meter across Pin 13 without disconnecting everything else. Not that it matters, as I can't see how I get into the VFO to change L1 or TC1 in the first place. So: what is the accepted way to measure voltages on those pins? And how do I get into the VFO, please? 73 de Robin ZL4IG

[Non-text portions of this message have been removed]

30921. More on my TS-820 IF Unit voltage problems etc.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 00:04:34 UTC
From: ae5uu
Topic: 30921 Message: 30921

Mike,

Thank you for your direct and to the point response to my request for help with my "Stubborn voltage problem on the TS-820 IF Unit."

Yes, I have had a lot of trouble with cracked foil runs in this radio. I have inspected them, repaired them, and been annoyed by them, particularly in the IF Unit, where I now seem to spend most of my time.

I previously had numerous problems with the AF-AVR Unit, including bad pins, bad foil runs and failing VR-4 and VR-1 pots. These problems are behind me now, with replacement of the pots, hardwiring AF1 and AF2 directly to the foil (with suitable extra lead length so that I can work on the board if I ever need to again. By connecting a ground connection to the board, I can operate the radio with the board un-installed (which I have found useful for problem solving.) I will send you a photo via regular email.

I replaced all of the electrolytic capacitors by way of preventive maintenance. I understand what you are saying about replacing "good " parts, but I felt comfortable doing this from my experience with other electronic equipment of this vintage (shipboard equipment.) The replacements must have gone OK, because all of my voltage readings (HV and LV) remain as they were before my swap-out. My IF Unit problems remain unchanged, and continue to defy me with or without new electrolytic capacitors throughout the radio. The symptoms are unchanged and the radio doesn't work any better or worse than before, with the exception of Receive sensitivity, which has improved, perhaps because I replaced the two tantalum capacitors on the PD board, C-14 and C-15.

I have had to repair many of the wires in the wiring harness, which I probably broke while moving things around. These old solid wire conductors are of poor quality and very brittle. The people who built these things should have used tinned stranded conductor wire, as we have done at sea for ever. I am sure that you in particular, with your maritime experience, know exactly what I am talking about. Any wire that breaks, I replace with marine grade wire.

The bit about the RF choke units was a typo on my part. I elected not to replace L-1 in the Final Unit; it looked fine, and the replacement in the kit did not appear to be of the proper value for this radio.

I checked the 60ma bias current issue more fully. Rightly or wrongly, I only check for idle bias on whatever sideband I wish to use when tuning. After your comment, I checked it in CW and found 63ma, slightly more than the 60ma that I measure on SSB, just as you said that I would. When checking in TUN mode, however, I show no idle bias current?

I have now measured the bias voltage at Terminal "FG" on the final Unit:

Mode Receive Voltage Transmit Voltage
Spec. Value -98vdc -60vdc
My Readings:

USB -99vdc -53.8vdc
LSB -99vdc -53.8vdc
CW -99vdc -53.7vdc
TUN -99vdc -55.4vdc

Checking my problem of no -6vdc at the IF Unit, I have measured FIX3, pin 14 on the FIX-VOX board and find the same +0.563 that I find at the IF Unit. I have not looked at the FIX-VOX board before, and will look toward Q-13 and T2, as you suggest, to discover why my -6vdc is missing, and is in fact +0.563.

Checking my problem with no increase in Meter reading when the RF GAIN control is rotated CCW (checking Relay Unit RL-14), I find that on RL3, pins 1 and 2 (ALC), I have 6.22vdc when the RF Gain is fully CW and 5.78vdc when it is fully CCW. On RL3, pins 3 and 4 (AGC), I find 6.98vdc when fully CW and 4.02vdc when fully CCW. The RF GAIN control was working and continues to work properly with lower sensitivity (less audio output) when rotated CCW, even though I continue to see no response on the meter.

I am going back to looking for foil breaks on the IF Unit this evening, as well as on all the rest of the boards. If you could give me your analysis of the voltages above, as well as all the HV voltages that I detailed in my last posting, I would be most appreciative.

Thank you Mike.

73,

Russell
AE5UU

30922. Re: Poor eyesight, big thumbs and a TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 00:15:09 UTC
From: Robin
Topic: 30919 Message: 30922

Sorry, I didn't explain myself properly: the problem lies in the dial itself, not the rotating ring... it is out by 4 divisions on the dial, not the knob ring.

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> If the knob is like my TS520, just hold the center part still when you get the
> frequency set with the marker or WWV and carefully rotate the numbered outer
> ring untilÂ the proper frequency mark Â lines up with the pointer.
>
>
> My father's TS-820 consistently reads 4kHz too high on the analogue scale, which
> is annoying. I tried to adjust the VFO according to p48 in the Service Manual I
> downloaded, but I can't figure out how to put a frequency meter across Pin 13
> without disconnecting everything else. Not that it matters, as I can't see how I
> get into the VFO to change L1 or TC1 in the first place. So: what is the
> accepted way to measure voltages on those pins? And how do I get into the VFO,
> please? 73 de Robin ZL4IG

30923. splatter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 00:43:43 UTC
From: ron story
Topic: 30923 Message: 30923

i know there are stations that have strong signals, hear them complain all the time that someone is splattering. i find in some cases that the receiving station has his or her noise blanker set on or too high causing the problem to magnify in the receiver. do some stations splatter, yes, are some stations just producing a strong signal due to good prop and even if clean will have some fellow griping because of alleged splatter, so there are many factors other than just your splattering om. ron ne0x

[Non-text portions of this message have been removed]

30924. Re: Now meter deflection when peaking the alc/drive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 01:37:51 UTC
From: roberteleazer@rocketmail.com
Topic: 30869 Message: 30924

As I said before, my TS-520 has no ALC indication on 10M.

And I just cranked it up on 28.475 and, using a dipole antenna strung in my attic here on the East coast of Florida, had a nice clear chat with a gentleman in Tucson, AZ.

Robert

--- In TS-520_820_530_830@yahoogroups.com, "Simon Taylor" <m3set@...> wrote:
>
> Hi guys, I have owned a ts520 for some months now and am really enjoying it! I have tried it on all bands, and can get full output on 3.5, 7, 14 and 21 mhz. However on 28, 28.5 and 29.1, I can get no deflection on the alc reading when trying to peak the drive control. Is it time to replace the drivere tube?
>
> I am sorry if this has been discovered in previous years/months.
>
> Kind regards,
>
> Simon
>

30925. Re: TS-820S 5V-AVR unit help.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 02:52:49 UTC
From: Hagar
Topic: 30798 Message: 30925

Mike, I fixed the fluctuation on the digital display. Seems it needed some contact cleaner on the band switch contacts. Got another question though. I took the knob of the plate adjustment, what should the pointer be at when the plates are fully meshed?

Thanks Joe
KJ4ZQX

--- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@...> wrote:
>
> I traced it Mike. Didn't realize someone hadsoldered it directly to the 5V-AVR unit No wonder I saw no plug. I removed the "Counter Ass'y Unit" and cleaned the contacts between the boards. This improved the digital display, Now I can try to figure out why the display fluctuates on ten meters.
>
> Thanks for the help.
> 73s
> KJ4ZQX
> Joe.
>
>
>
>
>
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Joe,
> >
> > The Relay Unit has a zener diode, D1 (BZ-052), and a 220 ohm 2 watt resistor that produces 5VDC from the 14VDC supply. This 5VDC supply is applied to the PLL Unit from Relay Unit plug RL1 pin 13.
> >
> > I don't believe the Relay Unit 5VDC supply is designed to power circuits in both the PLL unit and the Counter Unit at the same time.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >

> > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > >
> > > Thanks Mike, It does have the digital display and works good except it fluctuates on ten meters. I guess it is pulling the 5VDC from some where else.
> > >
> > > Joe
> > > KJ4ZQX
> > >
> > >
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > >
> > > > Hi Joe,
> > > >
> > > > The "S" model of the TS-820 includes the digital display. You didn't say whether the digital display is working or not, or even if it's present in your 820S.
> > > >
> > > > The sole purpose for the 5V-AVR board is to provide a regulated 5VDC to the digital display Counter Assembly Unit.
> > > >
> > > > If the Counter Assembly Unit has been removed, for what ever reason, then there is no need for the plug to be inserted onto the 5V-AVR Unit. it's possible the plug is laying on the chassis if the Counter Assembly has been removed or if the 7805 regulator is damaged (failed). There are 3 pins on the plug, one is the 14VDC input source voltage, one is the regulated 5VDC output, and the other is ground.
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "Hagar" <kj4zqx@> wrote:
> > > > >
> > > > > Newbie here, Picked up a 820S a while back. Started cleaning it and noticed that the 5V-AVR unit does not have a cable with plug hooked to the top of it. Radio receives fine except 10 meter band drifts and display fluctuates. Could this be a mod?
> > > > >
> > > > > Thanks Joe. KJ4ZQX
> > > > >
> > > >
> > > >
> > >
> > >
> >
>

30926. Re: TS-830S serial number

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 13:58:14 UTC
From: Paul
Topic: 30913 Message: 30926

Thank you Michael.
I have seen the database.
Probably Kenwood made my rig in 1981.
If I find a TS-830 made in late years I buy it.
73
Paul i8ixo

>
>
> Although I bought my TS-830S used I got all the documents including the
> warranty card that indicated the following
>
> Purchase Date 3-1-1985
> Serial Number 4100139
>
> There is a serial number close to yours in the following database:
>
> http://groups.yahoo.com/group/TS-520_820_530_830/database?method=reportRows&tbl=4
>
> That indicates the following:
>
> 1050150
> TS-830S
> Oct 4,1981
>
> --
> Michael D'Antignac AE6JL
> DM13bx

30927. Re: Low Pass filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 15:10:14 UTC
From: jon_g4fut
Topic: 30904 Message: 30927

The LF filter goes after the AMP. The ATU goes after the TX and reduced any harmonics generated by the TX. No need to have 2 LP filters.

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Kevin
>
> At the REDCLIFFE RADIO CLUB where i am a member, they built STUB FILTERS FOR the JOHN MOYLE compition day .
>
> These are placed between the AMP and the antenna. and really work at reducing harmonic interference and noise.
>
> however they are band specific, and will only work on aspecific frequency . You would require 1 for each band being operated on.
>
>
> Jeff
> VK4FNRS
>
> From: kevin <kmx888@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, 19 April 2011 8:26 AM
> Subject: Re: [TS-520_820_530_830] Low Pass filter
>
> I am putting an SB-200 amp into my system being driven by my 830S. I picked up a Kenwood Low Pass filter. The manual suggests that if you are running an amp. to put one filter between the 830 and the amp and another one between the amp and the antenna. Any suggestions?
> Kevin
> KD0ILM
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

30928. 830s start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 15:12:01 UTC
From: jon_g4fut
Topic: 30928 Message: 30928

When I switch on my 830s, I get a "start-up beep". I find this annoying
especially when I have told the XYL, (asleep in next room) that I have switched
the rig off, and want to re-start it without her knowing. :-)
How can I switch this off?
Jon G4FUT

30929. TS-520 VFO (internal)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 04:18:17 UTC
From: Red
Topic: 30929 Message: 30929

Hi and tnx for reading , i am currently having a problen with my ts-520 on every band 10-80 on the vfo from 350 to 450 i am getting dead spots where i have no transmit or recieve --dead silence and it is only in that spot on all bands any help would be nice so i can save the rig from hitting the bottom of the dumpster as this is very frustraiting when tuning to see what is there. any where else on the dial tune and load is great just in that area outlined is where the problem is.

30930. Re: TS-520 VFO (internal)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 16:56:33 UTC
From: w5rkl
Topic: 30929 Message: 30930

More than likely the problem is a very dirty VFO variable capacitor shaft to frame connection.

Remove the top cover, take care not to break the speaker cable.

Disconnect all power to the transceiver.

Front panel facing you, the VFO is the metal enclosure directly behind the front panel, in the middle.

Look on the right side of the VFO enclosure and you will see a small metal plate held to the VFO enclosure by 2 Phillips head screws.

Remove one screw, the rear is easiest to remove.

Loosen the other screws 1 turn.

Rotate the plate so you can see the variable capacitor plates.

Look at the rear of the variable capacitor and you will see a flexible "fork" connection. This connection needs to be cleaned.

Give the point where the fork meets the variable capacitor shaft a shot of DeoXit contact cleaner. Rotate the VFO to the end of rotation, both directions, several times.

Next, use generous amounts of canned air, available at Walmart, and
blow air at the point where the cleaner was applied while rotating the VFO knob.

Wait a few minutes then test the 520 VFO for proper operation. If the intermittent operating still occurs but much less, repeat the cleaning procedure.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Red" <kb8rwi@...> wrote:
>
> Hi and tnx for reading , i am currently having a problen with my ts-520 on every band 10-80 on the vfo from 350 to 450 i am getting dead spots where i have no transmit or recieve --dead silence and it is only in that spot on all bands any help would be nice so i can save the rig from hitting the bottom of the dumpster as this is very frustraiting when tuning to see what is there. any where else on the dial tune and load is great just in that area outlined is where the problem is.
>

30931. Re: 830s start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 16:59:27 UTC
From: w5rkl
Topic: 30928 Message: 30931

Jon,

The TS-830 does not have a built in "roger beep" that is heard when the 830 is turned ON. Do you have a CW key plugged into the CW socket, VOX is turned ON, and the Mode switch set to CW? If so, turn VOX "OFF" and set the Mode switch to USB or LSB. Turn the 830 OFF then, after a second or two, turn the 830 on. Do you still hear the "beep"? If not then the CW Break-in (VOX turned ON) is causing the "beep".

73s
Mike

--- In TS-520_820_530_830@yahoogroups.com, "jon_g4fut" <jon_g4fut@...> wrote:
>
> When I switch on my 830s, I get a "start-up beep". I find this annoying
> especially when I have told the XYL, (asleep in next room) that I have switched
> the rig off, and want to re-start it without her knowing. :-)
> How can I switch this off?
> Jon G4FUT
>

30932. Re: [TS-520_820_530_830] Re: Low Pass filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 18:20:54 UTC
From: John Davidson
Topic: 30904 Message: 30932

Many of the currently used antenna "tuners" are twin T circuits and actually look like high-pass circuits.
 Adding one between a rig and amp would have little effect removing any harmonic content.
The only benifit (?) would be showing the rig's PA circuit a 50 ohm load.

From: jon_g4fut <jon_g4fut@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 21, 2011 11:10:14 AM
Subject: [TS-520_820_530_830] Re: Low Pass filter

The LF filter goes after the AMP. The ATU goes after the TX and reduced any harmonics generated by the TX. No need to have 2 LP filters.

>
> I am putting an SB-200 amp into my system being driven by my 830S. I picked up
>a Kenwood Low Pass filter. The manual suggests that if you are running an amp.
>to put one filter between the 830 and the amp and another one between the amp
>and the antenna. Any suggestions?
> Kevin
> KD0ILM
>
>
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> Yahoo! Groups Links
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30933. Re: [TS-520_820_530_830] 830s start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 18:22:45 UTC
From: John Davidson
Topic: 30928 Message: 30933

Odd, none of my Kenwood rigs (TS520, TS700a and TS440s) do this .
Try using headphones.

From: jon_g4fut <jon_g4fut@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 21, 2011 11:12:01 AM
Subject: [TS-520_820_530_830] 830s start up beep

When I switch on my 830s, I get a "start-up beep". I find this annoying
especially when I have told the XYL, (asleep in next room) that I have switched
the rig off, and want to re-start it without her knowing. :-)
How can I switch this off?
Jon G4FUT

[Non-text portions of this message have been removed]

30934. RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 18:51:28 UTC
From: joe
Topic: 30934 Message: 30934

Hello,

I'm in the process of replacing RL-1 on my TS-830S due to an intermittent ALC indication problem. I've got the radio on the bench with the covers off ready to go. I'm scratching my head trying to figure out how the old relay is to be removed from the board so that the replacement can be installed. Can anyone that's done this before offer any guidance on how this is done?

Many thanks in advance,

Joe
WS8X

30935. Re: Low Pass filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 19:02:34 UTC
From: w5rkl
Topic: 30904 Message: 30935

The low pass filter referred to in this thread is a "TVI" filter.

A low pass filter does not provide a 50 ohm load to the exciter or amplifier like a 50 ohm dummy load does. A filter is just that, a filter, nothing more, and it is "transparent" to the transmitter and/or amplifier.

Low pass filters are designed to "filter" any VHF and above harmonic radiation from the RF source (exciter or amplifier) to prevent "TVI". Most, not all, older vintage and all modern day transceivers/transmitter, the PI Networks and broadband filters systems provide a significant reduction in harmonic radiation. Therefore, put the filter on a shelf in your shack, you don't need it. Besides, it makes a good conversation piece.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Many of the currently used antenna "tuners" are twin T circuits and actually
> look like high-pass circuits.
> Â Adding one between a rig and amp would have little effect removing any harmonic
> content.
> The only benifit (?) would be showing the rig's PA circuit a 50 ohm load.
>
>
>
>
> _____
> From: jon_g4fut <jon_g4fut@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, April 21, 2011 11:10:14 AM
> Subject: [TS-520_820_530_830] Re: Low Pass filter
>
> Â
> The LF filter goes after the AMP. The ATU goes after the TX and reduced any
> harmonics generated by the TX. No need to have 2 LP filters.
>
> >
> > I am putting an SB-200 amp into my system being driven by my 830S. I picked up
> >a Kenwood Low Pass filter. The manual suggests that if you are running an amp.
> >to put one filter between the 830 and the amp and another one between the amp
> >and the antenna. Any suggestions?
> > Kevin
> > KD0ILM
> >
> >

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30936. Re: RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 19:08:43 UTC
From: w5rkl
Topic: 30934 Message: 30936

Joe,

The relay on the AF Unit is "soldered" to the board. You have to heat the solder connection, remove the solder from the relay pins, and pull the relay out. You must use a low wattage soldering pencil, 20 watts at the most.

The relay can only be installed on the AF board "one way". That means the pins are arranged on the relay so they only fit one way.

If you have never done this before and/or your soldering skills are not very good, then I recommend you find a local ham with good soldering skills to help you. You can easily damage the board and create foil breaks/cracks that will have you chasing your tail if you are not careful.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
>
> Hello,
>
> I'm in the process of replacing RL-1 on my TS-830S due to an intermittent ALC indication problem. I've got the radio on the bench with the covers off ready to go. I'm scratching my head trying to figure out how the old relay is to be removed from the board so that the replacement can be installed. Can anyone that's done this before offer any guidance on how this is done?
>
> Many thanks in advance,
>
> Joe
> WS8X
>

30937. Re: 830s start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 19:12:05 UTC
From: w5rkl
Topic: 30928 Message: 30937

Although using headphones will keep the Xyl from hearing the transceiver being turned on and hearing the beep, using headphones will not eliminate the source of the beep and that's what Jon wants to do, eliminate the beep.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Odd, none of my Kenwood rigs (TS520, TS700aÂ and TS440s)Â do this .
> Try using headphones.
>
>
>
>
> _____
> From: jon_g4fut <jon_g4fut@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, April 21, 2011 11:12:01 AM
> Subject: [TS-520_820_530_830] 830s start up beep
>
> Â
> When I switch on my 830s, I get a "start-up beep". I find this annoying
> especially when I have told the XYL, (asleep in next room) that I have switched
> the rig off, and want to re-start it without her knowing. :-)
> How can I switch this off?
> Jon G4FUT
>
>
>
>
> [Non-text portions of this message have been removed]
>

30938. Re: [TS-520_820_530_830] Re: RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 19:57:00 UTC
From: joe loverti
Topic: 30934 Message: 30938

Thanks for the response Mike. The biggest problem I see is being able to access the under side of the board to de-solder the pins to begin with. It's tight in there! I just don't want to damage anything because aside from the ALC indication being iffy, the radio works fine.

Joe
WS8X

On Thu, Apr 21, 2011 at 2:08 PM, w5rkl <w5rkl@...> wrote:

>
>
> Joe,
>
> The relay on the AF Unit is "soldered" to the board. You have to heat the
> solder connection, remove the solder from the relay pins, and pull the relay
> out. You must use a low wattage soldering pencil, 20 watts at the most.
>
> The relay can only be installed on the AF board "one way". That means the
> pins are arranged on the relay so they only fit one way.
>
> If you have never done this before and/or your soldering skills are not
> very good, then I recommend you find a local ham with good soldering skills
> to help you. You can easily damage the board and create foil breaks/cracks
> that will have you chasing your tail if you are not careful.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
> >
> > Hello,
> >
> > I'm in the process of replacing RL-1 on my TS-830S due to an intermittent
> ALC indication problem. I've got the radio on the bench with the covers off
> ready to go. I'm scratching my head trying to figure out how the old relay
> is to be removed from the board so that the replacement can be installed.
> Can anyone that's done this before offer any guidance on how this is done?
> >
> > Many thanks in advance,
> >
> > Joe
> > WS8X
> >

>
>
>

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30939. TS-820-S meter lamps

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 22:43:18 UTC
From: km5rv
Topic: 30939 Message: 30939

I have searched the messages and haven't found what I need. I was wondering how hard it is to change the two meter lamps on my radio. Can this be done from the top only or will I have to take the front cover off also. Checked the service manual and it shows how to get the meter out but doesn't show the termination of lamp wires. Any help would be helpful before starting.

Thanks
Robert

30940. Re: [TS-520_820_530_830] TS-820-S meter lamps

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 23:15:32 UTC
From: n6wk@n6wk.com
Topic: 30939 Message: 30940

Take just the TOP cover off.
Right above the meter are two small Phillips screws. remove these and
the bracket that hold the Lamps will slide back allowing you to change
the meter Lamps.

73,
Gordon
N6WK

On 4/21/2011 3:43 PM, km5rv wrote:
>
> I have searched the messages and haven't found what I need. I was
> wondering how hard it is to change the two meter lamps on my radio.
> Can this be done from the top only or will I have to take the front
> cover off also. Checked the service manual and it shows how to get the
> meter out but doesn't show the termination of lamp wires. Any help
> would be helpful before starting.
>
> Thanks
> Robert
>
>

30941. TS-820 S Crystals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-21 23:35:39 UTC
From: brannola
Topic: 30941 Message: 30941

I have a Kenwood TS-820 S in which the former owner converted the 10 meter band to CB. Have orderd

new original crystals to be put in. Any advice for the operation? Are they solderd in? Must the FIX-VOX

board be removed for to do it? Any pictures anywere to look at the process?

Thanks !

30942. Re: [TS-520_820_530_830] TS-820 S Crystals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 00:24:40 UTC
From: Lou Blasco
Topic: 30941 Message: 30942

The replacement crystals are not for the FIX-VOX board.They are for
the PD board and depending on which band was modified you will have
to replace one crystal on that board. Refer to the service manual for
more details. I haven't worked on an 820 but looking at the service
manual I can see the following;

X7 (33.5MHz) is used for the 28MHz band
X8 (34MHz) is used for the 28.5MHz band
X9 (34.5MHz) is used for the 29MHz band

Once you've replaced the crystal you should run through the alignment
procedure in the manual.

Lou
VK3ALB

At 09:35 22/04/2011, you wrote:

>I have a Kenwood TS-820 S in which the former owner converted the 10
>meter band to CB. Have orderd
>
>new original crystals to be put in. Any advice for the operation? Are
>they solderd in? Must the FIX-VOX
>
>board be removed for to do it? Any pictures anywere to look at the
>process?
>
>Thanks !
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30943. Re: [TS-520_820_530_830] TS-820 S Crystals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 02:28:29 UTC
From: Joseph Stiles
Topic: 30941 Message: 30943

brannola,

I have done 3 fixes of this type of "CB HACK." Go to the home page and look for the photo(s) entitled TS820S CB HACK (WB7UQU). The crystals...most often 3 will have to be unsoldered and removed...most often they are crystals.. X-8, X-9 and/or X-10. they are usually very easy to spot as most of the time they are all silver and don't have a blue plastic shrink wrap on them with the printed frequency...but compare with schematic to make sure....with the proper ones put back in. The PLL/PD box will have to be removed...the AF-AVR screws should be removed also..it makes it ALOT easier to the the PLL/PD unit out. The PLL/PD unit is held in by screws on the side of the chassis (3) and two inside. When you get it back together the PLL/PD unit will need to be realigned. Good luck..it's not too difficult...just a pain.

73's joe wb7uqu

From: brannola <svenne@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 21, 2011 4:35:39 PM
Subject: [TS-520_820_530_830] TS-820 S Crystals

I have a Kenwood TS-820 S in which the former owner converted the 10 meter band to CB. Have orderd

new original crystals to be put in. Any advice for the operation? Are they solderd in? Must the FIX-VOX

board be removed for to do it? Any pictures anywere to look at the process?

Thanks !

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30944. ts-820 external key

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 06:49:02 UTC
From: kd5utc
Topic: 30944 Message: 30944

wanting to know how to hook up a foot switch on this rig ? like i have on my ts-530s .

30945. Re: [TS-520_820_530_830] Re: RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 11:05:58 UTC
From: Charles Coffee
Topic: 30934 Message: 30945

Joe;
I just went through this on a TS-830S on the bench, although I did not end up replacing
the Relay, I did take the board out of the unit.

You have the five screws in the PCB and three screws (2 on side - 1 in front) on the
metal heat sink which forms an "L" around the board. There will be wiring on a few
pins on the PCB which I tagged and removed. I also marked all 10 of the connectors
on the connector housing and where the connect on the board.

Once you have the board out, it is easy to use solder wick and a light wattage
soldering iron and remove the relay.

As I said, after I had gone through the drill, I removed the cover to the relay
and spray DeOxit on the contacts and moved the actuator arm a few times.
I did this routine a couple of times to make sure the contacts were clean.
That seems to have fixed the problem for me.

Just takes some time removing everything, marking all of the wires/connections
and making sure everything is back in the exact place/pins where it is supposed to go. Also make sure after you are done, you check the voltages on Connector 9 Pin 5, and also on TP6 and the FG pins.

As Mike said, if you are not comfortable with doing this work and de-soldering/
re-soldering the part - Get help from a local ham who does decent repair work.

Good Luck, 73s and hope it works out for you.

Chuck, KJ4GU

On Thu, Apr 21, 2011 at 3:57 PM, joe loverti <joeloverti@...> wrote:

> Thanks for the response Mike. The biggest problem I see is being able to
> access the under side of the board to de-solder the pins to begin with.
> It's
> tight in there! I just don't want to damage anything because aside from the
> ALC indication being iffy, the radio works fine.
>
> Joe

> WS8X
>
>
> On Thu, Apr 21, 2011 at 2:08 PM, w5rkl <w5rkl@...> wrote:
>
> >
> >
> > Joe,
> >
> > The relay on the AF Unit is "soldered" to the board. You have to heat the
> > solder connection, remove the solder from the relay pins, and pull the
> relay
> > out. You must use a low wattage soldering pencil, 20 watts at the most.
> >
> > The relay can only be installed on the AF board "one way". That means the
> > pins are arranged on the relay so they only fit one way.
> >
> > If you have never done this before and/or your soldering skills are not
> > very good, then I recommend you find a local ham with good soldering
> skills
> > to help you. You can easily damage the board and create foil
> breaks/cracks
> > that will have you chasing your tail if you are not careful.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...> wrote:
> > >
> > > Hello,
> > >
> > > I'm in the process of replacing RL-1 on my TS-830S due to an
> intermittent
> > ALC indication problem. I've got the radio on the bench with the covers
> off
> > ready to go. I'm scratching my head trying to figure out how the old
> relay
> > is to be removed from the board so that the replacement can be installed.
> > Can anyone that's done this before offer any guidance on how this is
> done?
> > >
> > > Many thanks in advance,
> > >
> > > Joe
> > > WS8X
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30946. TS-820 IF Unit Voltage Problems

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 11:49:03 UTC
From: ae5uu
Topic: 30946 Message: 30946

Mike,

Looking for my missing -6.0vdc, I took a look at Q-13 on the FIX-VOX Unit as you suggested. It was bad. I replaced it and now show -6.0vdc on the IF Unit again. So that worked; thank you.

Examining the IF Unit board with a bright light behind it and using a magnifying glass, I found two cracks in the foil run for RFI. I would have never seen them without the glass. These have been repaired.

The big problem remains, as it has all along, that even after all new electrolytics, new Q-15 and Q-16, and confirmation of continuity and no shorts in the foil runs, my 3.3vdc bias rises to 6.0vdc when the IF Unit board is fully plugged in. The voltage returns to 3.3vdc when I disconnect IF3 on that board.

Either I installed Q-15 or Q-16 incorrectly when I replaced them (easy to do as the lead layout is different on the replacement transistors), one or both of them were defective, or I still have a mystery cause for my 3.3vdc problem somewhere on this board.

Is there anything else that you would recommend looking at that might be causing my problem?

Also, during tuneup, I still get no reading in ALC with the Drive control.
Additionally I still have no increase in meter reading when the RF Gain control is rotated CCW. Until yesterday, when I replaced Q-13 on the FIX-VOX Unit, I did have a reduction in receive sensitivity as this control was rotated CCW; this is no longer the case. Rotating the control CCW now has no effect on anything.

In spite of the above, the radio puts out a strong signal with good signal audio reports, and Receive is very sensitive.

Thanks for your help.

73,

Russell
AE5UU

30947. Re: [TS-520_820_530_830] Re: RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 12:09:53 UTC
From: joe loverti
Topic: 30934 Message: 30947

Hi Charles,

Thanks for the details on the how to do this. I see I'm not "the lone ranger" this procedure :)

I think one of my biggest hang-ups on doing this is removing all the connectors the correct way. They don't seem to be "hand tight". I'm decent with a soldering iron but, I want to make sure I get it right as the radio is working just fine with the exception of the ALC indication being intermittent. I don't experience any slow return of receive after transmitting whatsoever. Just no ALC indication at times.

I'll take it slow and careful.

Again, many thanks for the response.

73 with regards,

Joe
WS8X

On Fri, Apr 22, 2011 at 6:05 AM, Charles Coffee <chascoffee@...>wrote:

>
>
> Joe;
> I just went through this on a TS-830S on the bench, although I did not end
> up replacing
> the Relay, I did take the board out of the unit.
>
> You have the five screws in the PCB and three screws (2 on side - 1 in
> front) on the
> metal heat sink which forms an "L" around the board. There will be wiring
> on a few
> pins on the PCB which I tagged and removed. I also marked all 10 of the
> connectors
> on the connector housing and where the connect on the board.
>
> Once you have the board out, it is easy to use solder wick and a light
> wattage
> soldering iron and remove the relay.
>
> As I said, after I had gone through the drill, I removed the cover to the
> relay
> and spray DeOxit on the contacts and moved the actuator arm a few times.
> I did this routine a couple of times to make sure the contacts were clean.
> That seems to have fixed the problem for me.

>
> Just takes some time removing everything, marking all of the
> wires/connections
> and making sure everything is back in the exact place/pins where it is
> supposed to go. Also make sure after you are done, you check the voltages
> on Connector 9 Pin 5, and also on TP6 and the FG pins.
>
> As Mike said, if you are not comfortable with doing this work and
> de-soldering/
> re-soldering the part - Get help from a local ham who does decent repair
> work.
>
> Good Luck, 73s and hope it works out for you.
>
> Chuck, KJ4GU
>
>
> On Thu, Apr 21, 2011 at 3:57 PM, joe loverti <joeloverti@...> wrote:
>
> > Thanks for the response Mike. The biggest problem I see is being able to
> > access the under side of the board to de-solder the pins to begin with.
> > It's
> > tight in there! I just don't want to damage anything because aside from
> the
> > ALC indication being iffy, the radio works fine.
> > >
> > > Joe
> > > WS8X
> > >
> > >
> > > On Thu, Apr 21, 2011 at 2:08 PM, w5rkl <w5rkl@...> wrote:
> > >
> > > > >
> > > > >
> > > > > Joe,
> > > > >
> > > > > The relay on the AF Unit is "soldered" to the board. You have to heat
> the
> > > > > solder connection, remove the solder from the relay pins, and pull the
> > > relay
> > > > > out. You must use a low wattage soldering pencil, 20 watts at the most.
> > > > >
> > > > > The relay can only be installed on the AF board "one way". That means
> the
> > > > > pins are arranged on the relay so they only fit one way.
> > > > >
> > > > > If you have never done this before and/or your soldering skills are not
> > > > > very good, then I recommend you find a local ham with good soldering
> > > skills
> > > > > to help you. You can easily damage the board and create foil

> > breaks/cracks
> > > that will have you chasing your tail if you are not careful.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...>
> wrote:
> > > >
> > > > Hello,
> > > >
> > > > I'm in the process of replacing RL-1 on my TS-830S due to an
> > intermittent
> > > > ALC indication problem. I've got the radio on the bench with the covers
> > off
> > > > ready to go. I'm scratching my head trying to figure out how the old
> > relay
> > > > is to be removed from the board so that the replacement can be
> installed.
> > > > Can anyone that's done this before offer any guidance on how this is
> > done?
> > > >
> > > > Many thanks in advance,
> > > >
> > > > Joe
> > > > WS8X
> > > >
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30948. Re: [TS-520_820_530_830] Re: RL-1 replacement proceedure?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 12:52:05 UTC
From: Charles Coffee
Topic: 30934 Message: 30948

Joe;
You may have the same problem I did and although I removed the board from the unit,
I really did not have too for the repair.

If you get a sharpie with a good point, mark each connector on the flat side opposite the
pins. As you look toward the rear with the radio upside down, the connectors start at the
top left as #10 and going right you have #9 and then #8, and coming from the top
down the right side you have #7 through #2. Connector #1 in toward the left of the
board about 1/2 way or a little more down.

These can be pulled out by hand, just be careful and do not break any wires.

Oh by the way, Connector 6, has the dark blue wire on pin 4 cut to enable WARC bands, do not make my mistake and solder it back together.

Take out the screws for the PCB and the metal "L" shaped heat sink and remove the board. VERY CAREFULLY remove the cover to the Relay.
I started toward the top of the board and gently pried off the cover and then removed it.

I sprayed the relay contacts with DeOxit and moved the relay actuator arm carefully a few times, - did this routine three times. Be very careful, as these
are very small fragile contacts and arms.

After I was done with the above, I used some canned compressed air and blew out any excess DeOxit and then let it air dry for a while. While that was drying, I then used the DeOxit on all of the connector pins, and then put the connector on the associated pins on/off several times to clean the male pins and female plugs.

Again used compressed air to dry everything off, and a let it sit for about an hour to make sure everything was dry (DeOxit is VERY flammable).

When I got it back in and together, my problem was solved.
By doing the above, you do not have to remove the wiring to the individual pins on the board.

Fixed my problem with the above (Could not get the 60ma idle current (bias) set prior to this).

By the way, Mike W5RKL,had given me a good tip to check the
relay. With a DMM, Black to chassis ground and the Red lead
to the "FG" post on the AF board, when you flip the the SEND
switch from Receive to SEND you should see a negative voltage
swing from -100VDC in Receive to about -60VDC in SEND.

The FG post is to the left of the RELAY maybe 3/4 of an inch or
so and has a White/Yellow wire from it to the Final Board.

Also, make sure you discharge the HV on the caps since
you will be working with the unit upside down and the HV caps
are just to the right of the AF Board.

Hope this is of some help. Hopefully it will save you some work.

Chuck, KJ4GU

On Fri, Apr 22, 2011 at 8:09 AM, joe loverti <joeloverti@...> wrote:

> Hi Charles,
>
> Thanks for the details on the how to do this. I see I'm not "the lone
> ranger" this procedure :)
>
> I think one of my biggest hang-ups on doing this is removing all the
> connectors the correct way. They don't seem to be "hand tight". I'm decent
> with a soldering iron but, I want to make sure I get it right as the radio
> is working just fine with the exception of the ALC indication being
> intermittent. I don't experience any slow return of receive after
> transmitting whatsoever. Just no ALC indication at times.
>
> I'll take it slow and careful.
>
> Again, many thanks for the response.
>
> 73 with regards,
>
> Joe
> WS8X
>
> On Fri, Apr 22, 2011 at 6:05 AM, Charles Coffee <chascoffee@...
> >wrote:
>
> >
> >
> > Joe;
> > I just went through this on a TS-830S on the bench, although I did not
> end
> > up replacing
> > the Relay, I did take the board out of the unit.
> >
> > You have the five screws in the PCB and three screws (2 on side - 1 in
> > front) on the

> > metal heat sink which forms an "L" around the board. There will be wiring
> > on a few
> > pins on the PCB which I tagged and removed. I also marked all 10 of the
> > connectors
> > on the connector housing and where the connect on the board.
> >
> > Once you have the board out, it is easy to use solder wick and a light
> > wattage
> > soldering iron and remove the relay.
> >
> > As I said, after I had gone through the drill, I removed the cover to the
> > relay
> > and spray DeOxit on the contacts and moved the actuator arm a few times.
> > I did this routine a couple of times to make sure the contacts were
> clean.
> > That seems to have fixed the problem for me.
> >
> > Just takes some time removing everything, marking all of the
> > wires/connections
> > and making sure everything is back in the exact place/pins where it is
> > supposed to go. Also make sure after you are done, you check the voltages
> > on Connector 9 Pin 5, and also on TP6 and the FG pins.
> >
> > As Mike said, if you are not comfortable with doing this work and
> > de-soldering/
> > re-soldering the part - Get help from a local ham who does decent repair
> > work.
> >
> > Good Luck, 73s and hope it works out for you.
> >
> > Chuck, KJ4GU
> >
> >
> > On Thu, Apr 21, 2011 at 3:57 PM, joe loverti <joeloverti@...>
> wrote:
> >
> > > Thanks for the response Mike. The biggest problem I see is being able
> to
> > > access the under side of the board to de-solder the pins to begin with.
> > > It's
> > > tight in there! I just don't want to damage anything because aside from
> > the
> > > ALC indication being iffy, the radio works fine.
> > >
> > > Joe
> > > WS8X
> > >
> > >
> > > On Thu, Apr 21, 2011 at 2:08 PM, w5rkl <w5rkl@...> wrote:
> > >

> > > >
> > > >
> > > > Joe,
> > > >
> > > > The relay on the AF Unit is "soldered" to the board. You have to heat
> > the
> > > > solder connection, remove the solder from the relay pins, and pull
> the
> > > relay
> > > > out. You must use a low wattage soldering pencil, 20 watts at the
> most.
> > > >
> > > > The relay can only be installed on the AF board "one way". That means
> > the
> > > > pins are arranged on the relay so they only fit one way.
> > > >
> > > > If you have never done this before and/or your soldering skills are
> not
> > > > very good, then I recommend you find a local ham with good soldering
> > > skills
> > > > to help you. You can easily damage the board and create foil
> > > breaks/cracks
> > > > that will have you chasing your tail if you are not careful.
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "joe" <joeloverti@...>
> > wrote:
> > > > >
> > > > > Hello,
> > > > >
> > > > > I'm in the process of replacing RL-1 on my TS-830S due to an
> > > intermittent
> > > > > ALC indication problem. I've got the radio on the bench with the
> covers
> > > off
> > > > > ready to go. I'm scratching my head trying to figure out how the old
> > > relay
> > > > > is to be removed from the board so that the replacement can be
> > installed.
> > > > > Can anyone that's done this before offer any guidance on how this is
> > > done?
> > > > >
> > > > > Many thanks in advance,
> > > > >
> > > > > Joe
> > > > > WS8X

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30949. Re: TS 520S with alc trouble

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 15:03:53 UTC
From: DaveS
Topic: 30851 Message: 30949

Hi Again Mike, I re calibrated the S meter and all is well, the radio is working just fine. Thanks for your advice on the repair, Thanks again, 73.
Dave

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello David,
>
> A "constant" ALC indication while operating sideband (USB or LSB) is not required. If you have been lead to believe there should be a constant display of ALC during sideband transmissions then you have been mislead.
>
> ALC is produced ONLY when grid current flows in the final tubes and this can ONLY occur when the level of RF from the driver tube is at a level that causes the grids of the final tubes to swing "positive". Then and ONLY then will ALC be produced.
>
> When operating sideband, set the meter switch to ALC and while speaking into the microphone from a distance of 1 to 2 inches in a normal level of voice, adjust the MIC gain so the ALC meter just "starts" to "flicker" above zero. This is the point of maximum peak RF output. Any further increase in the MIC gain will produce ALC which will cause a "reduction" in RF output, NOT an "increase" in RF output. ALC is there to help keep from over driving the final amplifier and causing splatter (adjacent frequency interference).
>
> Don't be fooled because your watt meter may NOT be displaying FULL OUTPUT. Only PEAK watt meter can display PEAK output. Most watt meters are average watt meters and when the transmitter is adjusted properly the typical RF output displayed on the average watt meter will be 20 to 30 watts at most. This is normal and should NOT be considered a problem or improperly adjusted transmitter.
>
> As for the S meter not zeroing when adjust VR1 on the IF board, either R41 (15K 1/2 watt) has changed values or VR1 is bad. Clean VR1 and readjust as stated in the 520 service manual. Did you perform the complete S meter adjustments in the 520 service manual or just adjust VR1?
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "DaveS" <kc8pcl@> wrote:
> >
> > Hello,
> > I have a TS 520S that works with good output, The processor works fine, but when I switch to alc, it is intermittent in output. It works sometimes, and then as you talk, it

slowly drops in output. Sometimes you have to get real close to the mic to get any output at all, yet when I switch it to RF, there is plenty of power out. Also the S meter will not zero even when you set VR1, can't set it on zero with the antenna disconnected. I am using a dummy load for adjusting the radio. can anyone help with troubleshooting this problem? Thanks for reading this post, Hope to hear from someone, 73.
> > KC8PCL
> >
>

30950. neutralizing 6146Bs in a TS-830S and chattering relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 10:43:14 UTC
From: nihongostudent
Topic: 30950 Message: 30950

Greetings to all:
I just resubscribed to the group. My TS-830S still has a chattering relay and I don't even use the relay now. I switch to send. I have all of Ken's K4EAA info and photographs on the relay placement.I think W5RKL mentioned that there are three relays that Kenwood used to describe RL-1 and Bob Mansker mentions a metal can near the cooling fan, under which is a relay.I would like to know which relay probably causes the chatter. I will probably end up replacing both.
On the neutralization issue I will probably use the plastic tool that Ken sells and wear gloves to boot. I don't have a high impedance vtvm or rf probe but I would like suggestions on what to buy inexpensively. I don't think I will use the second receiver and dummy load scenario.Where on the web ca I get a decent used high 1-11 Megohm vtvm and a cheap rf probe to connect to it. Then I need to figure out where to put the probe while I adjust the capacitor. Any help will really be appreciated. I have never attempted anyrhing like this before.
Yours Truly'
Richard
HS0ZFQ

30951. Re: neutralizing 6146Bs in a TS-830S and chattering relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 16:15:46 UTC
From: w5rkl
Topic: 30950 Message: 30951

The relays in the 830, like the other hybrids, is controlled by "3" sources.

1. SEND switch
2. PTT switch
3. VOX Relay Amplifier

IF the relay chatter occurs when keying the transmitter with the PTT button or SEND switch then you should look for an intermittent connection in the microphone's PTT circuit or a loose SEND switch connection.

The "SEND" switch and microphone "PTT" controls are wired in "parallel". That means when you press the microphone's PTT button, it's the same as flipping the SEND switch UP.

If the relay chatter occurs only when using VOX, you might check the VOX GAIN and VOX DELAY settings. If the VOX GAIN and VOX DELAY are not set properly then the relays will energize but not remain energized when the audio level falls below the VOX GAIN setting. This can happen rather quickly. The VOX GAIN control is used to control the audio level from the microphone to the VOX amplifier. IF the gain is set too low then the VOX amplifier will not produce an amplified audio signal to the VOX Relay control circuits, hence VOX won't work. Adjusting the VOX gain control so the relays energize when speaking in a normal voice level 1 to 2 inches from the microphone, should result in the relay energizing. Once this is achieved, adjust the VOX DELAY control so the relays remain energized for about a second or 2 between words.

I recommend cleaning the VOX GAIN and VOX DELAY controls with DeoXit F5 pot cleaner and lubricant then test for proper operation.

I also recommend checking the PTT and SEND switch wiring for an intermittent connection. Make sure the microphone plug is fully seated into the microphone socket and the microphone plug ring is tight. Do not over tighten the microphone plug.

Also, check the microphone plug and wiring itself to ensure the problem is not a loose/bad PTT connection in the microphone plug.

You don't need to spend a lot of money on a VTVM. Any vintage Heathkit, Knightkit, or Eico tube VTVM will work fine. Most of these VTVMs are selling for $50 or less. Even if the VTVM does not come with a probe, you can build the probe yourself for less than $2. The schematics can be found on the Internet which show the probes circuit which is simple.

As for an RF probe, you can build one yourself for less than $10. I built one for less than $2. I used a small diameter short length of PVC pipe, short length of RG-174 coax cable, a 1N4007 diode and a .001ufd 500VDC disc capacitor. The link below will show you how to build one:

http://www.io.com/~n5fc/rfprobe1.htm

73s
Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@...> wrote:
>
> Greetings to all:
> I just resubscribed to the group. My TS-830S still has a chattering relay and I don't even use the relay now. I switch to send. I have all of Ken's K4EAA info and photographs on the relay placement.I think W5RKL mentioned that there are three relays that Kenwood used to describe RL-1 and Bob Mansker mentions a metal can near the cooling fan, under which is a relay.I would like to know which relay probably causes the chatter. I will probably end up replacing both.
> On the neutralization issue I will probably use the plastic tool that Ken sells and wear gloves to boot. I don't have a high impedance vtvm or rf probe but I would like suggestions on what to buy inexpensively. I don't think I will use the second receiver and dummy load scenario.Where on the web ca I get a decent used high 1-11 Megohm vtvm and a cheap rf probe to connect to it. Then I need to figure out where to put the probe while I adjust the capacitor. Any help will really be appreciated. I have never attempted anyrhing like this before.
> Yours Truly'
> Richard
> HS0ZFQ
>

30952. Bringing it back to life!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 18:31:26 UTC
From: Michael
Topic: 30952 Message: 30952

Hey guys, I am new here and looking for some help. I have a ts-520 that has been setting for some time. Last time it transmitted was probably about 13 yrs ago and that was just to make sure it worked. Aside from checking the tubes (I guess that would be a good idea). What else should I check out before running it very much? I have powered it up and it seems to RX ok, the s-meter seems to be a little weak, not much if any deflection on signals from stations that would show more on other rigs. Thanks in advance for any help.

Thanks & 73,
Mike KF4PHW

30953. Re: Bringing it back to life!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 19:00:16 UTC
From: w5rkl
Topic: 30952 Message: 30953

Hi Mike,

Sitting for 13 years is a long time.

The first thing I would do is to clean all of the wafer switches, including the wafer switches inside the final amplifier enclosure using DeoXit D5. Clean the pots with DeoXit F5 pot cleaner and lubricant. After cleaning the switches, use generous amounts of canned air, available at Walmart, to remove any cleaner residue. Read and adhere to the warnings/cautions on the cleaner's can. Contact cleaner, whether D5 or F5, is flammable. You van buy the non-flammable version if you so desire. However, don't forget to follow all of the warnings/cautions regardless of which one you buy and use. Apply just enough to the contacts to do the job. Rotate the switches throughout their travel in both directions a few times then use canned air to remove any/all cleaner residue.

It's quite possible the filter capacitors may be old and dried out. Voltage sagging is a clear indication the capacitors need replacing.

The final tubes may have accumulated a lot of gas over the 13 years. Don't rely on them to be good. I recommend replacing them. You may get lucky and not have to replace them but if one or both have an accumulation of gas at the base of the tube sooner or later the tube can, and most likely will, arc. You're best bet is to replace them then neutralize the final amplifier.

As for replacing ALL of the electrolytic capacitors simply because the 520 has been sitting for 13 years, no I would worry about that. The HV and LV filter capacitors, if found to be weak or have high internal leakage current, you might consider replacing them. Whether you replace the electrolytic capacitors or not is entirely up to you.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Michael" <kf4phw@...> wrote:
>
> Hey guys, I am new here and looking for some help. I have a ts-520 that has been setting for some time. Last time it transmitted was probably about 13 yrs ago and that was just to make sure it worked. Aside from checking the tubes (I guess that would be a good idea). What else should I check out before running it very much? I have powered it up and it seems to RX ok, the s-meter seems to be a little weak, not much if any deflection on signals from stations that would show more on other rigs. Thanks in advance for any help.
>
> Thanks & 73,
> Mike KF4PHW
>

30954. Re: [TS-520_820_530_830] TS-520 VFO (internal)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 19:38:51 UTC
From: kshitij mathur
Topic: 30929 Message: 30954

Take openion from W5RKL first- this is very very important.

It is worth to go to Ken's kenwood repair site (Call sign of Ken is K4EAA)- where he explains in detail how to open the cover plate of VFO- (you can go to google and type kenwood hybrid repair and you will reach the Ken's web site for repairs) follow the instructions,

Let the rig sit idle for couple of hours so that all the capacitors get discharged. After 4 to 5 hours without any power line connection to the rig- earth the remaining charge using a very good insulated earthing tool. Remove the top cover of the rig. You can see the VFO Aluminium Box which houses a variable capacitor having aluminum plates

Open the cover plate of Variable capacitor Box (using a small screwdriver which is bent to 90 degrees so that it can reach to the cover plate screw)- spray some contact cleaner on the end bearings move the VFO from 0 to 600 five to six times- close the plate - wait for some time for contact cleaner to evaporate- and power up the rig-

While opening the cover plate you should be utmost careful (1) Not to touch the plates of variable capacitor. (2) Not to allow the screw (very small size) of the cover plate to fall in to the radio -then it will be difficult to retrieve it and it will short other circuits- and (3) open only one screw so that you can rotate the cover plate to peep in to the magic Variable capacitor enclosure.(4) No over sparying of contact cleaner please.

Best of Luck
Kshitij
VU2CDW

From: Red <kb8rwi@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, 21 April, 2011 9:48:17 AM
Subject: [TS-520_820_530_830] TS-520 VFO (internal)

Hi and tnx for reading , i am currently having a problen with my ts-520 on every band 10-80 on the vfo from 350 to 450 i am getting dead spots where i have no transmit or recieve --dead silence and it is only in that spot on all bands any help would be nice so i can save the rig from hitting the bottom of the dumpster as this is very frustraiting when tuning to see what is there. any where else on the dial tune and load is great just in that area outlined is where the problem is.

[Non-text portions of this message have been removed]

30955. (Was neutralizing 6146Bs in a TS-830S and chattering relay) now RF probe diode types

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 21:42:25 UTC
From: Leslie Smith
Topic: 30950 Message: 30955

Hi Mike,
Toward the end of your e-mail you mention building an RF probe to suit a VTVM. You give a reference to N5ESE's web instructions, where he shows a cct using a germanium 1N34 (or 34a), but you mention using a 1N4007.

Now I have a very nasty habit of "cross-linking" two items in my mind. So I MEAN 1N34a DIODE (or perhaps 1N4148 DIODE, or OA91 diode) and I think DIODE, and bingo - out of my mouth comes 1N4007, which is (of course) a different diode, and certainly not the one I intended. Perhaps you had in mind the 1N34 germanium diode mentioned on the web-site?

Different topic: If I use a 1N4148 silicon diode, (not the 1N34a, as per N5ESE) how much will this affect sensitivity? 700 vs 200 (as a ratio) ie 3 1/2 times less sensitive? Anyway, you suggestion to make an RF probe for my (old) HP VTVM I bought for $20 is excellent, and I'm going to do it! It's possible to do a great deal with basic test gear, intelligently used. Thanks for your reply!

Leslie Smith
[1]vk2bcu@...
(end)

On Fri, 22 Apr 2011 16:15 +0000, "w5rkl" <w5rkl@...> wrote:

The relays in the 830, like the other hybrids, is controlled by "3" sources.
1. SEND switch
2. PTT switch
3. VOX Relay Amplifier
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amplifier. IF the gain is set too low then the VOX amplifier will not produce an amplified audio signal to the VOX Relay control circuits, hence VOX won't work. Adjusting the VOX gain control so the relays energize when speaking in a normal voice level 1 to 2 inches from the microphone, should result in the relay energizing. Once this is achieved, adjust the VOX DELAY control so the relays remain energized for about a second or 2 between words.
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Also, check the microphone plug and wiring itself to ensure the problem is not a loose/bad PTT connection in the microphone plug.
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[2]http://www.io.com/~n5fc/rfprobe1.htm
73s
Mike
W5RKL
--- In [3]TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@...> wrote:
>
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to it. Then I need to figure out where to put the probe while I
adjust the capacitor. Any help will really be appreciated. I have
never attempted anyrhing like this before.
> Yours Truly'
> Richard
> HS0ZFQ
>

References

1. mailto:vk2bcu@...
2. http://www.io.com/~n5fc/rfprobe1.htm
3. mailto:TS-520_820_530_830%40yahoogroups.com
4. mailto:w5rkl@...?subject=Re%3A%20neutralizing%206146Bs%20in%20a%20TS-830S%20and%20chattering%20relay
5. mailto:TS-520_820_530_830@yahoogroups.com?subject=Re%3A%20neutralizing%206146Bs%20in%20a%20TS-830S%20and%20chattering%20relay
6. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJxYXFlYXRhBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwOTUxBHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUDMTMwMzQ4ODk0OQ--?act=reply&messageNum=30951
7. http://groups.yahoo.com/group/TS-520_820_530_830/post;_ylc=X3oDMTJlajJ1YnM4BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA250cGMEc3RpbWUDMTMwMzQ4ODk0OQ--
8. http://groups.yahoo.com/group/TS-520_820_530_830/message/30950;_ylc=X3oDMTM2YWFncWU4BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BG1zZ0lkAzMwOTUxBHNlYwNmdHIEc2xrA3Z0cGMEc3RpbWUDMTMwMzQ4ODk0OQR0cGNJZAMzMDk1MA--
9. http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmOWtsazg5BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDM0ODg5NDk-?o=6
10. http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlOXE5ODZvBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMzQ4ODk0OQ--
11. http://groups.yahoo.com/;_ylc=X3oDMTJkMTNqbWFpBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAzNDg4OTQ5
12. mailto:TS-520_820_530_830-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
13. mailto:TS-520_820_530_830-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
14. mailto:TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe
15. http://docs.yahoo.com/info/terms/

--
http://www.fastmail.fm - Accessible with your email software
or over the web

[Non-text portions of this message have been removed]

30956. TS520S MOD TO IMPROVE FLOOR NOISE LEVEL

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 22:04:19 UTC
From: jeffrey lord
Topic: 30956 Message: 30956

A Life member of our club from another State called in the other week, when I mentioned That I owned a T520S, he suggested that I change a component in the set , and it would improve the noise cancalling ability of the set.

However he rattled off the component numbers so fast that I could not remember them , and has now returned interstate.

With noise levels on 80m here sometimes registaring 20+ , i would like to look at the MOD.

So does anyone know the MOD that he was referring to?? and does it work and how well???

Jeff

VK4FNRS

[Non-text portions of this message have been removed]

30957. Re: [TS-520_820_530_830] TS520S MOD TO IMPROVE FLOOR NOISE LEVEL

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-22 22:12:33 UTC
From: tnnyswy@yahoo.com
Topic: 30956 Message: 30957

Will this Mod get rid of the Noise Source you're talking about?

(((73))) Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: jeffrey lord <jc_2aussie@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 22 Apr 2011 15:04:19
To: yahoo group<TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] TS520S MOD TO IMPROVE FLOOR NOISE LEVEL

A Life member of our club from another State called?in the other week, when I mentioned
That I owned a T520S, he suggested that I change a component in the set , and it would
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?
Jeff
?
VK4FNRS

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

30958. RE: [TS-520_820_530_830] Re: neutralizing 6146Bs in a TS-830S and chattering relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 00:21:46 UTC
From: Richard Vincent
Topic: 30950 Message: 30958

Mike:
Thanks a lot. That was a very informative post about the issue about being wired in parallel and the importance of the VOX Delay and VOX gain controls. Since I have never operated SSB, strictly cw with the TS-830S, can you tell me how much of this info is relevant for cw? I have downloaded these posts and will be taking them to my Thai repairman and try to explain what areas to work on. Once again, thanks a lot for the really thorough post.
Richard
HS0ZFQ
Chiangrai, Thailand

To: TS-520_820_530_830@yahoogroups.com
From: w5rkl@...
Date: Fri, 22 Apr 2011 16:15:46 +0000
Subject: [TS-520_820_530_830] Re: neutralizing 6146Bs in a TS-830S and chattering relay

The relays in the 830, like the other hybrids, is controlled by "3" sources.

1. SEND switch

2. PTT switch

3. VOX Relay Amplifier

IF the relay chatter occurs when keying the transmitter with the PTT button or SEND switch then you should look for an intermittent connection in the microphone's PTT circuit or a loose SEND switch connection.

The "SEND" switch and microphone "PTT" controls are wired in "parallel". That means when you press the microphone's PTT button, it's the same as flipping the SEND switch UP.

If the relay chatter occurs only when using VOX, you might check the VOX GAIN and VOX DELAY settings. If the VOX GAIN and VOX DELAY are not set properly then the relays will energize but not remain energized when the audio level falls below the VOX GAIN setting. This can happen rather quickly. The VOX GAIN control is used to control the audio level from the microphone to the VOX amplifier. IF the gain is set too low then the VOX amplifier will not produce an amplified audio signal to the VOX Relay control circuits, hence VOX won't work. Adjusting the VOX gain control so the relays energize when speaking in a normal voice level 1 to 2 inches from the microphone, should result in the relay energizing. Once this is achieved, adjust the VOX DELAY control so the relays remain energized for about a second or 2 between words.

I recommend cleaning the VOX GAIN and VOX DELAY controls with DeoXit F5 pot cleaner and lubricant then test for proper operation.

I also recommend checking the PTT and SEND switch wiring for an intermittent connection. Make sure the microphone plug is fully seated into the microphone socket and the microphone plug ring is tight. Do not over tighten the microphone plug.

Also, check the microphone plug and wiring itself to ensure the problem is not a loose/bad PTT connection in the microphone plug.

You don't need to spend a lot of money on a VTVM. Any vintage Heathkit, Knightkit, or Eico tube VTVM will work fine. Most of these VTVMs are selling for $50 or less. Even if the VTVM does not come with a probe, you can build the probe yourself for less than $2. The schematics can be found on the Internet which show the probes circuit which is simple.

As for an RF probe, you can build one yourself for less than $10. I built one for less than $2. I used a small diameter short length of PVC pipe, short length of RG-174 coax cable, a 1N4007 diode and a .001ufd 500VDC disc capacitor. The link below will show you how to build one:

http://www.io.com/~n5fc/rfprobe1.htm

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@...> wrote:

>

> Greetings to all:

> I just resubscribed to the group. My TS-830S still has a chattering relay and I don't even use the relay now. I switch to send. I have all of Ken's K4EAA info and photographs on the relay placement.I think W5RKL mentioned that there are three relays that Kenwood used to describe RL-1 and Bob Mansker mentions a metal can near the cooling fan, under which is a relay.I would like to know which relay probably causes the chatter. I will probably end up replacing both.

> On the neutralization issue I will probably use the plastic tool that Ken sells and wear gloves to boot. I don't have a high impedance vtvm or rf probe but I would like suggestions on what to buy inexpensively. I don't think I will use the second receiver and dummy load scenario.Where on the web ca I get a decent used high 1-11 Megohm vtvm and a cheap rf probe to connect to it. Then I need to figure out where to put the probe while I adjust the capacitor. Any help will really be appreciated. I have never attempted anyrhing like this before.

> Yours Truly'

> Richard

> HS0ZFQ

>

[Non-text portions of this message have been removed]

30959. TS-820 IF Unit 3.3vdc Voltage Problems

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 01:13:32 UTC
From: ae5uu
Topic: 30959 Message: 30959

The voltage problems with 3.3vdc bias in the IF Unit of my TS-820 continue. My 3.3vdc bias is 3.3vdc except when IF1 on the IF Unit is plugged in; then it is 6.2vdc, the problem that persists despite my best efforts.

Today I reinspected all the foil runs and found everything to be well. I have voltage measurement as follows:

Q-15

Base +7.5vdc (spec is +6.2vdc)
Collector +9.0vdc (spec is +9.0vdc)
Emitter +8.29vdc spec is +5.6vdc)

The Base and Emitter numbers are higher than specification.

Q-16

Base -5.3vdc (spec is -3.0vdc)
Collector +6.0vdc (spec is 0.0vdc)
Emitter -5.88 (spec is -6.0vdc)

The Base voltage is much too negative, the Collector voltage is positive instead of zero.

The problem does not prevent the radio from receiving well and transmitting a strong clear signal. However tuneup is challenging because I get no ALC reading when adjusting the Drive control in the TUN mode. Neither do I get any reduction in audio level nor increase in meter reading when the RF Gain control is rotated CCW.

All other voltages in the radio are correct with the exception of Q-5 on the RF Unit.

Q-5

Base Receive -96vdc (spec is -97vdc)
Transmit -51vdc (spec is -51vdc)

Collector Receive +5.06vdc (spec is 2.8vdc)
Transmit +9.04vdc (spec is 2.8vdc)

Emitter Receiver -96vdc (spec is -98vdc)
Transmit -51vdc (spec is -51vdc)

The Collector voltages are way off, perhaps also contributing to my ALC problem.

It has been suggested that I try removing D-20 on the IF Unit and then checking the 3.3vdc; there was no effect.

Any suggestions would be appreciated. Thank you.

73,

Russell
AE5UU

30960. Re: neutralizing 6146Bs in a TS-830S and chattering relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 12:20:21 UTC
From: w5rkl
Topic: 30950 Message: 30960

Hello Richard,

VOX is used in CW for "CW Break-in". While the VOX GAIN control isn't used for CW Break-in, the VOX DELAY control is.

With the 830 in CW and VOX turned ON, the 830 connected to a dummy load, send a series of DITS and DAHS. At the same time adjust the VOX DELAY until the transmitter remains keyed for a few seconds between the DITs and DAHs. When you stop sending CW, with the VOX DELAY set properly, the 830 should remain keyed for a few seconds then return to receive.

This is covered in the 830 operator's manual in the CW section.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Richard Vincent <richard_206@...> wrote:
>
>
> Mike:
> Thanks a lot. That was a very informative post about the issue about being wired in parallel and the importance of the VOX Delay and VOX gain controls. Since I have never operated SSB, strictly cw with the TS-830S, can you tell me how much of this info is relevant for cw? I have downloaded these posts and will be taking them to my Thai repairman and try to explain what areas to work on. Once again, thanks a lot for the really thorough post.
> Richard
> HS0ZFQ
> Chiangrai, Thailand
>
> To: TS-520_820_530_830@yahoogroups.com
> From: w5rkl@...
> Date: Fri, 22 Apr 2011 16:15:46 +0000
> Subject: [TS-520_820_530_830] Re: neutralizing 6146Bs in a TS-830S and chattering relay
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> 1. SEND switch
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> IF the relay chatter occurs when keying the transmitter with the PTT button or SEND switch then you should look for an intermittent connection in the microphone's PTT circuit or a loose SEND switch connection.
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> The "SEND" switch and microphone "PTT" controls are wired in "parallel". That means when you press the microphone's PTT button, it's the same as flipping the SEND switch UP.
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> If the relay chatter occurs only when using VOX, you might check the VOX GAIN and VOX DELAY settings. If the VOX GAIN and VOX DELAY are not set properly then the relays will energize but not remain energized when the audio level falls below the VOX GAIN setting. This can happen rather quickly. The VOX GAIN control is used to control the audio level from the microphone to the VOX amplifier. IF the gain is set too low then the VOX amplifier will not produce an amplified audio signal to the VOX Relay control circuits, hence VOX won't work. Adjusting the VOX gain control so the relays energize when speaking in a normal voice level 1 to 2 inches from the microphone, should result in the relay energizing. Once this is achieved, adjust the VOX DELAY control so the relays remain energized for about a second or 2 between words.
>

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>
> I recommend cleaning the VOX GAIN and VOX DELAY controls with DeoXit F5 pot cleaner and lubricant then test for proper operation.
>
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>
> I also recommend checking the PTT and SEND switch wiring for an intermittent connection. Make sure the microphone plug is fully seated into the microphone socket and the microphone plug ring is tight. Do not over tighten the microphone plug.
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>
> Also, check the microphone plug and wiring itself to ensure the problem is not a loose/bad PTT connection in the microphone plug.
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>
> You don't need to spend a lot of money on a VTVM. Any vintage Heathkit, Knightkit, or Eico tube VTVM will work fine. Most of these VTVMs are selling for $50 or less. Even if the VTVM does not come with a probe, you can build the probe yourself for less than $2. The schematics can be found on the Internet which show the probes circuit which is simple.
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>
> As for an RF probe, you can build one yourself for less than $10. I built one for less than $2. I used a small diameter short length of PVC pipe, short length of RG-174 coax cable, a 1N4007 diode and a .001ufd 500VDC disc capacitor. The link below will show you how to build one:
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>
> http://www.io.com/~n5fc/rfprobe1.htm
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> 73s
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> Mike
>
> W5RKL
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> --- In TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@> wrote:
>
> >
>
> > Greetings to all:
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> > I just resubscribed to the group. My TS-830S still has a chattering relay and I don't even use the relay now. I switch to send. I have all of Ken's K4EAA info and photographs on the relay placement.I think W5RKL mentioned that there are three relays that Kenwood used to describe RL-1 and Bob Mansker mentions a metal can near the cooling fan, under which is a relay.I would like to know which relay probably causes the chatter. I will probably end up replacing both.
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> > On the neutralization issue I will probably use the plastic tool that Ken sells and wear gloves to boot. I don't have a high impedance vtvm or rf probe but I would like suggestions on what to buy inexpensively. I don't think I will use the second receiver and dummy load scenario.Where on the web ca I get a decent used high 1-11 Megohm vtvm and a cheap rf probe to connect to it. Then I need to figure out where to put the probe while I adjust the capacitor. Any help will really be appreciated. I have never attempted anyrhing like this before.
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> > Yours Truly'
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> > Richard
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> > HS0ZFQ
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30961. Re: TS520S MOD TO IMPROVE FLOOR NOISE LEVEL

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 12:53:00 UTC
From: w5rkl
Topic: 30956 Message: 30961

Jef, I'll bet the member of your club is talking about "Pin diode mods". Don't waste you time and money, it's not worth it. If this is the mod you are referring to and that member said he "heard" a marked improvement in the receiver's noise floor, ask him how he determined that "marked improvement". What steps did he take to determine the Pin diode mod actually lowered the noise floor in his equipment.

If the noise being referred to is "external", meaning not in the equipment itself, then a mod to the transceiver will not eliminate that type of noise. Not all noise will be reduce or eliminated by a transceiver/receiver's noise limiter.

If the noise is external, possibly caused by power and telephone lines, then I recommend taking the time to read up on noise problems. There is a lot of information on the ARRL Website that discusses noises and their sources, what steps you can take, and how to handle eliminating these types of noise. The noise is not going away on it's own, you have to do some research and take steps to reduce and/or eliminate noise.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, tnnyswy@... wrote:
>
> Will this Mod get rid of the Noise Source you're talking about?
>
> (((73))) Milverton.
> Sent from my Verizon Wireless BlackBerry
>
> -----Original Message-----
> From: jeffrey lord <jc_2aussie@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Fri, 22 Apr 2011 15:04:19
> To: yahoo group<TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] TS520S MOD TO IMPROVE FLOOR NOISE LEVEL
>
> A Life member of our club from another State called in the other week, when I mentioned That I owned a T520S, he suggested that I change a component in the set , and it would improve the noise cancalling ability of the set.
>
> However he rattled off the component numbers so fast that I could not remember them , and has now returned interstate.
>
> With noise levels on 80m here sometimes registaring 20+ , i would like to look at the MOD.
>
> So does anyone know the MOD that he was referring to?? and does it work and how well???

>
> Jeff
>
> VK4FNRS
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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30962. Re: TS520S MOD TO IMPROVE FLOOR NOISE LEVEL

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 23:22:37 UTC
From: roberteleazer@rocketmail.com
Topic: 30956 Message: 30962

Jeff:

I am aware that there is a mod for the TS-820 that is designed to reduce the noise generated in the audio stages after the detector, thought to be due to excessive treble response in the receive audio stages.

The mod is described in an article on Mods.DK and simply consists of soldering a 0.1 uf capacitor across the AF Gain Control.

I have not tried the mod on my TS-820S and I have no idea whether it is applicable to the TS-520 but this may be what your friend is talking about. And at the worst I don't see how it could do any harm. In any case I find my TS-520 to be much less noisy than my TS-820S, but that may just be due to an actual difference in receive sensitivies between the two rigs.

Also, the Kenwood service bulletin on the TS-820 says that excessive noise can be caused by the failure of a tantalum capacitor in the PD section of the VCO/PD module. I tried replacing that cap with a ceramic bead cap of the same value in a spare VCO/PD module but got frequency instability as a result. I don't think this is applicable in any way to the TS-520.

73's

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> A Life member of our club from another State called in the other week, when I mentioned That I owned a T520S, he suggested that I change a component in the set , and it would improve the noise cancalling ability of the set.
>
> However he rattled off the component numbers so fast that I could not remember them , and has now returned interstate.
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> With noise levels on 80m here sometimes registaring 20+ , i would like to look at the MOD.
>
> So does anyone know the MOD that he was referring to?? and does it work and how well???
>
> Jeff
>
> VK4FNRS
>
> [Non-text portions of this message have been removed]
>

30963. Re: 830s start up beep

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-23 23:39:35 UTC
From: jon_g4fut
Topic: 30928 Message: 30963

Mike,
Thanks....you suggested the remedy. The VOX was switched on as I always use CW..Many thanks...OK now where is that iambic key again...:-)
Jon G4FUT

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Odd, none of my Kenwood rigs (TS520, TS700aÂ and TS440s)Â do this .
> Try using headphones.
>
>
>
>
> _____
> From: jon_g4fut <jon_g4fut@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, April 21, 2011 11:12:01 AM
> Subject: [TS-520_820_530_830] 830s start up beep
>
> Â
> When I switch on my 830s, I get a "start-up beep". I find this annoying
> especially when I have told the XYL, (asleep in next room) that I have switched
> the rig off, and want to re-start it without her knowing. :-)
> How can I switch this off?
> Jon G4FUT
>
>
>
>
> [Non-text portions of this message have been removed]
>

30964. 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 05:55:03 UTC
From: Dennis
Topic: 30964 Message: 30964

I have been able to save a TS 520S from the dumpster and I am working through many small problems and one big one I don't understand.

Receive and transmit is very good on all bands except 75 meters. The receiver on dial marker 0 should be 3500 kcs. Well this one is receiving 500 kc high. It starts to receive on about 3977 and goes up 500 kc from there. I can hear the Navy Mars Nets on 4012 USB and of course the MOX on 4006 very load. Remember the dial says approx 3520 or so. Just above the 0 indicator on the dial. Some one had a diddle stick in this thing . Can anyone start me in the right direction?

Dennis n5dpk

30965. Re: [TS-520_820_530_830] 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 07:24:16 UTC
From: Lou Blasco
Topic: 30964 Message: 30965

Hi Dennis,

Try measuring the frequencies at the VFO, CAR and particularly HET sockets on the back panel. With reference to the service manual, on 80m the HET frequency should be very close to 12.395MHz. The mixing scheme for the TS520 is RX frequency = HET - (CAR + VFO) and for 80m is 12.395MHz - (3.395MHz + 5.500MHz) If they all measure correctly then it's possible that someone has been in there and fiddled with the radio. A coil pack adjustment should bring everything back in line. If however, the HET signal is 500kHz high then it is very likely that someone has replaced the 80m crystal on the coil board. Test in TUN to see if the radio also transmits 500kHz high. If it does transmit 500kHz high then start by looking at crystal X2 on the coil board.

Lou
VK3ALB

At 15:55 24/04/2011, you wrote:
>I have been able to save a TS 520S from the dumpster and I am
>working through many small problems and one big one I don't understand.
>
>Receive and transmit is very good on all bands except 75
>meters. The receiver on dial marker 0 should be 3500 kcs. Well
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>dial says approx 3520 or so. Just above the 0 indicator on the
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>me in the right direction?
>
>Dennis n5dpk
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>
>Yahoo! Groups Links
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30966. Re: 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 13:19:45 UTC
From: w5rkl
Topic: 30964 Message: 30966

Check the 80 meter RF Unit HET OSC xtal. More than likely a previous owner has changed this xtal from 12.395Mhz to 12.795Mhz. Since you said the bottom of the 80 meter starts at 3.9Mhz then the HET OSC crystal will be 12.795Mhz instead of 12.395Mhz.

Replacement xtals can be obtained from International Crystals in Oklahoma City, OK for about $22 plus USPS shipping. See the link below for further details. Give them a call, they have an 800 toll free number.

http://www.icmfg.com/hamradio-manufacturers.html

You will have to adjust the COIL PACK again once you replace the wrong HET OSC crystal with the correct 12.395Mhz xtal. Perform the COIL PACK adjustment as stated in the 520 service manual. Don't simply adjust the 80 meter coil because there is a require sequence for the adjustment. Again, see the 520 service manual for details on the adjustments.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@...> wrote:
>
> I have been able to save a TS 520S from the dumpster and I am working through many small problems and one big one I don't understand.
>
> Receive and transmit is very good on all bands except 75 meters. The receiver on dial marker 0 should be 3500 kcs. Well this one is receiving 500 kc high. It starts to receive on about 3977 and goes up 500 kc from there. I can hear the Navy Mars Nets on 4012 USB and of course the MOX on 4006 very load. Remember the dial says approx 3520 or so. Just above the 0 indicator on the dial. Some one had a diddle stick in this thing . Can anyone start me in the right direction?
>
> Dennis n5dpk
>

30967. Re: 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 13:23:08 UTC
From: w5rkl
Topic: 30964 Message: 30967

The CAR and VFO frequencies have nothing to do with the problem Dennis is experiencing.

Since the other bands are working fine, the only thing Dennis needs to check is the 80 meter RF Unit HET OSC xtal. It appears, based on comments from Dennis, it has been changed from 12.395Mhz to 12.795Mhz.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi Dennis,
>
> Try measuring the frequencies at the VFO, CAR and particularly HET
> sockets on the back panel. With reference to the service manual, on
> 80m the HET frequency should be very close to 12.395MHz. The mixing
> scheme for the TS520 is RX frequency = HET - (CAR + VFO) and for 80m
> is 12.395MHz - (3.395MHz + 5.500MHz) If they all measure correctly
> then it's possible that someone has been in there and fiddled with
> the radio. A coil pack adjustment should bring everything back in
> line. If however, the HET signal is 500kHz high then it is very
> likely that someone has replaced the 80m crystal on the coil board.
> Test in TUN to see if the radio also transmits 500kHz high. If it
> does transmit 500kHz high then start by looking at crystal X2 on the
> coil board.
>
> Lou
> VK3ALB
>
>
> At 15:55 24/04/2011, you wrote:
> >I have been able to save a TS 520S from the dumpster and I am
> >working through many small problems and one big one I don't understand.
> >
> >Receive and transmit is very good on all bands except 75
> >meters. The receiver on dial marker 0 should be 3500 kcs. Well
> >this one is receiving 500 kc high. It starts to receive on about
> >3977 and goes up 500 kc from there. I can hear the Navy Mars Nets
> >on 4012 USB and of course the MOX on 4006 very load. Remember the
> >dial says approx 3520 or so. Just above the 0 indicator on the
> >dial. Some one had a diddle stick in this thing . Can anyone start
> >me in the right direction?
> >
> >Dennis n5dpk
> >

> >
> >
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> >Yahoo! Groups Links
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>

30968. Re: [TS-520_820_530_830] Re: 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 13:28:52 UTC
From: Lou Blasco
Topic: 30964 Message: 30968

Hi Mike,

Agreed. I mentioned them only to illustrate how the 520 works.

Sorry for the confusion.

Lou
VK3ALB

At 23:23 24/04/2011, you wrote:

>The CAR and VFO frequencies have nothing to do with the problem
>Dennis is experiencing.
>
>Since the other bands are working fine, the only thing Dennis needs
>to check is the 80 meter RF Unit HET OSC xtal. It appears, based on
>comments from Dennis, it has been changed from 12.395Mhz to 12.795Mhz.
>
>73s
>Mike
>W5RKL
>
>
>--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
> >
> > Hi Dennis,
> >
> > Try measuring the frequencies at the VFO, CAR and particularly HET
> > sockets on the back panel. With reference to the service manual, on
> > 80m the HET frequency should be very close to 12.395MHz. The mixing
> > scheme for the TS520 is RX frequency = HET - (CAR + VFO) and for 80m
> > is 12.395MHz - (3.395MHz + 5.500MHz) If they all measure correctly
> > then it's possible that someone has been in there and fiddled with
> > the radio. A coil pack adjustment should bring everything back in
> > line. If however, the HET signal is 500kHz high then it is very
> > likely that someone has replaced the 80m crystal on the coil board.
> > Test in TUN to see if the radio also transmits 500kHz high. If it
> > does transmit 500kHz high then start by looking at crystal X2 on the
> > coil board.
> >
> > Lou
> > VK3ALB
> >
> >
> > At 15:55 24/04/2011, you wrote:
> > >I have been able to save a TS 520S from the dumpster and I am

> > >working through many small problems and one big one I don't understand.
> > >
> > >Receive and transmit is very good on all bands except 75
> > >meters. The receiver on dial marker 0 should be 3500 kcs. Well
> > >this one is receiving 500 kc high. It starts to receive on about
> > >3977 and goes up 500 kc from there. I can hear the Navy Mars Nets
> > >on 4012 USB and of course the MOX on 4006 very load. Remember the
> > >dial says approx 3520 or so. Just above the 0 indicator on the
> > >dial. Some one had a diddle stick in this thing . Can anyone start
> > >me in the right direction?
> > >
> > >Dennis n5dpk
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30969. You can have your ts520 and eat it to

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 21:31:09 UTC
From: Don D
Topic: 30969 Message: 30969

This is a cake my mother made many years ago for my birthday
I was shocked when i saw what she had made as it looked so real right down to the nobs,switch's and meter
I just found this old photo and thought i would share it

Ate the nobs first lol

Check the photos under ve2ud

73s
Don
ve2ud/ve2dzo

30970. Re: You can have your ts520 and eat it to

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 22:00:27 UTC
From: ktwhy2003
Topic: 30969 Message: 30970

That's a great cake! It shows your mother knows how much the hobby means to you. I only wish my mom had lived to see me get my license last year (she passed away 3.5 years ago). She has encouraged me as a teen to get mine, but I can't do code, so now at 44 I've been licensed just over a year.

again, great pic:)

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> This is a cake my mother made many years ago for my birthday
> I was shocked when i saw what she had made as it looked so real right down to the nobs,switch's and meter
> I just found this old photo and thought i would share it
>
> Ate the nobs first lol
>
> Check the photos under ve2ud
>
> 73s
> Don
> ve2ud/ve2dzo
>

30971. Re: You can have your ts520 and eat it to

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-24 23:25:18 UTC
From: Don D
Topic: 30969 Message: 30971

Thank you very much for your kind words

My mother passed last year may/8 and i put this on here
as a tribute to her
She missed seeing me hit 65 by a couple of months
so i know how you feel
way to go on being a new ham.I love the code,but not that good at it
as i don;t have a musical ear
cheers
73
Don
ve2ud

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> That's a great cake! It shows your mother knows how much the hobby means to you. I only wish my mom had lived to see me get my license last year (she passed away 3.5 years ago). She has encouraged me as a teen to get mine, but I can't do code, so now at 44 I've been licensed just over a year.
>
> again, great pic:)
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:
> >
> > This is a cake my mother made many years ago for my birthday
> > I was shocked when i saw what she had made as it looked so real right down to the nobs,switch's and meter
> > I just found this old photo and thought i would share it
> >
> > Ate the nobs first lol
> >
> > Check the photos under ve2ud
> >
> > 73s
> > Don
> > ve2ud/ve2dzo
> >
>

30972. 16 pin and 12 pin connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 00:51:49 UTC
From: n6wk_skcc3
Topic: 30972 Message: 30972

I have 4 new 16 pin connectors used for the Kenwood twins cables and 4 of the 12 Pin connectors used for the TV-502 and TV-506 converters.
They are $30.00 each plus shipping.

Contact me off-list if interested

Gordon
N6WK

30973. Re: 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 00:53:14 UTC
From: Dennis Kippa
Topic: 30964 Message: 30973

Got back on the TS 520 this evening and you guy's where right on the money.
Wrong crystal in the slot . The old boy must have used this radio on MARS.
Anyway I hope to find the 12.395 crystal this week. Thanks very much guys.

Dennis

[Non-text portions of this message have been removed]

30974. Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 03:26:02 UTC
From: kf7jav
Topic: 30974 Message: 30974

Hello Everyone,
I have owned my Ts-520 for a couple of months now.I have a tech license so I listen alot and have tried to transmit on 10 meters a few times with no response.I dont know for sure if it even works.I have a antenna tuner that I leave in bypass mode so I can read the forward power,swr,etc.. I have been told I dont need the tuner with this type of radio so I go through the tune up procedure and transmit without the tuner.I have to try to teach myself and so far Im not sure Im doing right.Do I need the tuner?If so what is the proper way to use the tuner with this radio?When I flip the switch to send in cw mode I see the foward and reflected power on the tuners meter but not when I transmit in ssb ?Are there some tests I can do to insure the radio transmits ok ?Any help would be appreciated.
Thank You
KF7JAV

30975. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 11:41:08 UTC
From: jeffrey lord
Topic: 30974 Message: 30975

Jason,

I have a TS520S , you do need a tuner with this radio(TS520}.

You must tune the radio into a dummy load capable of 100Watts load at 50Ohms.
you can then tune the antenna with the TUNER with the Radio MODE SWITCH set to TUNE.

If the Antenna is too far out it may or may not harm the radio but you your RF output through the ANtenna will be greatly reduced, your 100Watts could end up as 10 or 15.

The TS520 at 10mt generally puts out about 90 Watts , at least all the owners I have spoken to have told me.

Jeff
VK4FNRS

From: kf7jav <jasonasbury@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, 24 April 2011 7:26 PM
Subject: [TS-520_820_530_830] Need Help with kenwood ts-520

Hello Everyone,
I have owned my Ts-520 for a couple of months now.I have a tech license so I listen alot and have tried to transmit on 10 meters a few times with no response.I dont know for sure if it even works.I have a antenna tuner that I leave in bypass mode so I can read the forward power,swr,etc.. I have been told I dont need the tuner with this type of radio so I go through the tune up procedure and transmit without the tuner.I have to try to teach myself and so far Im not sure Im doing right.Do I need the tuner?If so what is the proper way to use the tuner with this radio?When I flip the switch to send in cw mode I see the foward and reflected power on the tuners meter but not when I transmit in ssb ?Are there some tests I can do to insure the radio transmits ok ?Any help would be appreciated.
Thank You
KF7JAV

Yahoo! Groups Links

[Non-text portions of this message have been removed]

30976. Re: Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 13:40:22 UTC
From: w5rkl
Topic: 30974 Message: 30976

Hi Jeff and Jason,

I disagree, a tuner is not always required.

I agree a 50 ohm dummy load should be used to tune the 520 up into. However, I believe a 100 watt 50 ohm dummy load has too lower of a power rating to safely use it with the 520 regardless of the HF frequency. A 300 watt 50 ohm dummy load provides a much better margin of safety than a 100 watt 50 ohm dummy load. Always consider a margin of safety when selecting a 50 ohm dummy load.

Jason, you didn't say what type of antenna you are using on 10 meters nor did you say what the SWR is on that antenna. Before answering your question, you need to provide answers to those 2 questions. Follow the tuner's instruction when setting the FWD and SWR meter settings. Most all tuners will display the FWR power and reflected power (SWR) without going through the tuner (bypass mode).

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> Jason,
>
> I have a TS520S , you do need a tuner with this radio(TS520}.
>
> You must tune the radio into a dummy load capable of 100Watts load at 50Ohms.
> you can then tune the antenna with the TUNER with the Radio MODE SWITCH set to TUNE.
>
> If the Antenna is too far out it may or may not harm the radio but you your RF output through the ANtenna will be greatly reduced, your 100Watts could end up as 10 or 15.
>
> The TS520 at 10mt generally puts out about 90 Watts , at least all the owners I have spoken to have told me.
>
> Jeff
> VK4FNRS
>
> From: kf7jav <jasonasbury@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, 24 April 2011 7:26 PM
> Subject: [TS-520_820_530_830] Need Help with kenwood ts-520
>
> Hello Everyone,
> I have owned my Ts-520 for a couple of months now.I have a tech license so I listen alot and have tried to transmit on 10 meters a few times with no response.I dont know for sure

if it even works.I have a antenna tuner that I leave in bypass mode so I can read the forward power,swr,etc.. I have been told I dont need the tuner with this type of radio so I go through the tune up procedure and transmit without the tuner.I have to try to teach myself and so far Im not sure Im doing right.Do I need the tuner?If so what is the proper way to use the tuner with this radio?When I flip the switch to send in cw mode I see the foward and reflected power on the tuners meter but not when I transmit in ssb ?Are there some tests I can do to insure the radio transmits ok ?Any help would be appreciated.
> Thank You
> KF7JAV
>
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> [Non-text portions of this message have been removed]
>

30977. Re: 75 meter calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 14:01:16 UTC
From: w5rkl
Topic: 30964 Message: 30977

Dennis,

International Crystals in Oklahoma City, OK, can provide you with the 12.395Mhz crystal you need. Their price for a 12.395Mhz crystal for your 520 is around $22 plus a few dollars USPS shipping. Give them a call.

http://www.icmfg.com/hamradio-manufacturers.html

I use them for all my crystal needs and have never receive a bad or off frequency crystal. All you need to do is tell them the make, model, frequency and type of crystal you need. I ordered two 40 meter heterodyne oscillator crystals, at separate times, for my Drake T4XB transmitter and my Drake R4C receiver and all I needed to tell them was the frequency and what the crystal was used for. They knew the rest. They are very easy to deal with, very friendly, and they take all major credit cards.

While you can buy a replacement 12.395Mhz crystal on eBay, I wouldn't trust a use crystal but that's me. Besides, $22 plus a few dollars USPS shipping cost quite often is cheaper than eBay prices plus you get a guarantee with International Crystals, something you quite often do not get on eBay.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Dennis Kippa <n5dpk1@...> wrote:
>
> Got back on the TS 520 this evening and you guy's where right on the money.
> Wrong crystal in the slot . The old boy must have used this radio on MARS.
> Anyway I hope to find the 12.395 crystal this week. Thanks very much guys.
>
> Dennis
>
>
> [Non-text portions of this message have been removed]
>

30978. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 14:46:55 UTC
From: John Becker
Topic: 30974 Message: 30978

First question.

Why do you "think" you need the tuner? Antenna not good for the ten meter band?

For what it's worth - I used my 520 on a 3 element 10 meter band and
never had a bit of problem.

John, W0JAB

At 10:26 PM 4/24/2011, you wrote:
>Hello Everyone,
>I have owned my Ts-520 for a couple of months now.I have a tech license so I listen alot and have tried to transmit on 10 meters a few times with no response.I dont know for sure if it even works.I have a antenna tuner that I leave in bypass mode so I can read the forward power,swr,etc.. I have been told I dont need the tuner with this type of radio so I go through the tune up procedure and transmit without the tuner.I have to try to teach myself and so far Im not sure Im doing right.Do I need the tuner?If so what is the proper way to use the tuner with this radio?When I flip the switch to send in cw mode I see the foward and reflected power on the tuners meter but not when I transmit in ssb ?Are there some tests I can do to insure the radio transmits ok ?Any help would be appreciated.
>Thank You
>KF7JAV
>
>
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>Yahoo! Groups Links
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30979. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 14:47:54 UTC
From: John Becker
Topic: 30974 Message: 30979

At 06:41 AM 4/25/2011, you wrote:
>Jason,
>
>I have a TS520S , you do need a tuner with this radio(TS520}.
>

No you dont need it !!!!!

I have never use one with any of my 520's
John, W0JAB

30980. Re: Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 15:29:55 UTC
From: Dennis
Topic: 30974 Message: 30980

--- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@...> wrote:
>
> At 06:41 AM 4/25/2011, you wrote:
> >Jason,
> >
> >I have a TS520S , you do need a tuner with this radio(TS520}.
> >
>
> No you dont need it !!!!!
>
> I have never use one with any of my 520's
> John, W0JAB
>

I'm with you John. Back in the 1960's a mentor of mine stated many times (If you can dip the plate,go with it). He was right on. A tube rig can be very forgiving when it comes to SWR. Solid state not so much.

Dennis n5dpk

30981. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 16:17:03 UTC
From: Joe Loverti
Topic: 30974 Message: 30981

What type of tuner do you have? You should locate a manual for it and learn how to use it. As suggested, get a dummy load and transmit into the dummy load to test your RF output and tuning technique. Read your TS 520 manual and understand how to tune the rig. After you've got the rig tuned into a dummy load, reduce the power output and use your tuner to achieve a low SWR using your antenna. You can increase your RF output once your antenna is properly matched. Changing your operating frequency too far will require a touch-up in both the TS-520 and the antenna tuner. In SSB you should see relative power output when you speak or whistle into the microphone.

Joe
WW8X

On Mon, Apr 25, 2011 at 7:41 AM, jeffrey lord <jc_2aussie@...> wrote:

>
>
> Jason,
>
> I have a TS520S , you do need a tuner with this radio(TS520}.
>
> You must tune the radio into a dummy load capable of 100Watts load at
> 50Ohms.
> you can then tune the antenna with the TUNER with the Radio MODE SWITCH set
> to TUNE.
>
> If the Antenna is too far out it may or may not harm the radio but you your
> RF output through the ANtenna will be greatly reduced, your 100Watts could
> end up as 10 or 15.
>
> The TS520 at 10mt generally puts out about 90 Watts , at least all the
> owners I have spoken to have told me.
>
> Jeff
> VK4FNRS
>
> From: kf7jav <jasonasbury@ymail.com>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, 24 April 2011 7:26 PM
> Subject: [TS-520_820_530_830] Need Help with kenwood ts-520
>
>
> Hello Everyone,
> I have owned my Ts-520 for a couple of months now.I have a tech license so
> I listen alot and have tried to transmit on 10 meters a few times with no
> response.I dont know for sure if it even works.I have a antenna tuner that I

> leave in bypass mode so I can read the forward power,swr,etc.. I have been
> told I dont need the tuner with this type of radio so I go through the tune
> up procedure and transmit without the tuner.I have to try to teach myself
> and so far Im not sure Im doing right.Do I need the tuner?If so what is the
> proper way to use the tuner with this radio?When I flip the switch to send
> in cw mode I see the foward and reflected power on the tuners meter but not
> when I transmit in ssb ?Are there some tests I can do to insure the radio
> transmits ok ?Any help would be appreciated.
> Thank You
> KF7JAV
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30982. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 17:05:02 UTC
From: Jim S
Topic: 30974 Message: 30982

I have seen this same question asked on this forum so many times,that I really have to wonder WHY SSB theory is NOT TAUGHT in license classes.

EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any, or at least a very small amount of RF UNLESS the audio stages are modulated with a voice or tone ! ! !

That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it seems to be TOTALLY OVERLOOKED !

The amount of power your radio will put out in the CW mode with the key closed, is the SAME AMOUNT of power that it will put out on voice peaks when properly modulated.

But the important difference is that the human voice has approximately a 30% average to peak ratio, so when speaking into a 100 watt radio with a normal voice, you should see only around 30 watts registering on your meters, simply due to the fact that they respond only to the AVERAGE POWER, and NOT to the PEAK POWER.

PLEASE, try to understand this. Trying to squeeze more power out in SSB only results in more distortion, spurious products and a generally poor sounding transmission.

73, Jim

----- Original Message -----
From: "Joe Loverti" <ww8x.joe@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, April 25, 2011 12:17 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

> What type of tuner do you have? You should locate a manual for it and
> learn
> how to use it. As suggested, get a dummy load and transmit into the dummy
> load to test your RF output and tuning technique. Read your TS 520 manual
> and understand how to tune the rig. After you've got the rig tuned into a
> dummy load, reduce the power output and use your tuner to achieve a low
> SWR
> using your antenna. You can increase your RF output once your antenna is
> properly matched. Changing your operating frequency too far will require a
> touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> relative power output when you speak or whistle into the microphone.

<snip>
>
When I flip the switch to send

>> in cw mode I see the foward and reflected power on the tuners meter but
>> not
>> when I transmit in ssb ?Are there some tests I can do to insure the radio
>> transmits ok ?Any help would be appreciated.
>> Thank You
>> KF7JAV
>>
>> ------------------------------------
>>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com/
=======

30983. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 17:14:21 UTC
From: Merrijoy
Topic: 30974 Message: 30983

I reckon this forum must be for "no questions - no answers - just lecture," eh?

Dave w9ocm

----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 1:05 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

I have seen this same question asked on this forum so many times,that I
really have to wonder WHY SSB theory is NOT TAUGHT in license classes.

EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any, or at
least a very small amount of RF UNLESS the audio stages are modulated with a
voice or tone ! ! !

That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it seems
to be TOTALLY OVERLOOKED !

The amount of power your radio will put out in the CW mode with the key
closed, is the SAME AMOUNT of power that it will put out on voice peaks when
properly modulated.

But the important difference is that the human voice has approximately a 30%
average to peak ratio, so when speaking into a 100 watt radio with a normal
voice, you should see only around 30 watts registering on your meters,
simply due to the fact that they respond only to the AVERAGE POWER, and NOT
to the PEAK POWER.

PLEASE, try to understand this. Trying to squeeze more power out in SSB
only results in more distortion, spurious products and a generally poor
sounding transmission.

73, Jim

----- Original Message -----
From: "Joe Loverti" <ww8x.joe@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, April 25, 2011 12:17 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

> What type of tuner do you have? You should locate a manual for it and
> learn
> how to use it. As suggested, get a dummy load and transmit into the dummy
> load to test your RF output and tuning technique. Read your TS 520 manual
> and understand how to tune the rig. After you've got the rig tuned into a
> dummy load, reduce the power output and use your tuner to achieve a low

> SWR
> using your antenna. You can increase your RF output once your antenna is
> properly matched. Changing your operating frequency too far will require a
> touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> relative power output when you speak or whistle into the microphone.

<snip>
>
When I flip the switch to send
>> in cw mode I see the foward and reflected power on the tuners meter but
>> not
>> when I transmit in ssb ?Are there some tests I can do to insure the radio
>> transmits ok ?Any help would be appreciated.
>> Thank You
>> KF7JAV
>>
>> ------------------------------------
>>

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(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com/
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[Non-text portions of this message have been removed]

30984. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 17:56:41 UTC
From: John Davidson
Topic: 30974 Message: 30984

sing a tuner will not make an unsuitable antenna work on a band it's not designed for. for example; trying to use a two meter antenna work on ten meters is futile. Maybe you can tune the SWR down , you still will get hardly any signal out on the air.
It's not magic, it's Physics.

From: John Becker <jab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 10:46:55 AM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

First question.

Why do you "think" you need the tuner? Antenna not good for the ten meter band?

For what it's worth - I used my 520 on a 3 element 10 meter band and
never had a bit of problem.

John, W0JAB

At 10:26 PM 4/24/2011, you wrote:
>Hello Everyone,
>I have owned my Ts-520 for a couple of months now.I have a tech license so I
>listen alot and have tried to transmit on 10 meters a few times with no
>response.I dont know for sure if it even works.I have a antenna tuner that I
>leave in bypass mode so I can read the forward power,swr,etc.. I have been told
>I dont need the tuner with this type of radio so I go through the tune up
>procedure and transmit without the tuner.I have to try to teach myself and so
>far Im not sure Im doing right.Do I need the tuner?If so what is the proper way
>to use the tuner with this radio?When I flip the switch to send in cw mode I see
>the foward and reflected power on the tuners meter but not when I transmit in
>ssb ?Are there some tests I can do to insure the radio transmits ok ?Any help
>would be appreciated.
>Thank You
>KF7JAV
>
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>
>Yahoo! Groups Links
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>
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[Non-text portions of this message have been removed]

30985. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 17:58:55 UTC
From: Steve Bontempo
Topic: 30974 Message: 30985

Hey Guys,

I just wanted to throw my 2 cents in for what it's worth. I've been using a plain jane TS-520 since October of last year. It's the one that Mike W5RKL helped me troubleshoot a while back. I use a tuner with mine as I only have 1 antenna that needs to be "tuned" to all bands. If you have a perfect match with the antenna you are using for 10M then by all means consider yourself lucky and don't touch it. I cut my antenna for 40 meters and it is a perfect match there, but it varies through out the bands so it is better to be safe than sorry. Hence I keep the tuner inline.

I can get 120 Watts all day long out of this 520.

The way I tune it is in the tune setting as previously mentioned above. While the output power is reduced, I turn the knobs on the tuner until the swr is at minimum. Sure wish I had an autotuner right about now though!

Then I complete the tune up procedure that is outlined in the manual and voila! Just because you see 120 W in CW mode, doesn't mean you will see it while chatting on SSB. The CW tone is 100% duty cycle while your voice generally speaking is not even though my xyl's might be. Digital modes work similar to CW and are also 100% duty cycle for the most part which is why it is important to keep your SWR at a minimum. In my opinion, any reflected power is just bad news..

Steve KU4BY

> Recent Activity:
>
> - New Members<http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmNzBuZmQ5BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDM3NTExMjI-?o=6>
> 13
> - New Photos<http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmZWViMWVuBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDM3NTExMjI->
> 1
>
> Visit Your Group<http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlbWI3MDFoBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMzc1MTEyMg-->
> [image: Yahoo! Groups]<http://groups.yahoo.com/;_ylc=X3oDMTJkZGxtZ3J2BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAzNzUxMTIy>
> Switch to: Text-Only<TS-520_820_530_830-traditional@yahoogroups.com?subject=Change+Delivery+Format:+Traditional>,
> Daily Digest<TS-520_820_530_830-digest@yahoogroups.com?subject=Email+Delivery:+Digest>?

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> of Use <http://docs.yahoo.com/info/terms/>
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[Non-text portions of this message have been removed]

30986. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 17:58:55 UTC
From: n6wk@n6wk.com
Topic: 30974 Message: 30986

Everyone is entitled to ask any questions they have.
We are all here to help each other at any time. Lets keep it that way !
There is no such thing as a Dumb question, except the one you don't ask.

Gordon
N6WK

On 4/25/2011 10:14 AM, Merrijoy wrote:
>
> I reckon this forum must be for "no questions - no answers - just
> lecture," eh?
>
> Dave w9ocm
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>
> I have seen this same question asked on this forum so many times,that I
> really have to wonder WHY SSB theory is NOT TAUGHT in license classes.
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> EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any,
> or at
> least a very small amount of RF UNLESS the audio stages are modulated
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> voice or tone ! ! !
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> That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it
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> simply due to the fact that they respond only to the AVERAGE POWER,

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> PLEASE, try to understand this. Trying to squeeze more power out in SSB
> only results in more distortion, spurious products and a generally poor
> sounding transmission.
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> 73, Jim
>
> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> <snip>
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> When I flip the switch to send
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> >> Thank You
> >> KF7JAV
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> >> ------------------------------------
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30987. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 18:05:26 UTC
From: John Davidson
Topic: 30974 Message: 30987

Does anyone think many technical questions can be answered "YES" or "NO".??
Some explanation of WHY should be offered or there is no point in answering..
Do I need a tuner? Answer yes or no only ?? Nonsense !

----- Original Message ----
From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 1:58:55 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Everyone is entitled to ask any questions they have.
We are all here to help each other at any time. Lets keep it that way !
There is no such thing as a Dumb question, except the one you don't ask.

Gordon
N6WK

On 4/25/2011 10:14 AM, Merrijoy wrote:
>
> I reckon this forum must be for "no questions - no answers - just
> lecture," eh?
>
> Dave w9ocm
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> voice or tone ! ! !
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> But the important difference is that the human voice has approximately
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> average to peak ratio, so when speaking into a 100 watt radio with a
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> voice, you should see only around 30 watts registering on your meters,
> simply due to the fact that they respond only to the AVERAGE POWER,
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> PLEASE, try to understand this. Trying to squeeze more power out in SSB
> only results in more distortion, spurious products and a generally poor
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> 73, Jim
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> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> To: <TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> <snip>
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> >> ------------------------------------
> >>
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Yahoo! Groups Links

30988. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 18:07:13 UTC
From: Joe Loverti
Topic: 30974 Message: 30988

An antenna tuner is helpful when you don't have a perfect antenna match to your transmitter. It certainly isn't necessary... but, it can be very helpful especially on the lower bands where getting a decent match across the entire band is often difficult. An antenna tuner doesn't cure a mismatch or fix a poor antenna, it just makes the transmitter happy. The nice thing about a tuner is the convenience of having a built in SWR/Watt meter. However a dummy load is essential for good operating practice in my opinion.

Joe WW8X

On Mon, Apr 25, 2011 at 1:14 PM, Merrijoy <merrijoy@...> wrote:

>
>
> I reckon this forum must be for "no questions - no answers - just lecture,"
> eh?
>
> Dave w9ocm
>
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> 73, Jim
>
> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

30989. Re: Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 18:43:10 UTC
From: PGA
Topic: 30974 Message: 30989

Dave, that's not fair,

Jim is right in every way.
If you have a licence, there should be at least a understanding of the basic principles of SSB, antenna's and the polarity of a diode.
Nowadays it seems the norm to do nothing to find out for yourself, but ask in a forum as this. There is no problem with that, but most questions are endless repeats that can easely found an answer for by looking in the archives of the forum.

Asking the same simple things again and again can be very tiring for the good-willing experienced helpers like Jim on this and other forums.
Everyone has to start somewhere, and we are ready to help, but you have to understand some of the basics, that can be found in every ARRL handbook that cost maybe 3 dollars in a secondhand shop.

Ducking and running :0)

Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "Merrijoy" <merrijoy@...> wrote:
>
> I reckon this forum must be for "no questions - no answers - just lecture," eh?
>
> Dave w9ocm
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>
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> From: "Joe Loverti" <ww8x.joe@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, April 25, 2011 12:17 PM
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> [Non-text portions of this message have been removed]
>

30990. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 20:11:53 UTC
From: John Becker
Topic: 30974 Message: 30990

At 12:14 PM 4/25/2011, you wrote:
>I reckon this forum must be for "no questions - no answers - just lecture," eh?
>
>Dave w9ocm

I missed the "lecture" I guess.
But I really think some of the things ask in the past have either
been ask before -or- was a question on the FCC test. In either case a
fast and dirty search would show it.

I know that I do get a bit on the nasty side but I really think is because
of putting a lifetime into the radio and TV business as well as a number as
a 2 way radio tech at a radio shop.

Mark Twain said "that only stupid question was the one never asked" ?

John, W0JAB

30991. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:02:18 UTC
From: Jim S
Topic: 30974 Message: 30991

No Dave, it is NOT a lecture, AT ALL. Not unless you happen to be a teacher that doesn't teach that fundamental aspect about SSB radio!

I am just asking a question like anybody else here on this forum. Since SSB theory is SO FUNDAMENTAL to ham radio operation, WHY does the question keep popping up here and on other forums? WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio?

If you have a guilty complex, perhaps it is trying to tell you something.

Over on QRZ.COM, the question comes up, almost weekly, and one of us is only too eager to set the record straight.

Don't go lecturing ME about supplying lectures rather than answers. I believe my post count over there is around 15000, and most of them are related to answering questions.

73, Jim AG3Y

----- Original Message -----
From: Merrijoy
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 1:14 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

I reckon this forum must be for "no questions - no answers - just lecture," eh?

Dave w9ocm

----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 1:05 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

I have seen this same question asked on this forum so many times,that I
really have to wonder WHY SSB theory is NOT TAUGHT in license classes.

EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any, or at
least a very small amount of RF UNLESS the audio stages are modulated with a
voice or tone ! ! !

That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it seems
to be TOTALLY OVERLOOKED !

The amount of power your radio will put out in the CW mode with the key
closed, is the SAME AMOUNT of power that it will put out on voice peaks when
properly modulated.

But the important difference is that the human voice has approximately a 30% average to peak ratio, so when speaking into a 100 watt radio with a normal voice, you should see only around 30 watts registering on your meters, simply due to the fact that they respond only to the AVERAGE POWER, and NOT to the PEAK POWER.

PLEASE, try to understand this. Trying to squeeze more power out in SSB only results in more distortion, spurious products and a generally poor sounding transmission.

73, Jim

----- Original Message -----
From: "Joe Loverti" <ww8x.joe@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, April 25, 2011 12:17 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

> What type of tuner do you have? You should locate a manual for it and
> learn
> how to use it. As suggested, get a dummy load and transmit into the dummy
> load to test your RF output and tuning technique. Read your TS 520 manual
> and understand how to tune the rig. After you've got the rig tuned into a
> dummy load, reduce the power output and use your tuner to achieve a low
> SWR
> using your antenna. You can increase your RF output once your antenna is
> properly matched. Changing your operating frequency too far will require a
> touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> relative power output when you speak or whistle into the microphone.

<snip>
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When I flip the switch to send
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>> when I transmit in ssb ?Are there some tests I can do to insure the radio
>> transmits ok ?Any help would be appreciated.
>> Thank You
>> KF7JAV
>>
>> ------------------------------------
>>

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http://www.pctools.com/
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[Non-text portions of this message have been removed]

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[Non-text portions of this message have been removed]

30992. Re: [TS-520_820_530_830] Re: Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:04:08 UTC
From: Jim S
Topic: 30974 Message: 30992

Thanks so much, Wim! I posted before all my received posts came in ! No need for you to duck and run ! Very 73, Jim AG3Y

----- Original Message -----
From: PGA
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 2:43 PM
Subject: [TS-520_820_530_830] Re: Need Help with kenwood ts-520

Dave, that's not fair,

Jim is right in every way.
If you have a licence, there should be at least a understanding of the basic principles of SSB, antenna's and the polarity of a diode.
Nowadays it seems the norm to do nothing to find out for yourself, but ask in a forum as this. There is no problem with that, but most questions are endless repeats that can easely found an answer for by looking in the archives of the forum.

Asking the same simple things again and again can be very tiring for the good-willing experienced helpers like Jim on this and other forums.
Everyone has to start somewhere, and we are ready to help, but you have to understand some of the basics, that can be found in every ARRL handbook that cost maybe 3 dollars in a secondhand shop.

Ducking and running :0)

Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "Merrijoy" <merrijoy@...> wrote:
>
> I reckon this forum must be for "no questions - no answers - just lecture," eh?
>
> Dave w9ocm
>
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> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>
>
>
> I have seen this same question asked on this forum so many times,that I
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> EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any, or at
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> to be TOTALLY OVERLOOKED !
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> properly modulated.
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> But the important difference is that the human voice has approximately a 30%
> average to peak ratio, so when speaking into a 100 watt radio with a normal
> voice, you should see only around 30 watts registering on your meters,
> simply due to the fact that they respond only to the AVERAGE POWER, and NOT
> to the PEAK POWER.
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> PLEASE, try to understand this. Trying to squeeze more power out in SSB
> only results in more distortion, spurious products and a generally poor
> sounding transmission.
>
> 73, Jim
>
> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> > What type of tuner do you have? You should locate a manual for it and
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> > and understand how to tune the rig. After you've got the rig tuned into a
> > dummy load, reduce the power output and use your tuner to achieve a low
> > SWR
> > using your antenna. You can increase your RF output once your antenna is
> > properly matched. Changing your operating frequency too far will require a
> > touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> > relative power output when you speak or whistle into the microphone.
>
> <snip>
> >
> When I flip the switch to send
> >> in cw mode I see the foward and reflected power on the tuners meter but
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> >> Thank You
> >> KF7JAV
> >>
> >> ------------------------------------

> >>
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> =======
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[Non-text portions of this message have been removed]

30993. Re: [TS-520_820_530_830] Re: Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:01:46 UTC
From: Merrijoy
Topic: 30974 Message: 30993

I don't agree but I'll just lurk.
CU
Dave w9ocm

----- Original Message -----
From: PGA
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 2:43 PM
Subject: [TS-520_820_530_830] Re: Need Help with kenwood ts-520

Dave, that's not fair,

Jim is right in every way.
If you have a licence, there should be at least a understanding of the basic principles of SSB, antenna's and the polarity of a diode.
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Everyone has to start somewhere, and we are ready to help, but you have to understand some of the basics, that can be found in every ARRL handbook that cost maybe 3 dollars in a secondhand shop.

Ducking and running :0)

Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "Merrijoy" <merrijoy@...> wrote:
>
> I reckon this forum must be for "no questions - no answers - just lecture," eh?
>
> Dave w9ocm
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 25, 2011 1:05 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>
>
>
>
> I have seen this same question asked on this forum so many times,that I
> really have to wonder WHY SSB theory is NOT TAUGHT in license classes.
>
> EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any, or at

> least a very small amount of RF UNLESS the audio stages are modulated with a
> voice or tone ! ! !
>
> That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it seems
> to be TOTALLY OVERLOOKED !
>
> The amount of power your radio will put out in the CW mode with the key
> closed, is the SAME AMOUNT of power that it will put out on voice peaks when
> properly modulated.
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> But the important difference is that the human voice has approximately a 30%
> average to peak ratio, so when speaking into a 100 watt radio with a normal
> voice, you should see only around 30 watts registering on your meters,
> simply due to the fact that they respond only to the AVERAGE POWER, and NOT
> to the PEAK POWER.
>
> PLEASE, try to understand this. Trying to squeeze more power out in SSB
> only results in more distortion, spurious products and a generally poor
> sounding transmission.
>
> 73, Jim
>
> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>
> > What type of tuner do you have? You should locate a manual for it and
> > learn
> > how to use it. As suggested, get a dummy load and transmit into the dummy
> > load to test your RF output and tuning technique. Read your TS 520 manual
> > and understand how to tune the rig. After you've got the rig tuned into a
> > dummy load, reduce the power output and use your tuner to achieve a low
> > SWR
> > using your antenna. You can increase your RF output once your antenna is
> > properly matched. Changing your operating frequency too far will require a
> > touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> > relative power output when you speak or whistle into the microphone.
>
> <snip>
> >
> When I flip the switch to send
> >> in cw mode I see the foward and reflected power on the tuners meter but
> >> not
> >> when I transmit in ssb ?Are there some tests I can do to insure the radio
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> >> Thank You
> >> KF7JAV
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30994. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:00:43 UTC
From: Merrijoy
Topic: 30974 Message: 30994

Just in case anyone misunderstood my comment, I was answering
Jim S's statement why folks had to keep asking questions in regard
to SSB.
I joined 'cause I'm thinking I may be in the market for an '820. The
way Jim S. stated his views, it sounded like he doesn't think anyone
should have to ask certain questions.
I've been a ham probably as long as many have (50 years this month)
but I still have questions from time to time.
Dave w9ocm

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, April 25, 2011 1:58 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

> Everyone is entitled to ask any questions they have.
> We are all here to help each other at any time. Lets keep it that way !
> There is no such thing as a Dumb question, except the one you don't ask.
>
> Gordon
> N6WK
>
>
> On 4/25/2011 10:14 AM, Merrijoy wrote:
>>
>> I reckon this forum must be for "no questions - no answers - just
>> lecture," eh?
>>
>> Dave w9ocm
>>
>> ----- Original Message -----
>> From: Jim S
>> To: TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>
>> Sent: Monday, April 25, 2011 1:05 PM
>> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>>
>> I have seen this same question asked on this forum so many times,that I
>> really have to wonder WHY SSB theory is NOT TAUGHT in license classes.
>>
>> EVERYONE OUGHT TO KNOW that an SSB transmitter does NOT put out any,
>> or at
>> least a very small amount of RF UNLESS the audio stages are modulated
>> with a

>> voice or tone ! ! !
>>
>> That is one of the MOST BASIC PRINCIPLES of SSB transmission, and it
>> seems
>> to be TOTALLY OVERLOOKED !
>>
>> The amount of power your radio will put out in the CW mode with the key
>> closed, is the SAME AMOUNT of power that it will put out on voice
>> peaks when
>> properly modulated.
>>
>> But the important difference is that the human voice has approximately
>> a 30%
>> average to peak ratio, so when speaking into a 100 watt radio with a
>> normal
>> voice, you should see only around 30 watts registering on your meters,
>> simply due to the fact that they respond only to the AVERAGE POWER,
>> and NOT
>> to the PEAK POWER.
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>> PLEASE, try to understand this. Trying to squeeze more power out in SSB
>> only results in more distortion, spurious products and a generally poor
>> sounding transmission.
>>
>> 73, Jim
>>
>> ----- Original Message -----
>> From: "Joe Loverti" <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
>> To: <TS-520_820_530_830@yahoogroups.com
>> <mailto:TS-520_820_530_830%40yahoogroups.com>>
>> Sent: Monday, April 25, 2011 12:17 PM
>> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
>>
>> > What type of tuner do you have? You should locate a manual for it and
>> > learn
>> > how to use it. As suggested, get a dummy load and transmit into the
>> dummy
>> > load to test your RF output and tuning technique. Read your TS 520
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>> > and understand how to tune the rig. After you've got the rig tuned
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>> > properly matched. Changing your operating frequency too far will
>> require a
>> > touch-up in both the TS-520 and the antenna tuner. In SSB you should
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>> > relative power output when you speak or whistle into the microphone.

>>
>> <snip>
>> >
>> When I flip the switch to send
>> >> in cw mode I see the foward and reflected power on the tuners meter
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>> >> Thank You
>> >> KF7JAV
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30995. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:10:19 UTC
From: tnnyswy@yahoo.com
Topic: 30974 Message: 30995

>>
However a dummy load is essential for good operating practice in my opinion. <<

Gotta agree with Joe 100%
As a matter of fact, the requirement to take the test for your ticket should be
A) 2 pieces of ID.
B) A Dummy Load.
C) $12.00 for your exam fee.

On further consideration!
B) A Dummy Load and a copy of ARRL Operating Manual.

(((73))) Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: Joe Loverti <ww8x.joe@gmail.com>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 25 Apr 2011 14:07:13
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

An antenna tuner is helpful when you don't have a perfect antenna match to
your transmitter. It certainly isn't necessary... but, it can be very
helpful especially on the lower bands where getting a decent match across
the entire band is often difficult. An antenna tuner doesn't cure a mismatch
or fix a poor antenna, it just makes the transmitter happy. The nice thing
about a tuner is the convenience of having a built in SWR/Watt meter.
However a dummy load is essential for good operating practice in my opinion.

Joe WW8X

On Mon, Apr 25, 2011 at 1:14 PM, Merrijoy <merrijoy@frontier.com> wrote:

>
>
> I reckon this forum must be for "no questions - no answers - just lecture,"
> eh?
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> Dave w9ocm
>
>
> ----- Original Message -----
> From: Jim S
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, April 25, 2011 1:05 PM

> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> From: "Joe Loverti" <ww8x.joe@gmail.com>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, April 25, 2011 12:17 PM
> Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520
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> <snip>
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[Non-text portions of this message have been removed]

Yahoo! Groups Links

30996. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 21:43:08 UTC
From: tnnyswy@yahoo.com
Topic: 30974 Message: 30996

>> Since SSB theory is SO FUNDAMENTAL to ham radio operation, WHY does the question keep popping up here and on other forums? WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio? <<

In support of Jim.
This very same subject matter is being discussed on the 480 Forum at this moment.

Is it that some of us are too Lazy read the BASIC?

(((73))) Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: "Jim S" <jimstan@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 25 Apr 2011 17:02:18
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

No Dave, it is NOT a lecture, AT ALL. Not unless you happen to be a teacher that doesn't teach that fundamental aspect about SSB radio!

I am just asking a question like anybody else here on this forum. Since SSB theory is SO FUNDAMENTAL to ham radio operation, WHY does the question keep popping up here and on other forums? WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio?

If you have a guilty complex, perhaps it is trying to tell you something.

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73, Jim AG3Y

----- Original Message -----
From: Merrijoy
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 1:14 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

I reckon this forum must be for "no questions - no answers - just lecture," eh?

Dave w9ocm

----- Original Message -----
From: Jim S
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, April 25, 2011 1:05 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

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PLEASE, try to understand this. Trying to squeeze more power out in SSB only results in more distortion, spurious products and a generally poor sounding transmission.

73, Jim

----- Original Message -----
From: "Joe Loverti" <ww8x.joe@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, April 25, 2011 12:17 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

> What type of tuner do you have? You should locate a manual for it and
> learn
> how to use it. As suggested, get a dummy load and transmit into the dummy
> load to test your RF output and tuning technique. Read your TS 520 manual
> and understand how to tune the rig. After you've got the rig tuned into a
> dummy load, reduce the power output and use your tuner to achieve a low
> SWR
> using your antenna. You can increase your RF output once your antenna is
> properly matched. Changing your operating frequency too far will require a
> touch-up in both the TS-520 and the antenna tuner. In SSB you should see
> relative power output when you speak or whistle into the microphone.

<snip>
>
When I flip the switch to send
>> in cw mode I see the foward and reflected power on the tuners meter but

>> not
>> when I transmit in ssb ?Are there some tests I can do to insure the radio
>> transmits ok ?Any help would be appreciated.
>> Thank You
>> KF7JAV
>>
>> ------------------------------------
>>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com/
=======

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[Non-text portions of this message have been removed]

30997. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 22:05:26 UTC
From: John Becker
Topic: 30974 Message: 30997

At 04:02 PM 4/25/2011, you wrote:
> WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio?

They don't want to know or learn. Just let me talk.

I dont know how many times I have heard the question
"why do we have to know this stuff"

some just belong on 11 meters for life.

30998. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 22:20:53 UTC
From: jeffrey lord
Topic: 30974 Message: 30998

I agree with STEVE , even though with some ANTENNAS a tuner is excess baggage, it is kinder to the tubes in the set, NO need to place excessive load via antenna mismatch if it can be avoided.

My set up ihas been checked by several of my clubs FULL CALL HAMS , and all agree that the TUNER is better in line than out.

WIth respect to the dummy load, mine is a 40Watt home brew. it will tolorate 100watts, for 30 seconds without heating up too much , a 100watt will be more than enough, especially if only 100 - 120 watts output, and the key is not held down for more than 30 seconds.

What type of Antenna do you have, ?, I do use a doublet with open wire feeder, and the tuner is necessary.

JEFF
VK4FNRS

From: Steve Bontempo <sbontempo@...>
To: TS-520_820_530_830@...m
Sent: Monday, 25 April 2011 9:58 AM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Hey Guys,

I just wanted to throw my 2 cents in for what it's worth. I've been using a plain jane TS-520 since October of last year. It's the one that Mike W5RKL helped me troubleshoot a while back. I use a tuner with mine as I only have 1 antenna that needs to be "tuned" to all bands. If you have a perfect match with the antenna you are using for 10M then by all means consider yourself lucky and don't touch it. I cut my antenna for 40 meters and it is a perfect match there, but it varies through out the bands so it is better to be safe than sorry. Hence I keep the tuner inline.

I can get 120 Watts all day long out of this 520.

The way I tune it is in the tune setting as previously mentioned above. While the output power is reduced, I turn the knobs on the tuner until the swr is at minimum. Sure wish I had an autotuner right about now though!

Then I complete the tune up procedure that is outlined in the manual and voila! Just because you see 120 W in CW mode, doesn't mean you will see it while chatting on SSB. The CW tone is 100% duty cycle while your voice generally speaking is not even though my xyl's might be. Digital modes work similar to CW and are also 100% duty cycle for the most part which is why it is important to keep your SWR at a minimum. In my opinion, any reflected power is just bad news..

Steve KU4BY

> Recent Activity:
>
>   - New Members<http://groups.yahoo.com/group/TS-520_820_530_830/members;_ylc=X3oDMTJmNzBuZmQ5BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZtYnJzBHN0aW1lAzEzMDM3NTExMjI-?o=6>
>   13
>   - New Photos<http://groups.yahoo.com/group/TS-520_820_530_830/spnew;_ylc=X3oDMTJmZWViMWVuBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZwaG90BHN0aW1lAzEzMDM3NTExMjI->
>   1
>
> Visit Your Group<http://groups.yahoo.com/group/TS-520_820_530_830;_ylc=X3oDMTJlbWI3MDFoBF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwN2dGwEc2xrA3ZnaHAEc3RpbWUDMTMwMzc1MTEyMg-->
> [image: Yahoo! Groups]<http://groups.yahoo.com/;_ylc=X3oDMTJkZGxtZ3J2BF9TAzk3MzU5NzE0BGdycElkAzc1MjUwMjEEZ3Jwc3BJZAMxNzA1MDYzMTA4BHNlYwNmdHIEc2xrA2dmcARzdGltZQMxMzAzNzUxMTIy>
> Switch to: Text-Only<TS-520_820_530_830-traditional@yahoogroups.com?subject=Change+Delivery+Format:+Traditional>,
> Daily Digest<TS-520_820_530_830-digest@yahoogroups.com?subject=Email+Delivery:+Digest>•
> Unsubscribe<TS-520_820_530_830-unsubscribe@yahoogroups.com?subject=Unsubscribe>• Terms
> of Use <http://docs.yahoo.com/info/terms/>
>   .
>
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[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

30999. possible to align radio so badly that you get NO ALC movement?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 23:09:45 UTC
From: kd0fds
Topic: 30999 Message: 30999

I adopted a tech special TS-820s and I've been having a great time learning about, from, and with the radio.

I've never really used HF, so I don't have much to compare real world performance to. This makes it hard for me to know if things are "right" or not sometimes, but I'm expanding my experiences with each effort on the radio and the assistance of these forums.
I've read literally hundreds of posts on this forum and found an overload of great information.

Last weekend I "unrepaired" my radio.

Before I started an alignment, I was able to tune up into the dummy load just fine. I was able to receive some stations mostly from the western coast on 20 and 40 meters. Heck, I even had the digital display working correctly for about 30 minutes!

I was working on an alignment, starting with a 25k generator tuning comparing to WWV. I probably messed up right there. I went down the manual and everything seemed to be going well, I was making small adjustments to the tuning coils for peak S meter readings on receive with the tone generator on and the VFO tuned to a comfortably pitched tone. No. I've never actually done this before, but I guess it is like balancing dual (or triple) SU carbs on your Austin Healey, eh?

I got to the alignment of the DRIVE slugs. I used to get ALC meter movement when practicing tuning up the radio (into a 50 ohm dummy load), but now I don't get ALC meter movement and I don't seem to have any RF output either! Ack! What have I done?!

I have idle current, I have 800+ volts with the meter on HV. 3.3 and 9 volt adjusted correctly just fine. 3.3 was about 10% low at one point in my repair process, but it has been running at 3.3 for afew weeks now. The big cathode resistors measure out a little bit high, but probably still in spec.

Is it possible that I have tuned my radio so far out of whack that I can't get any output?! Way to go ME!

The good news is that I'm not wrecking a "good" radio here. I'm bringing one back into service and learning enough to keep it working in the future.

How about a friendly hand from the group to help me figure out what I just learned the hard way about my TS-820s?! Thanks, Stephen

31000. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 23:50:44 UTC
From: Joseph Stiles
Topic: 30974 Message: 31000

John & all,

I have been gone out of town for awhile and have now read the e-mails regarding the "controversy." I started out as a Radioman in the USCG in the mid/late '70's. We very highly trained professionals ...but did not repair...etc. our equipment, that was a job for the ET(electronics technician(s)). I received my first license circa 1977(Novice)..code was not a problem...I graduated Radioman School with a "High Speed" rating of 24WPM receive..24WPM send..w/Vibroplex "BUG." Electronics has never been my strong suite...as I have a learning disability regarding math. This group has been, a GREAT HELP learning(re-learning) some pretty basic principals, and trouble shooting techniques. I have been able...with the help of the group to,... mitigate numerous problems...and actually FIX some stuff. I carried a NOVICE ticket until just a few years ago. I went to a local radio club... 1 month of self-study...and passed the TECH and then the GENERAL in one sitting. I was offered to sit for the EXTRA...but I had to get back to work. From what I remember from the prior exam manuals... when there were ...what...4-5 classes of "tickets".....these tests were pretty EASY...pretty much no "theory" just the "legal stuff." I do agree however that some of the current day operators are just that......operators. Just like modern day TV and such...just "turn em on." no need to really know how they work. I enjoy...the hobby...the people...but please remember...we are not all an electronic genius. I do agree also...that there are WAY TO MANY "operators" that think that turning up the "MIC GAIN" and/or running "full legal limit" when it's not really necessary is the "WAY TO GO." You know the "BIG GUNS!"..which is funny because the FCC rules clearly state..that you shall not use more power than is required to carry out the communication(s)(para-phrased). I have a very modest station...and old 820S & 830S and even older(until january..lost antenna in wind storm) Mini Products HQ-1 2 ele beam...and really never seemed to have significant problems working anything I could hear...even in a pile-up...maybe just took some time. So...in short...it's our fault...big government regulating or un-regulating...more bodies equals more $$$ and more "voices" even though those "voices" may not know what they are talking about...so...more than likely... I just hacked some people off...but thanks for reading this far....Mike(w5rkl) & Gordon(n6wk)...and Ken Kemski(k4eaa) thanks in helping us keepin' these old things hummin'!!!

73's joe wb7uqu

From: John Becker <jab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 3:05:26 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

At 04:02 PM 4/25/2011, you wrote:
> WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio?

They don't want to know or learn. Just let me talk.

I dont know how many times I have heard the question
"why do we have to know this stuff"

some just belong on 11 meters for life.

[Non-text portions of this message have been removed]

31001. Looking for wire diagram to wire a Yaesu MD-1 to a Kenwood TS-520.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-25 23:44:28 UTC
From: k7bmz
Topic: 31001 Message: 31001

Hello Group
I hope that someone might know how to wire this MD-1 desk mic to my TS-520 as the mic was a dear fiend and I will not part with it for a MC50 or 60 so if any of you have information about the mix of a fantastic 520 and the MD-1.

Thanks 73 k7bmz Steven

31002. Re: [TS-520_820_530_830] Looking for wire diagram to wire a Yaesu MD-1 to a Kenwood TS-520.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 00:02:22 UTC
From: Joseph Stiles
Topic: 31001 Message: 31002

Steve,

I am not very knowledgeable on the YAESU units...is ths a 4 pin? If so....you can look at Gordon's(n6wk) web site or K4EAA's web site for the correct connections for the plug.....just make sure to follow the diagram...Kenwoods don't like inappropriate audio grounds!.....

73's joe wb7uqu

From: k7bmz <k7bmz@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 4:44:28 PM
Subject: [TS-520_820_530_830] Looking for wire diagram to wire a Yaesu MD-1 to a Kenwood TS-520.

Hello Group
I hope that someone might know how to wire this MD-1 desk mic to my TS-520 as the mic was a dear fiend and I will not part with it for a MC50 or 60 so if any of you have information about the mix of a fantastic 520 and the MD-1.

Thanks 73 k7bmz Steven

[Non-text portions of this message have been removed]

31003. Re: Looking for wire diagram to wire a Yaesu MD-1 to a Kenwood TS-520.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 00:08:44 UTC
From: w5rkl
Topic: 31001 Message: 31003

The Yaesu MD-1 manual can be downloaded at the following website

http://www.radioamateur.eu/schemi/ACC_microphone/Yaesu_MD-1_user.pdf

The 520 manual can be downloaded at Gordon's website

www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Steve,
>
> I am not very knowledgeable on the YAESU units...is ths a 4 pin? If
> so....you can look at Gordon's(n6wk) web site or K4EAA's web site for the
> correct connections for the plug.....just make sure to follow the
> diagram...Kenwoods don't like inappropriate audio
> grounds!.....
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: k7bmz <k7bmz@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, April 25, 2011 4:44:28 PM
> Subject: [TS-520_820_530_830] Looking for wire diagram to wire a Yaesu MD-1 to a
> Kenwood TS-520.
>
>
> Hello Group
> I hope that someone might know how to wire this MD-1 desk mic to my TS-520 as
> the mic was a dear fiend and I will not part with it for a MC50 or 60 so if any
> of you have information about the mix of a fantastic 520 and the MD-1.
>
> Thanks 73 k7bmz Steven
>
>
>
>

> [Non-text portions of this message have been removed]
>

31004. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 00:12:17 UTC
From: george dumond
Topic: 30974 Message: 31004

Amen
George k0gwd

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 6:50:44 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

John & all,

I have been gone out of town for awhile and have now read the e-mails regarding the "controversy." I started out as a Radioman in the USCG in the mid/late '70's. We very highly trained professionals ...but did not repair...etc. our equipment, that was a job for the ET(electronics technician(s)). I received my first license circa 1977(Novice)..code was not a problem...I graduated Radioman School with a "High Speed" rating of 24WPM receive..24WPM send..w/Vibroplex "BUG." Electronics has never been my strong suite...as I have a learning disability regarding math. This group has been, a GREAT HELP learning(re-learning) some pretty basic principals, and trouble shooting techniques. I have been able...with the help of the group to,... mitigate numerous problems...and actually FIX some stuff. I carried a NOVICE ticket until just a few years ago. I went to a local radio club... 1 month of self-study...and passed the TECH and then the GENERAL in one sitting. I was offered to sit for the EXTRA...but I had to get back to work. From what I remember from the prior exam manuals... when there were ...what...4-5 classes of

"tickets".....these tests were pretty EASY...pretty much no "theory" just the "legal stuff." I do agree however that some of the current day operators are just that......operators. Just like modern day TV and such...just "turn em on." no need to really know how they work. I enjoy...the hobby...the people...but please remember...we are not all an electronic genius. I do agree also...that there are WAY TO MANY "operators" that think that turning up the "MIC GAIN" and/or running "full legal limit" when it's not really necessary is the "WAY TO GO." You know the "BIG GUNS!"..which is funny because the FCC rules clearly state..that you shall not use more power than is required to carry out the communication(s)(para-phrased). I have a very modest station...and old 820S & 830S and even older(until january..lost antenna in wind storm) Mini Products HQ-1 2 ele beam...and really never seemed to have significant problems working anything I could hear...even in a pile-up...maybe just took some time. So...in short...it's our fault...big government regulating or un-regulating...more bodies equals more $$$ and more "voices" even though those "voices" may not know

what they are talking about...so...more than likely... I just hacked some people

off...but thanks for reading this far....Mike(w5rkl) & Gordon(n6wk)...and Ken Kemski(k4eaa) thanks in helping us keepin' these old things hummin'!!!

73's joe wb7uqu

From: John Becker <jab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 3:05:26 PM
Subject: Re: [TS-520_820_530_830] Need Help with kenwood ts-520

At 04:02 PM 4/25/2011, you wrote:
> WHY isn't more emphasis placed on the TECHNICAL BASICS of ham radio?

They don't want to know or learn. Just let me talk.

I dont know how many times I have heard the question
"why do we have to know this stuff"

some just belong on 11 meters for life.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31005. Another new guy with questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 01:03:57 UTC
From: kevin
Topic: 31005 Message: 31005

I have been a ham for less than two years. I started with a 520 because I thought it would be more challenging and fun to learn about the hobby from point of view that was not just plug and play. Others see it differently and more power to them.

One thing that people tend to forget is now intimidating this can all be in the beginning. We all want to be good operators and do not want to make operating errors especially on the air.

Another thing that gets lost on the experienced ham is that this is anew language. Because of that many old hands and many publications use language that they assume everyone knows. This is just simply not true. You may not even know what question to ask. True if you read enough you can usually pick it up from cross referencing many articles but maybe not. There is also a lot of conflicting information. Just ask 5 hams how to tune a Hybrid and an old Tube amp together.

I made the same SSB band mistake when I first started with this radio. I figured it out myself but only from trial and error. Then I felt stupid because the did in fact teach about SSB in class. Who hasn't made this type of error?

I am a bit taken back when someone asks a newbie kind of question and gets jumped on (many groups are WAY worse), but more impressed when 99.9% of the time people here take the time to give detailed explanations that a new ham understands. It helps someone like myself learn and hopefully I will be able to share with others in the future.

Kevin
KD0ILM

31006. The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 01:18:21 UTC
From: Jim Larsen - AL7FS
Topic: 31001 Message: 31006

An Elmer is a person who teaches and nurtures the neophyte amateur radio operator.

From what I have seen, the vast majority of hams on this list just keep helping and helping to answer the questions. I am happy to see that.

The quality of the ham operators of the future will depend upon the day-to-day examples of the old timers of yesterday and today. I would encourage hams to be continue to be more like the true Elmer.

Many thanks to all who follow the path of the Elmer...and of a friend.

73, Jim

Jim Larsen, AL7FS
WA?LPK 1965-1984
Anchorage Alaska
http://www.AL7FS.us/

31007. Kenwood DC-DC Converter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 02:22:22 UTC
From: jsloss
Topic: 31007 Message: 31007

DC Converter allows your TS-520S and -820 to be operated from a DC source. $55 including shipping USPS conus.

,joe k7mks

[Non-text portions of this message have been removed]

31008. Re: [TS-520_820_530_830] Another new guy with questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 03:21:58 UTC
From: Dennis Kippa
Topic: 31005 Message: 31008

Well said Kevin. It has been 49 years but I remember how hard it was
sometimes. Thanks for reminding us!

Dennis n5dpk

On Mon, Apr 25, 2011 at 8:03 PM, kevin <kmx888@...> wrote:

>
>
> I have been a ham for less than two years. I started with a 520 because I
> thought it would be more challenging and fun to learn about the hobby from
> point of view that was not just plug and play. Others see it differently and
> more power to them.
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> the beginning. We all want to be good operators and do not want to make
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> Another thing that gets lost on the experienced ham is that this is anew
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> that they assume everyone knows. This is just simply not true. You may not
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>
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> time people here take the time to give detailed explanations that a new ham
> understands. It helps someone like myself learn and hopefully I will be able
> to share with others in the future.
>
> Kevin
> KD0ILM
>
>
>

[Non-text portions of this message have been removed]

31009. Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 03:24:53 UTC
From: David
Topic: 30408 Message: 31009

I just did a lot of work on my 830S including replacing the HV filter caps, screen and grid resistors, and doing a complete alignment. The owners manual states that the neutralization should be done on 10 meters. I did it 4 times, and every time when moving down to the lower bands I would have the rig run away and blow the 115V fuse.

I used a Tektronik 60 MHZ scope.

I then started the neutralization at lower bands, and finally finished by balancing the low point as viewed on the scope between 20 and 17 meters. The result was full power out on all bands from 160 to 10 meters, and huge drop in current to the finals. Also the maximum power occurred at the final dip point for the first time since I have owned this rig.

On the air signal checks have been positive too.

I guess the Kenwood manuals are not infallible.

David KE6YX

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> I always do my rig final neutralizations on 10 meters. If you do it on 20
> or 15 meters, there's no guarantee that the final tank circuitry will be
> "clean" on 10 meters.
> Pete, wa2cwa
>
> On Sat, 26 Mar 2011 20:21:40 -0000 "yioutta_99" <yioutta_99@...>
> writes:
> > my manual states 28.5
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@>
> > wrote:
> > >
> > > I recall the manual giving 14 MHz as the frequency to do the
> > neutralization
> > > procedure on. Not 10M !
> > > I never got much ALC reading on 10M, even when my TS520 was new.
> > >
> > >
> > >
> > > _99 <yioutta_99@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sat, March 26, 2011 12:01:06 AM
> > > Subject: [TS-520_820_530_830] Re: 520s neutralization
> > >
> > > Â
> > >

> > > UPDATE: I changed the drive and the ALC was working on 10 meters.
> > i got rid of
> > > the length of coax and i could see the signal on the scope FB I
> > was able to tune
> > > down to min. i buttoned up the radio and i am putting out close to
> > 100
> > > watts...BUT I also relaozed i was not at 28.5 MHZ when i
> > neutralized..it was
> > > more like 28.2 MHZ. Is that important? Should i redo it?
> > >
> > > steve
> > > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin
> > <macklinbob@> wrote:
> > > >
> > > > The 4.7M resistor in the RF probe converts the peak reading of
> > the probe to RMS
> > > >displayed by the meter.
> > > >
> > > > Bob Macklin
> > > > K5MYJ
> > > > Seattle, Wa.
>

31010. Re: [TS-520_820_530_830] Another new guy with questions

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 03:46:24 UTC
From: Bryan Sanders
Topic: 31005 Message: 31010

To me using a hybrid radio,Kenwoods, it is like the first time that I got to drive my fathers 69 Chevelle. She may start a little cold in the mornings and she runs best after you let her run for 15 or 20 mins but you never forget the ride. Alas I digress, I have noticed a general consensus in some circles that are brow beating newer hams when a simple(to us) question is asked. Some will say I had to learn from a book, let them learn it that way. Where did the term Elmer come from? It is such a popular word in amateur radio circles. You can ask those hams that don't feel that we have a responsibility to help the newer hams to the hobby, but ask those same people who there Elmer was and they can tell you his name, where he lived and what kind of coffee that he drinks. I find that funny, I mean Elmer usually congers up thoughts of an older ham that showed you the ropes, but yet these same people tell you to look it up for yourself. Ironic isn't it. I believe wholeheartedly in the term pay it forward, and I think many others do to. Lets just hope that those curmudgeons don't ruin the whole crop.

73 de K8BEC,
Bryan

On Mon, Apr 25, 2011 at 10:21 PM, Dennis Kippa <n5dpk1@...> wrote:

> Well said Kevin. It has been 49 years but I remember how hard it was
> sometimes. Thanks for reminding us!
>
> Dennis n5dpk
>
> On Mon, Apr 25, 2011 at 8:03 PM, kevin <kmx888@...> wrote:
>
> >
> >
> > I have been a ham for less than two years. I started with a 520 because I
> > thought it would be more challenging and fun to learn about the hobby
> from
> > point of view that was not just plug and play. Others see it differently
> and
> > more power to them.
> >
> > One thing that people tend to forget is now intimidating this can all be
> in
> > the beginning. We all want to be good operators and do not want to make
> > operating errors especially on the air.
> >
> > Another thing that gets lost on the experienced ham is that this is anew
> > language. Because of that many old hands and many publications use
> language

> > that they assume everyone knows. This is just simply not true. You may
> not
> > even know what question to ask. True if you read enough you can usually
> pick
> > it up from cross referencing many articles but maybe not. There is also a
> > lot of conflicting information. Just ask 5 hams how to tune a Hybrid and
> an
> > old Tube amp together.
> >
> > I made the same SSB band mistake when I first started with this radio. I
> > figured it out myself but only from trial and error. Then I felt stupid
> > because the did in fact teach about SSB in class. Who hasn't made this
> type
> > of error?
> >
> > I am a bit taken back when someone asks a newbie kind of question and
> gets
> > jumped on (many groups are WAY worse), but more impressed when 99.9% of
> the
> > time people here take the time to give detailed explanations that a new
> ham
> > understands. It helps someone like myself learn and hopefully I will be
> able
> > to share with others in the future.
> >
> > Kevin
> > KD0ILM
> >
> >
> >
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>
> [Non-text portions of this message have been removed]
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> ------------------------------------
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> Yahoo! Groups Links
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Bryan

[Non-text portions of this message have been removed]

31011. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 03:54:01 UTC
From: Bob
Topic: 31001 Message: 31011

So true! You got my vote on that! Let's set the good example so that hopefully, the future of ham radio does NOT become another CB radio.
73,
Bob, KD5MHQ

--- On Mon, 4/25/11, Jim Larsen - AL7FS <jimlarsen2002@...> wrote:

An Elmer is a person who teaches and nurtures the neophyte amateur radio

operator.

From what I have seen, the vast majority of hams on this list just keep

helping and helping to answer the questions. I am happy to see that.

The quality of the ham operators of the future will depend upon the

day-to-day examples of the old timers of yesterday and today. I would

encourage hams to be continue to be more like the true Elmer.

Many thanks to all who follow the path of the Elmer...and of a friend.

73, Jim

Jim Larsen, AL7FS

WAØLPK 1965-1984

Anchorage Alaska

http://www.AL7FS.us/

[Non-text portions of this message have been removed]

31012. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 04:39:54 UTC
From: rkeuler
Topic: 30408 Message: 31012

David, congrats on refurbishing the 830S. Another one saved from the scrap heap. I'll be starting on mine soon.
Enjoy!

-73-

Ron WB9BDZ

[Non-text portions of this message have been removed]

31013. RE: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 04:48:01 UTC
From: Rick Hicks
Topic: 31001 Message: 31013

I don’t know how many have noticed, the technician and general tests are fairly easy to pass if you just take the many practice exams over enough. I realized just after I “earned” my general that I didn’t really know jack ____ about the things in which I was supposed to be proficient. I have been asking questions ever since to find out what I would have known if I wasn’t such a good test-taker. Thank you to everyone who has not only answered my questions, but rewarded my desire to learn by not humiliating me when I asked a question.

73,

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
Sent: Monday, April 25, 2011 8:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] The hams of the future

So true! You got my vote on that! Let's set the good example so that hopefully, the future of ham radio does NOT become another CB radio.
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73, Jim

Jim Larsen, AL7FS

WAØLPK 1965-1984

Anchorage Alaska

http://www.AL7FS.us/

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1321 / Virus Database: 1500/3597 - Release Date: 04/25/11

[Non-text portions of this message have been removed]

31014. Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 11:47:14 UTC
From: w5rkl
Topic: 31001 Message: 31014

Rick,

I mean no disrespect but your experience is a prime example where "memorizing questions and answers" by taking practice test over and over again does not teach you or anyone else who uses this method to pass the test, a darn thing!

When I give a response to a question, I typically include supporting statements so the person actually learns why certain steps are to be taken. I have also stated that operators should read the "Circuit Description" section of the manuals plus study the block diagrams. If they have any questions then they should come here and ask for an explanation. There are some who take it upon themselves to actually read and study this information but for the most part, many do not. If you want to learn you need to start learning the basic "first"! You can't learn advance subjects without having a thorough understanding of the basics "FIRST"!

I will be glad to help anyone who wants to learn. If you don't understand something, regardless of what it is, don't sit like a bump on a log, ask for help. Don't expect me or anyone else to take hold your hand and always GIVE YOU THE ANSWERS! You, as a student, have a responsibility to "STUDY" on your own. You will not learn a darn thing if the answer are always given to you because you are too lazy to study! This may seem harsh to some but learning is a "2 way street".

If any of your are interested in learning the basics, I recommend you buy and study the first 2 or 3 chapters in the 50s and 60s versions of the ARRL Handbook. If you can find it, buy and read the first 2 or 3 chapters in the "Basic Radio Course" by John T. Frye. If you think this information is "out dated" and you won't learn a thing by reading it, THINK AGAIN! Basic electronics does NOT go OUT OF DATE because it's the year 2011 and the information in the reference material provide above is dated 1950 or 1960!

Again, if you have any questions, ask for help either here or e-mail me. Don't expect to learn it over night, in a week or month. It takes a lot of studying, reading the chapters over and over again, and asking lots of questions before you will learn it.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
>
> I donâ□□t know how many have noticed, the technician and general tests are fairly easy to pass if you just take the many practice exams over enough. I realized just after I â□□earnedâ□□ my general that I didnâ□□t really know jack ____ about the things in which I was supposed to be proficient. I have been asking questions ever since to find out what I would have known if I wasnâ□□t such a good test-taker. Thank you to everyone who has not only answered my questions, but rewarded my desire to learn by not humiliating me when I asked a question.
>
> 73,

>
> Rick KF7JFU
>
>
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
> Sent: Monday, April 25, 2011 8:54 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] The hams of the future
>
>
>
>
>
> So true! You got my vote on that! Let's set the good example so that hopefully, the future of ham radio does NOT become another CB radio.
> 73,
> Bob, KD5MHQ
>
> --- On Mon, 4/25/11, Jim Larsen - AL7FS <jimlarsen2002@... <mailto:jimlarsen2002%40alaska.net> > wrote:
>
>
>
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>
> Many thanks to all who follow the path of the Elmer...and of a friend.
>
> 73, Jim
>
> Jim Larsen, AL7FS
>
> WAÃ□LPK 1965-1984
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> Anchorage Alaska
>
> http://www.AL7FS.us/

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> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1321 / Virus Database: 1500/3597 - Release Date: 04/25/11
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> [Non-text portions of this message have been removed]
>

31015. Re: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 13:43:39 UTC
From: van wd8aam
Topic: 31001 Message: 31015

Another way to pickup fundamentals of electronics is through the Cleveland Institute of Electronics, CIE using a correspondence course. I took the 'tube based' 1st class FCC license course back in 1969-1970 which was about $470 then.

Here's their URL: http://www.cie-wc.edu/

One thing I found was that they had a simplistic view of electronics, that made learning very fast. I learned mathematics/how to use a slide rule/calculator in four small books. I was amazing since I hated the subject of math in high school, this was SO easy. and the rest of the course went by almost too soon. And yes, I received my FCC license when there WAS such a thing.

The most amazing part was what/and the amount I learned in 1 year, vs what I learned in high school. NO comparison.

CIE is just one institution, there are several out their, google electronics correspondence courses.

Van wd8aam

At 11:47 4/26/2011, you wrote:
>
>
>Rick,
>
>I mean no disrespect but your experience is a
>prime example where "memorizing questions and
>answers" by taking practice test over and over
>again does not teach you or anyone else who uses
>this method to pass the test, a darn thing!
>
>When I give a response to a question, I
>typically include supporting statements so the
>person actually learns why certain steps are to
>be taken. I have also stated that operators
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>the manuals plus study the block diagrams. If
>they have any questions then they should come
>here and ask for an explanation. There are some

>who take it upon themselves to actually read and
>study this information but for the most part,
>many do not. If you want to learn you need to
>start learning the basic "first"! You can't
>learn advance subjects without having a thorough
>understanding of the basics "FIRST"!
>
>I will be glad to help anyone who wants to
>learn. If you don't understand something,
>regardless of what it is, don't sit like a bump
>on a log, ask for help. Don't expect me or
>anyone else to take hold your hand and always
>GIVE YOU THE ANSWERS! You, as a student, have a
>responsibility to "STUDY" on your own. You will
>not learn a darn thing if the answer are always
>given to you because you are too lazy to study!
>This may seem harsh to some but learning is a "2 way street".
>
>If any of your are interested in learning the
>basics, I recommend you buy and study the first
>2 or 3 chapters in the 50s and 60s versions of
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>Again, if you have any questions, ask for help
>either here or e-mail me. Don't expect to learn
>it over night, in a week or month. It takes a
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>over again, and asking lots of questions before you will learn it.
>
>73s
>Mike
>W5RKL
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>"Rick Hicks" <rick@...> wrote:
> >
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> >
> > 73,
> >
> > Rick KF7JFU
> >
> >
> >
> > From:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Bob
> > Sent: Monday, April 25, 2011 8:54 PM
> > To:
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] The hams of the future
> >
> >
> >
> >
> >
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> the good example so that hopefully, the future
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> > 73,
> > Bob, KD5MHQ
> >
> > --- On Mon, 4/25/11, Jim Larsen - AL7FS
> <jimlarsen2002@... <mailto:jimlarsen2002%40alaska.net> > wrote:
> >
> >
> >
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> >
> > operator.
> >
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> >
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> >
> > The quality of the ham operators of the future will depend upon the
> >
> > day-to-day examples of the old timers of yesterday and today. I would
> >

> > encourage hams to be continue to be more like the true Elmer.
> >
> > Many thanks to all who follow the path of the Elmer...and of a friend.
> >
> > 73, Jim
> >
> > Jim Larsen, AL7FS
> >
> > WAÃ□LPK 1965-1984
> >
> > Anchorage Alaska
> >
> > <http://www.AL7FS.us/>http://www.AL7FS.us/
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> > No virus found in this message.
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31016. Re: Need Help with kenwood ts-520 - FAQ needed?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 14:29:47 UTC
From: Bill
Topic: 30974 Message: 31016

Hi,

Some of the responses in this thread are disappointing with eruptions into flames.

Online searches and "archive' searches will now turn up the flames and those are not going to help anybody. It's happened to me, too. I try to search for any kind of information and find a long list of snide remarks that are not the least bit helpful. I finally ask a direct question on an appropriate list and I get told to try searching for the answer myself, usually in quite crude terms. Of course...that reply gets added to the pile, too.

I have also tried to search the archives of various lists and the archives don't seem to be organized very well for actually retrieving information. So lets be fair about that, too. If a question was asked last week maybe the subject line only says "help needed with 520". How is one to know "help with what part"?

I noticed immediately when I joined *THIS* list that the same questions get asked over and over and over again. That's a great sign the list should start building some FAQ pages. For those who don't know, "FAQ" means 'Frequently Asked Questions'. Oh yes...some new people will come along and overlook the FAQ files and ask anyway. They can then be referred to the FAQ pages instead of having to explain over and over and over again. Explaining over and over and over again can wear on ya AND each time you can slip new typos in there. FAQ pages can be refined and typos or mis-statements cleaned up over time. How can we lose?

About those antenna tuners. I like end fed wires on HF. That means one antenna does it all for me. At the root of it any antenna that couples your RF to the ether is a good antenna. Hams use a dipole for a specific band or maybe an array made of dipoles for a band or bands and those just happen to be near 50 ohms for hams who are using solid state radios or later model tube rigs with adjustable "pi" networks at the output. That station form works well and is easy to implement. End fed wires (and other antennas) are just not so simple. They can present a very wide range of impedances to a transmitter and more specifically to the output filter in that transmitter. Solid state rigs have typically fixed output filters and they are designed for 50 ohms. With anything other than 50 ohms you lose the filtering capability whether or not you lose your finals. Later tube rigs - like ours - with adjustable output filters can match into a somewhat wider range but they are *NOT* as robust as the networks built into transmitters in an earlier day. Your Kenwood Hybrid will be just fine with any dipole built for the band you are using it with and no tuner needed.

So to wrap this up...who wants to help build the FAQ files for this list (and perhaps other lists)? I'll help, too.

73,

Bill KU8H

31017. Re: File - MSG_on_approved_membership

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 13:54:19 UTC
From: jpr3232819@aol.com
Topic: 31017 Message: 31017

Than you for letting me join the group. I am a 65 years old who has enjoyed SWL sense I was a boy, the book The Boy Electrician I read a number of times.

My aunt gave me an old 1939 floor model radio that had short wave frequencies on it and that got me hooked. I built a Science Fair Globe Patrol and listen to Hams all over the world with a long wire out my window, and I still have a Globe Patrol. In the 70's I purchased a Realistic DX 160, and still have it.

When I retired I decide to get my Ham ticket and to my surprise, no code and I had my technician license the next week, 4/8/2011 I expect to take my general exam 5/7/2011, wish me luck.

I have purchased a Kenwood TS-520S and a dummy load off ebay waiting for them to arrive, now I'm thinking on what kind of antenna I should use, maybe a G5RV used as an inverted V. Any thought on that would be appreciated also suggestions on a simple and inexpensive support for it.

KK4BKV Jim

[Non-text portions of this message have been removed]

31018. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 14:49:42 UTC
From: Charlie Swenson
Topic: 31001 Message: 31018

Rick, I am with you. I am a test taker and I am thankful for the willingness of all who help without condescension.
Charlie - NØERE

I don’t know how many have noticed, the technician and general tests are fairly easy to pass if you just take the many practice exams over enough. I realized just after I “earned” my general that I didn’t really know jack ____ about the things in which I was supposed to be proficient. I have been asking questions ever since to find out what I would have known if I wasn’t such a good test-taker. Thank you to everyone who has not only answered my questions, but rewarded my desire to learn by not humiliating me when I asked a question.

73,

Rick KF7JFU

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Sent: Monday, April 25, 2011 8:54 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] The hams of the future

So true! You got my vote on that! Let's set the good example so that hopefully, the future of ham radio does NOT become another CB radio.
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WAØLPK 1965-1984

Anchorage Alaska

http://www.AL7FS.us/

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1321 / Virus Database: 1500/3597 - Release Date: 04/25/11

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31019. RE: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 15:00:57 UTC
From: Rick Hicks
Topic: 31001 Message: 31019

No offence taken. It may just be a sign of the times, but the hams that encouraged me to take up the hobby also encouraged me to take the shortest route to the license. Being fully licensed, but incompetent none the less has always bothered me more than it has others and I am the one who has initiated remedial education for myself.

Monitoring such lists as this is a part of that education and I rarely post, but always learn. I learn from the disagreements and repetitions and sometimes from the disinformation and I appreciate the participation of all.

Thanks for the recommendation of a source for foundational information. I will try to secure one.

Rick

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of w5rkl
Sent: Tuesday, April 26, 2011 4:47 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: The hams of the future

Rick,

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W5RKL

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick Hicks" <rick@...> wrote:
>
> I donâ€™t know how many have noticed, the technician and general tests are fairly easy to pass if you just take the many practice exams over enough. I realized just after I â€œearnedâ€□ my general that I didnâ€™t really know jack ____ about the things in which I was supposed to be proficient. I have been asking questions ever since to find out what I would have known if I wasnâ€™t such a good test-taker. Thank you to everyone who has not only answered my questions, but rewarded my desire to learn by not humiliating me when I asked a question.
>
> 73,
>
> Rick KF7JFU
>
>
>
> From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> [mailto:TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Bob
> Sent: Monday, April 25, 2011 8:54 PM
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: Re: [TS-520_820_530_830] The hams of the future
>
>
>
>
>
>
> So true! You got my vote on that! Let's set the good example so that hopefully, the future of ham radio does NOT become another CB radio.
> 73,
> Bob, KD5MHQ
>
> --- On Mon, 4/25/11, Jim Larsen - AL7FS <jimlarsen2002@... <mailto:jimlarsen2002%40alaska.net> > wrote:
>
>
>
> An Elmer is a person who teaches and nurtures the neophyte amateur radio
>
> operator.
>
> From what I have seen, the vast majority of hams on this list just keep
>

> helping and helping to answer the questions. I am happy to see that.
>
> The quality of the ham operators of the future will depend upon the
>
> day-to-day examples of the old timers of yesterday and today. I would
>
> encourage hams to be continue to be more like the true Elmer.
>
> Many thanks to all who follow the path of the Elmer...and of a friend.
>
> 73, Jim
>
> Jim Larsen, AL7FS
>
> WAÃ˜LPK 1965-1984
>
> Anchorage Alaska
>
> http://www.AL7FS.us/
>
> [Non-text portions of this message have been removed]
>
>
>
> _____
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1321 / Virus Database: 1500/3597 - Release Date: 04/25/11
>
>
>
> [Non-text portions of this message have been removed]
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1321 / Virus Database: 1500/3597 - Release Date: 04/25/11

[Non-text portions of this message have been removed]

31020. Re: File - MSG_on_approved_membership

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:07:59 UTC
From: w5rkl
Topic: 31017 Message: 31020

Hello Jim,

Welcome to the Kenwood group.

Since you are new to the hobby and new to the use of a Kenwood TS-520, may I recommend you read the 520 operator's manual thoroughly. If you have any questions about anything you have read, please ask them before you attempt to operate your 520.

Once you have a firm grasp/understanding of what's expected of you when you operate your 520, the operating experience will be much more enjoyable. Quite often new operators tend to jump into operating the equipment without taking the time to read over the operator's manual and ask question about sections they don't understand. This quite often results in frustrated operators who can easily loose interest.

As for what type of antenna you will need, since this is your first time, may I recommend a simple dipole for 40 meters. I say 40 meters because 40 meters is the ideal band for day and night time communications. During the day you can have contacts 500 miles and at night, long distances even DX stations in Europe. In very early morning hours, 4 or 5am, the South Pacific, New Zealand, Australia, and the Far East can be heard. Start simple first then once you have some experience you can upgrade to a more elaborate antenna (G5RV) which will require additional equipment, a tuner. But for now, keep it simple.

If you have a few tall trees far enough apart, about 67 feet for a 1/2 wave 40 meter dipole, you can string the dipole between the 2 trees. Put the dipole as high as possible and allow the feed line, typically 50 ohm coaxial cable, straight down and finally terminating at your operating position. You can also purchase a commercially made shortened dipole, one with coils called traps, that will allow you to use it if you don't have enough space in your back yard.

Attic antennas can be used but there will be some reduction in performance. Attic antennas also can cause RFI (Radio Frequency Interference) to such things as telephones, televisions, stereo surround sounds systems, as well as affecting some touch lamps. It also can contribute to RF distortion when operating sideband voice due to high RF fields if the station is located very close to the antenna itself.

Here are some links to amateur radio stores you might consider visiting while you are waiting for the arrival of your 520.

www.n6wk.com/kenwood/
(download the 520 operating manual(s) here).

http://www.aesham.com/
(online store that carries antennas, cables, transceivers, power supplies, etc)

http://w8ji.com/
(great technical information website. Good site for reading about antennas especially about baluns)

http://www.arrl.org/part-97-amateur-radio
(excellent source for FCC's part 97 Rules and Regulations pertaining to Amateur Radio operation in the United States)

And of course, here for questions about information you don't understand. Don't forget the "files" section here. There is a lot of valuable/information data that you can download and read, free of charge.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jpr3232819@... wrote:
>
> Than you for letting me join the group. I am a 65 years old who has
> enjoyed SWL sense I was a boy, the book The Boy Electrician I read a number of
> times.
>
> My aunt gave me an old 1939 floor model radio that had short wave
> frequencies on it and that got me hooked. I built a Science Fair Globe Patrol and
> listen to Hams all over the world with a long wire out my window, and I
> still have a Globe Patrol. In the 70's I purchased a Realistic DX 160, and
> still have it.
>
> When I retired I decide to get my Ham ticket and to my surprise, no code
> and I had my technician license the next week, 4/8/2011 I expect to take my
> general exam 5/7/2011, wish me luck.
>
> I have purchased a Kenwood TS-520S and a dummy load off ebay waiting for
> them to arrive, now I'm thinking on what kind of antenna I should use, maybe
> a G5RV used as an inverted V. Any thought on that would be appreciated
> also suggestions on a simple and inexpensive support for it.
>
> KK4BKV Jim
>
>
> [Non-text portions of this message have been removed]
>

31021. Re: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:13:21 UTC
From: Glenn Crawford
Topic: 31001 Message: 31021

Van, I will echo what you said about Cleveland Institute of Electronics. Upon graduating from high school in 1958, I realized I needed additional education to be able to make a decent living. I had received a General Class ham ticket in my sophomore year. Those were the days when the General Class exam did not contain all multiple choice questions. You had to actually draw diagrams and write out answers for some of the questions. There were no “question pools” so you could never be sure what questions would be on the test or how they would be asked. However, I had a serious problem. I was very poor. I had raised and sold tomatoes and done simple radio and TV repair to get a Heathkit AT-1 transmitter and a used Hallicrafters S-40B receiver. My test equipment consisted of a cheap VOM and the tube tester at the local drug store. Going to college or trade school was out of the question. I lived in a rural area and scholarships, student loans, and grants were very scarce or nonexistent. I couldn’t even afford correspondence courses that included test equipment or radios. I signed up for two CIE courses: one to train for the Second Class Commercial ticket and later for the First Class. The lessons were well designed and easy to follow. I found them exciting and I couldn’t wait for the next book to arrive. I had taken all the math courses offered by my little high school so I already knew most of the math except for trig. The CIE course provided a sound education in trig, and I became very proficient with the slide rule. All in all I ended up with a good, solid education in electronics and passed the FCC exams with flying colors. My voice had matured when I was about thirteen so I sounded like I was about thirty. With a book from the library and an old Webcor tape recorder I had trained myself to be a decent announcer. With my First Class ticket in hand, I thought my troubles were over, but that was not to be. The local 250-watt AM broadcast station would not hire me because I had no connections and had not been popular in high school. There were no other electronics job possibilities in my hometown. I went to stay with a relative in Dayton while I looked for a job there. It was there I found the downside to correspondence schools. I had no hands-on experience. My diploma from CIE and experience in ham radio was not enough. It seems the people with FCC licenses that got jobs had worked their way up in the field. They had not received their license just out of high school. Even with my knowledge in radio and electronics, I had to settle for minimum wage jobs that had nothing to do with my chosen field. However all was not lost. I was fortunate enough to find an area that was hurting for guys like me. That was something new called computers. Of course CIE did not cover digital electronics, but I was able to take a course at a community college that filled in that gap. With my background from CIE I was off and running. I graduated from the University of Dayton, became a software engineer with an international corporation, taught computer science at a community college, and worked as the operations manager at an FM broadcast station. My diploma from CIE still hangs proudly on my wall.
Glenn, W8EXX

-----Original Message-----
From: "van wd8aam" [vlincoln@frontiernet.net]
Date: 04/26/2011 09:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: The hams of the future

Another way to pickup fundamentals of electronics is through the Cleveland Institute of Electronics, CIE using a correspondence course. I took the 'tube based' 1st class FCC license course back in 1969-1970 which was about $470 then.

Here's their URL: http://www.cie-wc.edu/

One thing I found was that they had a simplistic view of electronics, that made learning very fast. I learned mathematics/how to use a slide rule/calculator in four small books. I was amazing since I hated the subject of math in high school, this was SO easy. and the rest of the course went by almost too soon. And yes, I received my FCC license when there WAS such a thing.

The most amazing part was what/and the amount I learned in 1 year, vs what I learned in high school. NO comparison.

CIE is just one institution, there are several out their, google electronics correspondence courses.

Van wd8aam

[Non-text portions of this message have been removed]

31022. Re: Need Help with kenwood ts-520 - FAQ needed?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:25:35 UTC
From: w5rkl
Topic: 30974 Message: 31022

Hi Bill,

FAQs are good to have but whether Yahoo can support an FAQ file or not is another story. How would the FAQ file be searched? Is there enough storage space available through Yahoo without having to pay a monthly fee? If a monthly fee would be required for additional storage space, how much would the cost be for each member? Would that make the Yahoo Kenwood group require each member to pay a fee to join? If so with the economy the way it is today, how many members would be willing to pay that fee? I don't know the answers to those questions but maybe Gordon and Walt do.

If it is possible to create an FAQ file without any cost involved then I would be glad to contribute to an FAQ file.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bill" <w_r_cromwell@...> wrote:
>
> Hi,
>
> Some of the responses in this thread are disappointing with eruptions into flames.
>
> Online searches and "archive' searches will now turn up the flames and those are not going to help anybody. It's happened to me, too. I try to search for any kind of information and find a long list of snide remarks that are not the least bit helpful. I finally ask a direct question on an appropriate list and I get told to try searching for the answer myself, usually in quite crude terms. Of course...that reply gets added to the pile, too.
>
> I have also tried to search the archives of various lists and the archives don't seem to be organized very well for actually retrieving information. So lets be fair about that, too. If a question was asked last week maybe the subject line only says "help needed with 520". How is one to know "help with what part"?
>
> I noticed immediately when I joined *THIS* list that the same questions get asked over and over and over again. That's a great sign the list should start building some FAQ pages. For those who don't know, "FAQ" means 'Frequently Asked Questions'. Oh yes...some new people will come along and overlook the FAQ files and ask anyway. They can then be referred to the FAQ pages instead of having to explain over and over and over again. Explaining over and over and over again can wear on ya AND each time you can slip new typos in there. FAQ pages can be refined and typos or mis-statements cleaned up over time. How can we lose?
>
> About those antenna tuners. I like end fed wires on HF. That means one antenna does it all for me. At the root of it any antenna that couples your RF to the ether is a good antenna. Hams use a dipole for a specific band or maybe an array made of dipoles for a band

or bands and those just happen to be near 50 ohms for hams who are using solid state radios or later model tube rigs with adjustable "pi" networks at the output. That station form works well and is easy to implement. End fed wires (and other antennas) are just not so simple. They can present a very wide range of impedances to a transmitter and more specifically to the output filter in that transmitter. Solid state rigs have typically fixed output filters and they are designed for 50 ohms. With anything other than 50 ohms you lose the filtering capability whether or not you lose your finals. Later tube rigs - like ours - with adjustable output filters can match into a somewhat wider range but they are *NOT* as robust as the networks built into transmitters in an earlier day. Your Kenwood Hybrid will be just fine with any dipole built for the band you are using it with and no tuner needed.

> So to wrap this up...who wants to help build the FAQ files for this list (and perhaps other lists)? I'll help, too.

> 73,

> Bill KU8H

31023. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:30:27 UTC
From: Bob
Topic: 31001 Message: 31023

Hi Rick, yeah I'm on board with you on that too, couldn't agree more. Sad to say, I have a General that I feel I didn't really 'earn' the right to own, considering what a few of my elmers hams did in the past to get theirs. However, I'm making the best of my General now with the priciples I'd learned about good amateur radio practice and the like. I'm am one of those guilty of 'bashing' the General test, but at least I already had the practical values of amateur radio inculcated in me, along with the electronics knowledge as well. (Actually, the electronics theory was pretty easy for me since I was already a practitioner and hobbiest of it for many years.) So there's my input for what it's worth. Being the fact that the tests are fairly easy pickin's these days should not keep us from learning good values (and hopefully good electronic know-how as well). These user groups are exelent resources for such.

73,

Bob, KD5MHQ

I don’t know how many have noticed, the technician and general tests are fairly easy to pass if you just take the many practice exams over enough. I realized just after I “earned” my general that I didn’t really know jack ____ about the things in which I was supposed to be proficient. I have been asking questions ever since to find out what I would have known if I wasn’t such a good test-taker. Thank you to everyone who has not only answered my questions, but rewarded my desire to learn by not humiliating me when I asked a question.

73,

Rick KF7JFU

31024. Re: possible to align radio so badly that you get NO ALC movement?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:33:07 UTC
From: roberteleazer@rocketmail.com
Topic: 30999 Message: 31024

Stephen:

Anything is possible, especially when you are talking about using a diddle stick inside a radio. I bought a Tech Special TS-820S the year before last, ended up buying a number of spare subassemblies for it, and in the end found out that other than the usual burned out resistors in the power supply section the main thing it needed was adjustments. Other than the burned out resistors the only thing that needed replacement was the SSB filter, which did work Okay on USB but not on LSB.

First, I recommend that you use a better alignment procedure than the one in the original manual, which has some errors and omissions as well as it not quite being written in english. If you provide me with an e-mail address where I can send you a small PDF file you can use the procedure I employed. Unfortunately, I no longer know where it came from on the Internet so I can't direct you there.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> I adopted a tech special TS-820s and I've been having a great time learning about, from, and with the radio.
>
> I've never really used HF, so I don't have much to compare real world performance to. This makes it hard for me to know if things are "right" or not sometimes, but I'm expanding my experiences with each effort on the radio and the assistance of these forums.
> I've read literally hundreds of posts on this forum and found an overload of great information.
>
> Last weekend I "unrepaired" my radio.
>
> Before I started an alignment, I was able to tune up into the dummy load just fine. I was able to receive some stations mostly from the western coast on 20 and 40 meters. Heck, I even had the digital display working correctly for about 30 minutes!
>
> I was working on an alignment, starting with a 25k generator tuning comparing to WWV. I probably messed up right there. I went down the manual and everything seemed to be going well, I was making small adjustments to the tuning coils for peak S meter readings on receive with the tone generator on and the VFO tuned to a comfortably pitched tone. No. I've never actually done this before, but I guess it is like balancing dual (or triple) SU carbs on your Austin Healey, eh?
>
> I got to the alignment of the DRIVE slugs. I used to get ALC meter movement when practicing tuning up the radio (into a 50 ohm dummy load), but now I don't get ALC meter

movement and I don't seem to have any RF output either! Ack! What have I done?!
>
> I have idle current, I have 800+ volts with the meter on HV. 3.3 and 9 volt adjusted correctly just fine. 3.3 was about 10% low at one point in my repair process, but it has been running at 3.3 for afew weeks now. The big cathode resistors measure out a little bit high, but probably still in spec.
>
> Is it possible that I have tuned my radio so far out of whack that I can't get any output?! Way to go ME!
>
> The good news is that I'm not wrecking a "good" radio here. I'm bringing one back into service and learning enough to keep it working in the future.
>
> How about a friendly hand from the group to help me figure out what I just learned the hard way about my TS-820s?! Thanks, Stephen
>

31025. Re: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:43:43 UTC
From: David Rust
Topic: 30999 Message: 31025

Don't ever let a radio intimidate you. Thats the way you learn. If one doesn't work, it for sure you can't hurt it. I own and maintain a repeater, its an education, but it has been trouble free for years now. Once you get things going your way you will feel good about it.
73
Dave W0DLR

[Non-text portions of this message have been removed]

31026. Re: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 16:49:53 UTC
From: van wd8aam
Topic: 31001 Message: 31026

Thanks Glenn, opportunity for education is
everywhere, one just has to look for it.
It helps to have someone elses experience as a
guide as to what can be achieved,
and at what cost/timeframe.

My career (I'm 66 and retired now, (I even got a American Flag
flown over the White House at my retirement)) was this:
High School, photographer for yearbook, Wedding Photographer
College, Mass communications, TV, Student assistant on staff,
Instructed as permitted audio-visual college classes.
Short of credits after 3 years, went into USNavy, air traffic control.
Took CIE electronics 1st Class RadioTelephone License Course.
Joined FAA, as air traffic controller (Look on QRZ.com for wd8aam, bio)
after 7 years, took early computer class in programming (1979).
After 6 years, FAA sent me to school for mainframes, AND continued as
FAA Air Traffic Controller. Retired after 25
more years from FAA ATC/Computer Specialist.
I feel blessed for this Career, and especially,
since in High school, I graduated 236 out of 238 as
a D- (5 year) student, NOT caring but wondering
where I would find myself a job as a
productive citizen of the USA. What would the future hold? I found out.
The USNavy gave me the answer. And the training.

I just want others to know opportunities abound, you MUST seek them out,
and take advantage of the ones you can find. Especially when it relates to
training. Don't give up, the military is a GREAT character builder.
And training in many specialities.
Van
wd8aam

At 16:13 4/26/2011, you wrote:
>Van, I will echo what you said about Cleveland
>Institute of Electronics. Upon graduating from
>high school in 1958, I realized I needed
>additional education to be able to make a decent
>living. I had received a General Class ham
>ticket in my sophomore year. Those were the days
>when the General Class exam did not contain all
>multiple choice questions. You had to actually
>draw diagrams and write out answers for some of
>the questions. There were no â□□question
>poolsâ□□ so you could never be sure what
>questions would be on the test or how they would

>be asked. However, I had a serious problem. I
>was very poor. I had raised and sold tomatoes
>and done simple radio and TV repair to get a
>Heathkit AT-1 transmitter and a used
>Hallicrafters S-40B receiver. My test equipment
>consisted of a cheap VOM and the tube tester at
>the local drug store. Going to college or trade
>school was out of the question. I lived in a
>rural area and scholarships, student loans, and
>grants were very scarce or nonexistent. I
>couldnâ☐☐t even afford correspondence courses
>that included test equipment or radios. I signed
>up for two CIE courses: one to train for the
>Second Class Commercial ticket and later for the
>First Class. The lessons were well designed and
>easy to follow. I found them exciting and I
>couldnâ☐☐t wait for the next book to arrive. I
>had taken all the math courses offered by my
>little high school so I already knew most of the
>math except for trig. The CIE course provided a
>sound education in trig, and I became very
>proficient with the slide rule. All in all I
>ended up with a good, solid education in
>electronics and passed the FCC exams with flying
>colors. My voice had matured when I was about
>thirteen so I sounded like I was about thirty.
>With a book from the library and an old Webcor
>tape recorder I had trained myself to be a
>decent announcer. With my First Class ticket in
>hand, I thought my troubles were over, but that
>was not to be. The local 250-watt AM broadcast
>station would not hire me because I had no
>connections and had not been popular in high
>school. There were no other electronics job
>possibilities in my hometown. I went to stay
>with a relative in Dayton while I looked for a
>job there. It was there I found the downside to
>correspondence schools. I had no hands-on
>experience. My diploma from CIE and experience
>in ham radio was not enough. It seems the people
>with FCC licenses that got jobs had worked their
>way up in the field. They had not received their
>license just out of high school. Even with my
>knowledge in radio and electronics, I had to
>settle for minimum wage jobs that had nothing to
>do with my chosen field. However all was not
>lost. I was fortunate enough to find an area
>that was hurting for guys like me. That was
>something new called computers. Of course CIE

>did not cover digital electronics, but I was
>able to take a course at a community college
>that filled in that gap. With my background from
>CIE I was off and running. I graduated from the
>University of Dayton, became a software engineer
>with an international corporation, taught
>computer science at a community college, and
>worked as the operations manager at an FM
>broadcast station. My diploma from CIE still hangs proudly on my wall.
>Glenn, W8EXX
>
>-----Original Message-----
>From: "van wd8aam"
>[<mailto:vlincoln%40frontiernet.net>vlincoln@...]
>Date: 04/26/2011 09:43 AM
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Subject: Re: [TS-520_820_530_830] Re: The hams of the future
>
>Another way to pickup fundamentals of electronics is through the Cleveland
>Institute of Electronics, CIE using a
>correspondence course. I took the 'tube based'
>1st class FCC license course back in 1969-1970 which was about $470 then.
>
>Here's their URL: <http://www.cie-wc.edu/>http://www.cie-wc.edu/
>
>One thing I found was that they had a simplistic
>view of electronics, that made learning
>very fast. I learned mathematics/how to use a
>slide rule/calculator in four small books.
>I was amazing since I hated the subject of math
>in high school, this was SO easy. and the
>rest of the course went by almost too soon. And
>yes, I received my FCC license when there WAS
>such a thing.
>
>The most amazing part was what/and the amount I
>learned in 1 year, vs what I learned in high
>school. NO comparison.
>
>CIE is just one institution, there are several
>out their, google electronics correspondence
>courses.
>
>Van wd8aam
>
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31027. Re: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 17:01:25 UTC
From: Bob
Topic: 31001 Message: 31027

After reading these entries, I just couldn't resist- I had to say something. To both Glen and Van, I salute you guys! You echo what I'd learned about what I consider as 'real-world electronics' -- much different from what they call 'electronics' today. I learned basic electronics in high school (for free!) what many are now learning for literly THOUSANDS of $$$! I think I learned more then than they are now. I too worked hard for even a 3rd Class licence (with a broadcast endorsement!). Wow, was that really special to me! No, it wasn't a 1st Class, but I had my foot in the door at that point. Today, I work in broadcasting--in TV and radio--with credentials; but it's an entirely different industry now; it's all about networking and computers. Still, my traditional broadcasting experience always seems to come in handy. I can do things in simple, practical ways that other so-called 'engineers' don't seem to understand. I owe a good part of that experience
to the likes of amateur radio. Broadcasting and ham radio used to go hand-in-hand, which is--sad to say--not the case these days. I hold fast to the good values I've learned from folks like Glen and Van. You guys were here LONG before I was even an embryo. (Hi) I think we need more guys like you to rekindle what ham radio should 'look' like, along with all the practical electronics knowledge that it embraces.

73!

Bob, KD5MHQ

--- On Tue, 4/26/11, Glenn Crawford <grc1939@...> wrote:

Van, I will echo what you said about Cleveland Institute of Electronics. Upon graduating from high school in 1958, I realized I needed additional education to be able to make a decent living. I had received a General Class ham ticket in my sophomore year. Those were the days when the General Class exam did not contain all multiple choice questions. You had to actually draw diagrams and write out answers for some of the questions. There were no “question pools” so you could never be sure what questions would be on the test or how they would be asked. However, I had a serious problem. I was very poor. I had raised and sold tomatoes and done simple radio and TV repair to get a Heathkit AT-1 transmitter and a used Hallicrafters S-40B receiver. My test equipment consisted of a cheap VOM and the tube tester at the local drug store. Going to college or trade school was out of the question. I lived in a rural area and scholarships, student loans, and grants
were very scarce or nonexistent. I couldn’t even afford correspondence courses that included test equipment or radios. I signed up for two CIE courses: one to train for the Second Class Commercial ticket and later for the First Class. The lessons were well designed and easy to follow. I found them exciting and I couldn’t wait for the next book to arrive. I had taken all the math courses offered by my little high school so I already knew most of the math except for trig. The CIE course provided a sound education in trig, and I became very proficient with the slide rule. All in all I ended up with a good, solid education in electronics and passed the FCC exams with flying colors. My voice had matured when I was about thirteen so I sounded like I was about thirty. With a book from the library and an old Webcor tape recorder I had trained myself to be a decent announcer. With my First Class ticket in hand, I thought my troubles were over, but that was
not to be. The local 250-watt AM broadcast station would not hire me because I had no

connections and had not been popular in high school. There were no other electronics job possibilities in my hometown. I went to stay with a relative in Dayton while I looked for a job there. It was there I found the downside to correspondence schools. I had no hands-on experience. My diploma from CIE and experience in ham radio was not enough. It seems the people with FCC licenses that got jobs had worked their way up in the field. They had not received their license just out of high school. Even with my knowledge in radio and electronics, I had to settle for minimum wage jobs that had nothing to do with my chosen field. However all was not lost. I was fortunate enough to find an area that was hurting for guys like me. That was something new called computers. Of course CIE did not cover digital electronics, but I was able to take a course at a community college that filled in that gap. With my background from CIE I was off and running. I graduated from the University of Dayton, became a software engineer with an international corporation, taught computer science at a community college, and worked as the operations manager at an FM broadcast station. My diploma from CIE still hangs proudly on my wall.
Glenn, W8EXX

-----Original Message-----
From: "van wd8aam" [vlincoln@...]
Date: 04/26/2011 09:43 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: The hams of the future

Another way to pickup fundamentals of electronics is through the Cleveland Institute of Electronics, CIE using a correspondence course. I took the 'tube based' 1st class FCC license course back in 1969-1970 which was about $470 then.

Here's their URL: http://www.cie-wc.edu/

One thing I found was that they had a simplistic view of electronics, that made learning very fast. I learned mathematics/how to use a slide rule/calculator in four small books. I was amazing since I hated the subject of math in high school, this was SO easy; and the rest of the course went by almost too soon. And yes, I received my FCC license when there WAS such a thing.

The most amazing part was what/and the amount I learned in 1 year, vs what I learned in high school. NO comparison.

CIE is just one institution, there are several out their, google electronics correspondence courses.

Van wd8aam

31028. Re: [TS-520_820_530_830] Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 17:12:44 UTC
From: James Hall
Topic: 31001 Message: 31028

I only wish high schools gave more import to electronics than they do now. I graduated in 2000 so I know I'm the pipsqueak of the group. As a sophomore in highschool I signed up for a communications electronics course, then the teacher retired literally right before the school year began. We had subs who treated it as a study hall for several months until they hired a teacher who turned it into a woodshop class. I kinda wish I had stayed in that now actually, I'm horrendous with working with my hands. The next year I had the opportunity to go to a vocational school in the second half of my day to an Electronics class there. Awesome teacher who retired from the Navy. Knew what he was doing and kept us busy learning. Then the second year I was there.. some stupid kid showed at his house drunk on Halloween, got picked up by the cops and he was forced out of the school, guilt by association. The guy they got to replace him turned the class into a computer class. Put us on the track to take A+ certification test. I just passed that test last year actually, I'm in computers now but I never went to take the test after graduation. That class is still a computer class. The local community college even stopped teaching electronics. I'd have to drive 30-40miles away to one that does.

I've been self-teaching myself for quite awhile. I've had an interest in it since before I got my Ham Radio license actually, and I got that in '94. Just wish people would take it a little more seriously around here. Guess if there's no job prospects around here, no one is going to care to teach it. That just goes along with the lazy work ethics I see these days, where people do just the bare minimum and don't care to put any extra effort.

James
N9XLC
On Tue, Apr 26, 2011 at 1:01 PM, Bob <bob4analog@...> wrote:

>
>
> After reading these entries, I just couldn't resist- I had to say
> something. To both Glen and Van, I salute you guys! You echo what I'd
> learned about what I consider as 'real-world electronics' -- much different
> from what they call 'electronics' today. I learned basic electronics in high
> school (for free!) what many are now learning for literly THOUSANDS of $$$!
> I think I learned more then than they are now. I too worked hard for even a
> 3rd Class licence (with a broadcast endorsement!). Wow, was that really
> special to me! No, it wasn't a 1st Class, but I had my foot in the door at
> that point. Today, I work in broadcasting--in TV and radio--with
> credentials; but it's an entirely different industry now; it's all about
> networking and computers. Still, my traditional broadcasting experience
> always seems to come in handy. I can do things in simple, practical ways
> that other so-called 'engineers' don't seem to understand. I owe a good part
> of that experience

> to the likes of amateur radio. Broadcasting and ham radio used to go
> hand-in-hand, which is--sad to say--not the case these days. I hold fast to
> the good values I've learned from folks like Glen and Van. You guys were
> here LONG before I was even an embryo. (Hi) I think we need more guys like
> you to rekindle what ham radio should 'look' like, along with all the
> practical electronics knowledge that it embraces.
>
> 73!
>
> Bob, KD5MHQ
>
> --- On Tue, 4/26/11, Glenn Crawford <grc1939@...> wrote:
>
> Van, I will echo what you said about Cleveland Institute of Electronics.
> Upon graduating from high school in 1958, I realized I needed additional
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> ham ticket in my sophomore year. Those were the days when the General Class
> exam did not contain all multiple choice questions. You had to actually draw
> diagrams and write out answers for some of the questions. There were no
> ?question pools? so you could never be sure what questions would be on the
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> repair to get a Heathkit AT-1 transmitter and a used Hallicrafters S-40B
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> not to be. The local 250-watt AM broadcast station would not hire me
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> Glenn, W8EXX
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> -----Original Message-----
> From: "van wd8aam" [vlincoln@frontiernet.net]
> Date: 04/26/2011 09:43 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: The hams of the future
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> learned in 1 year, vs what I learned in high
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>
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> courses.
>
> Van wd8aam
>
>
>

[Non-text portions of this message have been removed]

31029. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 17:31:02 UTC
From: van wd8aam
Topic: 31001 Message: 31029

As long as your license imbues the desire to learn
more, you have earned! it AND the right to continue
in your pursuit of the folks who have coveted the
knowledge of electronics. There is a lot to learn, more
than you will EVER learn, but that is the fun of the game.
To continue to learn until your mind goes south.
May that never be.!
Van
wd8aam

At 16:30 4/26/2011, you wrote:
>Hi Rick, yeah I'm on board with you on that too,
>couldn't agree more. Sad to say, I have a
>General that I feel I didn't really 'earn' the
>right to own, considering what a few of my
>elmers hams did in the past to get theirs.
>However, I'm making the best of my General now
>with the priciples I'd learned about good
>amateur radio practice and the like. I'm am one
>of those guilty of 'bashing' the General test,
>but at least I already had the practical values
>of amateur radio inculcated in me, along with
>the electronics knowledge as well. (Actually,
>the electronics theory was pretty easy for me
>since I was already a practitioner and hobbiest
>of it for many years.) So there's my input for
>what it's worth. Being the fact that the tests
>are fairly easy pickin's these days should not
>keep us from learning good values (and hopefully
>good electronic know-how as well). These user
>groups are exelent resources for such.
>
>73,
>
>Bob, KD5MHQ
>-----
>I donâ☐☐t know how many have noticed, the
>technician and general tests are fairly easy to
>pass if you just take the many practice exams
>over enough. I realized just after I
>â☐☐earnedâ☐☐ my general that I didnâ☐☐t really
>know jack ____ about the things in which I was
>supposed to be proficient. I have been asking
>questions ever since to find out what I would

>have known if I wasnâ□□t such a good test-taker.
>Thank you to everyone who has not only answered
>my questions, but rewarded my desire to learn by
>not humiliating me when I asked a question.
>
>73,
>
>Rick KF7JFU
>
>

[Non-text portions of this message have been removed]

31030. Re: [TS-520_820_530_830] Need Help with kenwood ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 17:41:31 UTC
From: Dave & Loraine
Topic: 30974 Message: 31030

Please close this thread.
Dave f4eyk

31031. Re: FAQ needed?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 18:23:42 UTC
From: Bill
Topic: 30974 Message: 31031

Hi Mike,

Thanks for your reply. Just the fact there is any interest is a great first step. Your questions point directly at a few things that have to be overcome and decisions to made. The whole project will fail if any one or two of us "dictate" how things must be done. So let's see if we get a few suggestions about to do a FAQ and how it will be hosted.

73,

Bill KU8H

31032. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 19:04:05 UTC
From: Bob
Topic: 31001 Message: 31032

Thanks Van! I couldn't agree more. I'm sure we'd all like to embrace that philosophy--AND should. A goal for us all to attain and hold in high esteem. Our combined efforts in keeping ham radio alive and all that it stands for and the values and knowledge that are inculcated with it. Salute!

73,

Bob, KD5MHQ

--- On Tue, 4/26/11, van wd8aam <vlincoln@...> wrote:

From: van wd8aam <vlincoln@...>
Subject: Re: [TS-520_820_530_830] The hams of the future
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 26, 2011, 11:31 AM

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>the electronics knowledge as well. (Actually,
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>73,
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>I don’t know how many have noticed, the
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>Rick KF7JFU
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31033. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 19:34:50 UTC
From: R.L. Wurdack
Topic: 31001 Message: 31033

I got my first license in 1958 and I'm still learning.

Dick, N7XKC

Original Message -----
From: "van wd8aam" <vlincoln@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, April 26, 2011 10:31 AM
Subject: Re: [TS-520_820_530_830] The hams of the future

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May that never be.!
Van
wd8aam

31034. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 20:07:23 UTC
From: Bob
Topic: 31001 Message: 31034

Got mine in 2001 and I'm becoming more founded in the skill and 'art' of electronics, as well as in ham radio too. ;-} It's all good!

Bob, KD5MHQ

--- On Tue, 4/26/11, R.L. Wurdack <dickw@...> wrote:

From: R.L. Wurdack <dickw@...>
Subject: Re: [TS-520_820_530_830] The hams of the future
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 26, 2011, 1:34 PM

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Dick, N7XKC

Original Message -----
From: "van wd8aam" <vlincoln@frontiernet.net>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, April 26, 2011 10:31 AM
Subject: Re: [TS-520_820_530_830] The hams of the future

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To continue to learn until your mind goes south.
May that never be.!
Van
wd8aam

[Non-text portions of this message have been removed]

31035. Re: possible to align radio so badly that you get NO ALC movement? <

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 19:59:30 UTC
From: kd0fds
Topic: 30999 Message: 31035

Online volunteer TS-820s tech support team:

Thank you for the encouraging responses.
Thanks for not telling me to "search." (I'm still reading through the 400+ messages you get when you search "no ALC!)

My wife (KD0FDN) laughs with (at?) me and this radio. She saw the old black and white youtube ham radio videos and said, "In 1950, 11 year old Jimmy could make a ham radio out of some shot glasses, a colander, an egg beater, and a chunk of barbed wire; Why can't YOU fix that thing?!"

Yes, we share a distinct sense of humor.

31036. Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 20:32:24 UTC
From: Alan Nicholson (ADHB)
Topic: 31001 Message: 31036

Mike,

I'd just like to add my 2c worth.

I am NOT licenced YET but I am studying. Personally I am finding it challenging as I am somewhat of an Electrical Numpty from the school of "if you can't see it you can't fix it".

Luckily I do have a brother who is a bit of an Electronics whizz and also a bunch of Electronics engineers at work who are patient enough to answer my questions..of which there are many.

Matters are compounded by the fact that I have a lot of other things to do with my time and there are never enough hours in the day. However I like the challenge and I am learning slowly albeit so far without an Elmer. In fact I have never even seen a ham working their rigs!

The mysteries of FM,SSB and the various antennas are still to be fully revealed and "lurking" here has its benefits but there will be more when I am finally licenced and can start transmitting. You can expect a lot of questions then although I'll do my best to nut it out myself first.

However there is another side of the coin. There are many people who love driving but have no idea of the workings of the internal combustion engine beyond what is required for day to day running. They are happy to let an expert tell them what needs to be done and to service their cars as required. I am sure there must be hams who enjoy the simple fact that they are on air and talking to distant places but who not fully understand electronics. They would probably be quite happy to pay to have someone come and tune up their rigs to improve their enjoyment. Similarly there would be many quite happy to buy an antenna and have it erected with little or no understanding of the physics involved.

Personally I am a DIY type of guy but don't mind asking questions if I can't find the answers myself. Sometimes is easier to ask an initial question to be set on the correct track than it is to spend hours wasted on wrong turnings leading to frustration.

At the end of the day however it is not so important what you say as how you say it that determines if the questioner will ever ask again.

73

Alan Nicholson

##
Scanned by MailMarshal - Marshal8e6's comprehensive email content security solution.
Download a free evaluation of MailMarshal at www.marshal.com
##

31037. Re: [TS-520_820_530_830] Re: The puppet show has been cancelled. Ciao.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 21:11:54 UTC
From: John Davidson
Topic: 30408 Message: 31037

I finally found my TS520 manual since I have been moving all my hobby stuff from one end of the house to the other, into a salvaged and remodeled kid's bedroom. Anyway the book sez TEN meters is where yoou do the neutralization !!!! sorry, it has been about 20 years since I did mine !

_____
From:
. The owners manual states that the neutralization should be done on 10 meters. I did it 4 times, and every time when moving down to the lower bands I would have the rig run away and blow the 115V fuse.

>> > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@>
> > wrote:
> > >
> > > I recall the manual giving 14 MHz as the frequency to do the
> > neutralization
> > > procedure on. Not 10M ! * New Photos 1
Visit Your Group

Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use
.

[Non-text portions of this message have been removed]

31038. Re: [] Another new guy with questions Old guy with (some)answers.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 21:22:20 UTC
From: John Davidson
Topic: 31005 Message: 31038

Well...looking at the questions , basic radio you wonder why they don't get
it...
BUT on the other hand, I am totally lost in the dark when the noobies start
spewing the stuff about the various digital modes and computer ham programs that
THEY grew up using !

So when I ask what the futz is a digigoombahboomer mark 7 firmware mod?????
 THEY wonder if I just jumped off the turnip truck ! Everybody who is Anybody in
ham radio should know all about the digigoombahboomer mark 1 thru 6, at least
!!!!
Tube circuits ??? forget that old stuff....
My $0.02 :D

From: Bryan Sanders <flyfshn76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, April 25, 2011 11:46:24 PM
Subject: Re: [TS-520_820_530_830] Another new guy with questions

To me using a hybrid radio,Kenwoods, it is like the first time that I got to
drive my fathers 69 Chevelle. She may start a little cold in the mornings
and she runs best after you let her run for 15 or 20 mins but you never
forget the ride. Alas I digress, I have noticed a general consensus in some
circles that are brow beating newer hams when a simple(to us) question is
asked. Some will say I had to learn from a book, let them learn it that
way.73 de K8BEC,
Bryan

On Mon, Apr 25, 2011 at 10:21 PM, Dennis Kippa <n5dpk1@...> wrote:

> Well said Kevin. It has been 49 years but I remember how hard it was
> sometimes. Thanks for reminding us!
>
> Dennis n5dpk
>
> > time people here take the time to give detailed explanations that a new
> ham
> > understands. It helps someone like myself learn and hopefully I will be
> able
> > to share with others in the future.
>Bryan

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31039. Re: [TS-520_820_530_830] The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 21:46:53 UTC
From: george dumond
Topic: 31001 Message: 31039

Got mine in 1965 and i'm still dumb as a stump as Mike can tell you. The knowledgable ones that can help us dummies sometimes get questions that even they can't answer without more information. When they ask questions we need to answe as quickly as possible with whatever info. they request. then they can give you answers to our problems. most are very gracious with their time and expertese, and all that have helped me were as elated as I when I managed to get something fixed
God Bless
73
George k0gwd

From: Bob <bob4analog@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 26, 2011 3:07:23 PM
Subject: Re: [TS-520_820_530_830] The hams of the future

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Bob, KD5MHQ

--- On Tue, 4/26/11, R.L. Wurdack <dickw@...> wrote:

From: R.L. Wurdack <dickw@nwlink.com>
Subject: Re: [TS-520_820_530_830] The hams of the future
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 26, 2011, 1:34 PM

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To continue to learn until your mind goes south.
May that never be.!
Van

wd8aam

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31040. Re: [TS-520_820_530_830] The hams of the future [OT]

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 22:51:32 UTC
From: R.L. Wurdack
Topic: 31040 Message: 31040

Apologies to the list for the OT reminences.

At some point, you begin to forget more than you know. My first call was KN0KMY. In '58 I took the streetcar to downtown Kansas City to take the Novice test at the FCC office. Worked KC to Los Angeles with 2.5 W 6L6 single tube rig into a dipole tuned with a loop of wire connected to a 1937 Buick Tail light bulb, 579, my finest hour. Right after that some guy (I really wish I knew his name) saw me looking at parts in a radio store and asked me if I wanted some stuff. He gave me 4 wheelbarrow loads of WWII surplus, (it took 4 trips with dad's wheelbarrow to get it all from his station wagon to my shack, dad's basement) and I haven't been quite right since. Talk about an Elmer, and I don't even know his name.

D.

----- Original Message -----
.From: "george dumond" <dums2@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, April 26, 2011 2:46 PM
Subject: Re: [TS-520_820_530_830] The hams of the future

Got mine in 1965 and i'm still dumb as a stump as Mike can tell you. The knowledgable ones that can help us dummies sometimes get questions that even they can't answer without more information. When they ask questions we need to
answe as quickly as possible with whatever info. they request. then they can give you answers to our problems. most are very gracious with their time and expertese, and all that have helped me were as elated as I when I managed to get
something fixed
God Bless
73
George k0gwd

_____
From: Bob <bob4analog@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, April 26, 2011 3:07:23 PM
Subject: Re: [TS-520_820_530_830] The hams of the future

Got mine in 2001 and I'm becoming more founded in the skill and 'art' of electronics, as well as in ham radio too. ;-} It's all good!

Bob, KD5MHQ

--- On Tue, 4/26/11, R.L. Wurdack <dickw@...> wrote:

From: R.L. Wurdack <dickw@...>
Subject: Re: [TS-520_820_530_830] The hams of the future
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, April 26, 2011, 1:34 PM

I got my first license in 1958 and I'm still learning.

Dick, N7XKC

Original Message -----
From: "van wd8aam" <vlincoln@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, April 26, 2011 10:31 AM
Subject: Re: [TS-520_820_530_830] The hams of the future

As long as your license imbues the desire to learn
more, you have earned! it AND the right to continue
in your pursuit of the folks who have coveted the
knowledge of electronics. There is a lot to learn, more
than you will EVER learn, but that is the fun of the game.
To continue to learn until your mind goes south.
May that never be.!
Van
wd8aam

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[Non-text portions of this message have been removed]

Yahoo! Groups Links

31041. Re: possible to align radio so badly that you get NO ALC movement? <

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 22:58:44 UTC
From: roberteleazer@rocketmail.com
Topic: 30999 Message: 31041

Stephen:

When I got my TS-820S it had no ALC indication. I asked the famous Ken about that and he recommended I start with the transmitter level diagram. That was an entirely logical response - and was a complete waste of time other than getting me familiar with some aspects of the radio.

I went through all of the Kenwood Service Bulletin info, one at a time, and found some things that way. As it turned out, one of the IF connectors was in the wrong position (not mentioned in the Service manual but instead in the Operating Manual), the usual resistors in the HV power supply were burned out, numerous transmitter adjustments were out of whack, the Carrier Frequencies were off calibration, the VFO tuning cap was shorting out and the SSB filter only worked on USB. And that's just the stuff that came as is and I did not break myself while trying to fix all the other problems or that simply failed spontaneously during the troubleshooting process.

And before the TS-820S I had already bought a TS-520 that would not transmit and fixed it! I thought the TS-820S would be just as easy.

The people here were a big help when I got stumped or needed something explained more clearly than the manual.

P.S. 11 year old Jimmy had it easy in 1950. I recently fixed three different 1960 vintage National receivers, one of which required a redesign of a local oscillator combined with an new alignment procedure that was unique for that set - and that was all a snap compared to the TS-820S.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Online volunteer TS-820s tech support team:
>
> Thank you for the encouraging responses.
> Thanks for not telling me to "search." (I'm still reading through the 400+ messages you get when you search "no ALC!)
>
> My wife (KD0FDN) laughs with (at?) me and this radio. She saw the old black and white youtube ham radio videos and said, "In 1950, 11 year old Jimmy could make a ham radio out of some shot glasses, a colander, an egg beater, and a chunk of barbed wire; Why can't YOU fix that thing?!"
>
> Yes, we share a distinct sense of humor.
>

31042. Re: The hams of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-26 23:12:25 UTC
From: Bernie
Topic: 31001 Message: 31042

Amen to that. I started studying the ARRL Handbook with a 1948 version when I was 10 years old. The book was given to my by a friend of my dad's. I studied it to the point that the pages were all lose and several times I had to put them back into order. I studied enough to not only get my novice ticket but I also designed and built my own rcvr and xmtr. I WORKED. No one can ever quit learning by studying. That ARRL Handbook was given to me 61 years ago. I have never regretted studying it.

Bernie - W8NBC

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Rick,
>
> I mean no disrespect but your experience is a prime example where "memorizing questions and answers" by taking practice test over and over again does not teach you or anyone else who uses this method to pass the test, a darn thing!
>
> When I give a response to a question, I typically include supporting statements so the person actually learns why certain steps are to be taken. I have also stated that operators should read the "Circuit Description" section of the manuals plus study the block diagrams. If they have any questions then they should come here and ask for an explanation. There are some who take it upon themselves to actually read and study this information but for the most part, many do not. If you want to learn you need to start learning the basic "first"! You can't learn advance subjects without having a thorough understanding of the basics "FIRST"!
>
> I will be glad to help anyone who wants to learn. If you don't understand something, regardless of what it is, don't sit like a bump on a log, ask for help. Don't expect me or anyone else to take hold your hand and always GIVE YOU THE ANSWERS! You, as a student, have a responsibility to "STUDY" on your own. You will not learn a darn thing if the answer are always given to you because you are too lazy to study! This may seem harsh to some but learning is a "2 way street".
>
> If any of your are interested in learning the basics, I recommend you buy and study the first 2 or 3 chapters in the 50s and 60s versions of the ARRL Handbook. If you can find it, buy and read the first 2 or 3 chapters in the "Basic Radio Course" by John T. Frye. If you think this information is "out dated" and you won't learn a thing by reading it, THINK AGAIN! Basic electronics does NOT go OUT OF DATE because it's the year 2011 and the information in the reference material provide above is dated 1950 or 1960!
>
> Again, if you have any questions, ask for help either here or e-mail me. Don't expect to learn it over night, in a week or month. It takes a lot of studying, reading the chapters over and over again, and asking lots of questions before you will learn it.
>
> 73s

> Mike
> W5RKL

31043. Re: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? <

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 00:31:11 UTC
From: Jim S
Topic: 30999 Message: 31043

But outside of that, there was NOTHING WRONG with it ! ! !

Jim AG3Y !
----- Original Message -----
From: roberteleazer@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, April 26, 2011 6:58 PM
Subject: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? <<thank you>

Stephen:

As it turned out, one of the IF connectors was in the wrong position (not mentioned in the Service manual but instead in the Operating Manual), the usual resistors in the HV power supply were burned out, numerous transmitter adjustments were out of whack, the Carrier Frequencies were off calibration, the VFO tuning cap was shorting out and the SSB filter only worked on USB. And that's just the stuff that came as is and I did not break myself while trying to fix all the other problems or that simply failed spontaneously during the troubleshooting process.

Robert
WB5WSV

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17360)
http://www.pctools.com/
=======

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31044. Re: [TS-520_820_530_830] The hams of the future [OT]

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 02:35:23 UTC
From: van wd8aam
Topic: 31040 Message: 31044

This story is very similar to mine, and I started
daydreaming just reading it. Thank heavens for Elmers!
van
wd8aam
At 22:51 4/26/2011, you wrote:
>
>
>Apologies to the list for the OT reminences.
>
>At some point, you begin to forget more than you know. My first call was
>KN0KMY. In '58 I took the streetcar to downtown Kansas City to take the
>Novice test at the FCC office. Worked KC to Los Angeles with 2.5 W 6L6
>single tube rig into a dipole tuned with a loop of wire connected to a 1937
>Buick Tail light bulb, 579, my finest hour. Right after that some guy (I
>really wish I knew his name) saw me looking at parts in a radio store and
>asked me if I wanted some stuff. He gave me 4 wheelbarrow loads of WWII
>surplus, (it took 4 trips with dad's wheelbarrow to get it all from his
>station wagon to my shack, dad's basement) and I haven't been quite right
>since. Talk about an Elmer, and I don't even know his name.
>
>D.
>
>----- Original Message -----
>.From: "george dumond" <<mailto:dums2%40yahoo.com>dums2@...>
>To:
><<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>Sent: Tuesday, April 26, 2011 2:46 PM
>Subject: Re: [TS-520_820_530_830] The hams of the future
>
>Got mine in 1965 and i'm still dumb as a stump as Mike can tell you. The
>knowledgable ones that can help us dummies sometimes get questions that even
>they can't answer without more information. When they ask questions we need
>to
>answe as quickly as possible with whatever info. they request. then they can
>give you answers to our problems. most are very gracious with their time and
>expertese, and all that have helped me were as elated as I when I managed to
>get
>something fixed
>God Bless
>73
>George k0gwd
>
>_________________________________
>From: Bob <<mailto:bob4analog%40yahoo.com>bob4analog@...>
>To:

><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Sent: Tue, April 26, 2011 3:07:23 PM
>Subject: Re: [TS-520_820_530_830] The hams of the future
>
>Got mine in 2001 and I'm becoming more founded in the skill and 'art' of
>electronics, as well as in ham radio too. ;-} It's all good!
>
>Bob, KD5MHQ
>
>--- On Tue, 4/26/11, R.L. Wurdack
><<mailto:dickw%40nwlink.com>dickw@nwlink.com> wrote:
>
>From: R.L. Wurdack <<mailto:dickw%40nwlink.com>dickw@nwlink.com>
>Subject: Re: [TS-520_820_530_830] The hams of the future
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Date: Tuesday, April 26, 2011, 1:34 PM
>
>I got my first license in 1958 and I'm still learning.
>
>Dick, N7XKC
>
>Original Message -----
>From: "van wd8aam"
><<mailto:vlincoln%40frontiernet.net>vlincoln@frontiernet.net>
>To:
><<mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com>
>Sent: Tuesday, April 26, 2011 10:31 AM
>Subject: Re: [TS-520_820_530_830] The hams of the future
>
>As long as your license imbues the desire to learn
>more, you have earned! it AND the right to continue
>in your pursuit of the folks who have coveted the
>knowledge of electronics. There is a lot to learn, more
>than you will EVER learn, but that is the fun of the game.
>To continue to learn until your mind goes south.
>May that never be.!
>Van
>wd8aam
>
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>[Non-text portions of this message have been removed]
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>
>Yahoo! Groups Links
>
>

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31045. Re: possible to align radio so badly that you get NO ALC movement? < >

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 06:14:53 UTC
From: kd0fds
Topic: 30999 Message: 31045

Sure. There are probably 15 things wrong with my TS-820s, but I actually found and corrected my "no ALC, No TX output" problem!

So I started reading down the tune up process again, and was staring at CAR1 looking for test point #5. What is this? A broken wire at J27? I removed the filter card from the chassis and looked more closely. yeah. That wire probably should go to something. I don't think these ham radio things have too many "race parts" in them. ("Oh you don't need that left-over engine part after a rebuild unless you plan on RACING this engine.")

So out to the garage where the welder is kept...and I find my soldering iron. Zip. Wire stuck back in the hole.

Back into the basement computer lounge where the XYL is watching dancing with the stars and I put the old goat (the radio, not the XYL) back together. check to make sure dummy load is connected...tuning seems weird. Oh yeah, flip that slide switch from tune to norm. on to the next.
Switch to USB and IP on the meter...Idle current....check...Switch down to ALC and TUNE..flip the SEND switch. I think I saw the needle move...good sign. Do it again with hand on drive control...and WHAM! she tunes! Tuned up all the way and I see my 90 watts on CW again.

Only one "new" problem. The meter pegs on RF when I tune up all the way. I think I've read about that... Maybe tomorrow I'll check that out and get back to stable 1.

What was broken?
When you look at the board, the nicely labeled connector pin that goes to the solder pad with the broken wire is the TIF pin. Makes Sense! The RIF was OK and so was receive. , but the transmit couldn't work with no TIF wire hooked up to it. The wire was solid strand and shielded. The solid wire is pretty brittle and must have been bumped one too many times.

In summary: Thanks team. You didn't provide me with specifics to find this problem, you just kept me motivated. It turns out these things are a lot like the Austin Healey. "Always blame the mechanicals before you blame the electricals!"

I still need a frequency counter and probably a signal injector to get this bucket tuned enough where I would trust it on the air, but I did get a used oscilloscope tonight.

Not bad for a lawyer's son, eh? Keep smiling and thanks for the help!

31046. The Elmers of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 16:06:16 UTC
From: kevin
Topic: 31046 Message: 31046

Given the profound changes in how we interact socially I am guessing that people on boards like this are the Elmers of the future (or today). While there may be a lot of criticize about todays social networking there is a lot about it that is wonderful. For example I doubt that you could get so many people who are interested in Kenwood Hybrids from all over the world and so many who are so knowledgeable in a room together every day without social networking.

Like Heathkit or Collins stuff? Easy to find experts on the net as well. The internet has become a wonderful tool for those of us seeking to learn from others.

A lot is lost by not being face to face, but the benefits are also enormous.

Kevin
KD0ILM

Hope I can find an old ARRL Handbook as suggested by Mike at the Hamvention. Any of the rest of you coming?

31047. Re: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? < >

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 17:00:05 UTC
From: Jim S
Topic: 30999 Message: 31047

Only one "new" problem. The meter pegs on RF when I tune up all the way. I think I've read about that... Maybe tomorrow I'll check that out and get back to stable 1.

That's an easy one IIRC. Isn't there a pot that controls the amount of meter deflection in the RF OUT position? I believe that is just a relative measurement.

73, and continued success! Jim AG3Y

----- Original Message -----
From: kd0fds
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, April 27, 2011 2:14 AM
Subject: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? <<SOLUTION>>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17390)
http://www.pctools.com/
=======

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31048. Re: possible to align radio so badly that you get NO ALC movement? < >

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 17:57:00 UTC
From: w5rkl
Topic: 30999 Message: 31048

Jim,

You're right, an open "TIF" connection will cause complete loss of RF being fed to the RF Unit from the IF unit.

The receiver will work fine if the "TIF" wire is broken because the "TIF" connection is for "transmit only" and has nothing to do with receive.

Good job and I'm glad you found the problem.

As for the RF meter peg full scale, the RF VOLT pot is adjusted too high. Rotate it fully CCW and key the transmitter at full output into a dummy load and adjust the RF VOLT pot for a 3/4 scale indication. The RF VOLT pot and meter indication are nothing more than "relative" RF output indication, nothing more. The RF output is applied to a resistive voltage divider and diode circuit. The diode rectifies the RF into a DC voltage and that voltage is fed to the resistive voltage divider and the RF VOLT pot which the output is taken from the RF VOLT pot's wiper and applied to the RF meter switch setting. That's all there is to the RF meter switch setting, no watt meter etc, just plain old "relative" power indication.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> Sure. There are probably 15 things wrong with my TS-820s, but I actually found and corrected my "no ALC, No TX output" problem!
>
> So I started reading down the tune up process again, and was staring at CAR1 looking for test point #5. What is this? A broken wire at J27? I removed the filter card from the chassis and looked more closely. yeah. That wire probably should go to something. I don't think these ham radio things have too many "race parts" in them. ("Oh you don't need that left-over engine part after a rebuild unless you plan on RACING this engine.")
>
> So out to the garage where the welder is kept...and I find my soldering iron. Zip. Wire stuck back in the hole.
>
> Back into the basement computer lounge where the XYL is watching dancing with the stars and I put the old goat (the radio, not the XYL) back together. check to make sure dummy load is connected...tuning seems weird. Oh yeah, flip that slide switch from tune to norm. on to the next.
> Switch to USB and IP on the meter...Idle current....check...Switch down to ALC and TUNE..flip the SEND switch. I think I saw the needle move...good sign. Do it again with hand on drive control...and WHAM! she tunes! Tuned up all the way and I see my 90 watts on CW again.

>
> Only one "new" problem. The meter pegs on RF when I tune up all the way. I think I've read about that... Maybe tomorrow I'll check that out and get back to stable 1.
>
> What was broken?
> When you look at the board, the nicely labeled connector pin that goes to the solder pad with the broken wire is the TIF pin. Makes Sense! The RIF was OK and so was receive. , but the transmit couldn't work with no TIF wire hooked up to it. The wire was solid strand and shielded. The solid wire is pretty brittle and must have been bumped one too many times.
>
> In summary: Thanks team. You didn't provide me with specifics to find this problem, you just kept me motivated. It turns out these things are a lot like the Austin Healey. "Always blame the mechanicals before you blame the electricals!"
>
> I still need a frequency counter and probably a signal injector to get this bucket tuned enough where I would trust it on the air, but I did get a used oscilloscope tonight.
>
> Not bad for a lawyer's son, eh? Keep smiling and thanks for the help!
>

31049. Re: [TS-520_820_530_830] The Elmers of the future

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 19:05:20 UTC
From: Bob
Topic: 31046 Message: 31049

I agree with that too. Social networking is great; just need to use it constructively (like we do). SN (such as this users group) is indeed a wonderful tool. It's been a very useful resource for me. I think for us (and no doubt others), it helps to inform about what amateur radio is about. Hopefully others who have no idea about ham radio will be informed by these resources... My thoughts anyway.

Bob, KD5MHQ

--- On Wed, 4/27/11, kevin <kmx888@...> wrote:

Given the profound changes in how we interact socially I am guessing that people on boards like this are the Elmers of the future (or today). While there may be a lot of criticize about todays social networking there is a lot about it that is wonderful. For example I doubt that you could get so many people who are interested in Kenwood Hybrids from all over the world and so many who are so knowledgeable in a room together every day without social networking.

Like Heathkit or Collins stuff? Easy to find experts on the net as well. The internet has become a wonderful tool for those of us seeking to learn from others.

A lot is lost by not being face to face, but the benefits are also enormous.

Kevin
KD0ILM

Hope I can find an old ARRL Handbook as suggested by Mike at the Hamvention. Any of the rest of you coming?

[Non-text portions of this message have been removed]

31050. Re: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? < >

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-27 23:53:15 UTC
From: John Davidson
Topic: 30999 Message: 31050

Good work. sometimes you just need a sharp eye to find something that doesn't look right in the circuits.
Mt TS520 has an adjustment on the left side of the housing along weith the VOX adjustment that varies the Relative RF meter sensitivity. I never had much use for this meter reading since I always have an RF wattmeter connected to the radio.
I prefer to monitor the Ip meter setting and reflected power on the external meter when I operate.
 That way I know to stop sending when a tree falls on my antenna

---
From: kd0fds <kd0fds@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, April 27, 2011 2:14:53 AM
Subject: [TS-520_820_530_830] Re: possible to align radio so badly that you get NO ALC movement? <<SOLUTION>>

Sure. There are probably 15 things wrong with my TS-820s, but I actually found and corrected my "no ALC, No TX output" problem!
and I see my 90 watts on CW again.

Only one "new" problem. The meter pegs on RF when I tune up all the way. I think I've read about that... Maybe tomorrow I'll check that out and get back to stable 1.

What

[Non-text portions of this message have been removed]

31051. 20 m does not display on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-28 01:31:03 UTC
From: scott.schillereff
Topic: 31051 Message: 31051

Hello,
I am a new member and this is my first post. I have a TS-820S that does not display frequencies on the digital display for the 20m band. All other bands fine; but when I change the band switch to 20m, the display just goes blank.

I had been having trouble with erratic digital display on all bands(aside from the blanked 20m), so I did some web research and learned about the fix of cleaning the varnish off the corner screw mounts of the circuit boards in the Counting Assembly Unit. I did this, and presto, the display on all bands was perfect - except 20m still blank!

Any ideas of cause and way to correct the lack of display on 20m?

Thanks and 73s
Scott

31052. Re: [TS-520_820_530_830] 20 m does not display on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-28 03:54:25 UTC
From: Joseph Stiles
Topic: 31051 Message: 31052

Scott,

Welcome aboard. Does the rig seem receive on 20M? I would recommend cleaning the band switch wafers on the RF board...and...the other in the final cage area. Make sure rig is turned OFF AND UNPLUGGED...let it sit for a bit...and check the HV capacitors for voltage before rooting around in/near the final cage area...there's about 900 volts lurking there. DEOXIT works well...along with some "canned air." This a good place to start...and sure can't hurt. There may be other problems...but try this simple thing first..... then let us know.....good luck.....

73's joe wb7uqu

From: scott.schillereff <scott.schillereff@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, April 27, 2011 6:31:03 PM
Subject: [TS-520_820_530_830] 20 m does not display on TS-820S

Hello,
I am a new member and this is my first post. I have a TS-820S that does not display frequencies on the digital display for the 20m band. All other bands fine; but when I change the band switch to 20m, the display just goes blank.

I had been having trouble with erratic digital display on all bands(aside from the blanked 20m), so I did some web research and learned about the fix of cleaning the varnish off the corner screw mounts of the circuit boards in the Counting Assembly Unit. I did this, and presto, the display on all bands was perfect - except 20m still blank!

Any ideas of cause and way to correct the lack of display on 20m?

Thanks and 73s
Scott

[Non-text portions of this message have been removed]

31053. Re: 20 m does not display on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-28 11:55:23 UTC
From: w5rkl
Topic: 31051 Message: 31053

Scott,

You might check the 20 meter VCO adjustment on page 45 section 2-2 "Voltage adjust VCO" and page 52 section 5-2-1 "Adjustment of VCO Coil" in the TS-820 service manual. It's possible the 20 meter VCO signal level may not be sufficient for the Display Unit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "scott.schillereff" <scott.schillereff@...> wrote:
>
> Hello,
> I am a new member and this is my first post. I have a TS-820S that does not display frequencies on the digital display for the 20m band. All other bands fine; but when I change the band switch to 20m, the display just goes blank.
>
> I had been having trouble with erratic digital display on all bands(aside from the blanked 20m), so I did some web research and learned about the fix of cleaning the varnish off the corner screw mounts of the circuit boards in the Counting Assembly Unit. I did this, and presto, the display on all bands was perfect - except 20m still blank!
>
> Any ideas of cause and way to correct the lack of display on 20m?
>
> Thanks and 73s
> Scott
>

31054. SSB signal quality

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-28 19:51:12 UTC
From: Lou Blasco
Topic: 31051 Message: 31054

Hi All,

Here's a couple of pages discussing SSB signal quality which might be of interest. These are not exactly step by step guides but they do give a good insight into the reason why we hear both really good and really poor SSB signals on air.

http://www.ifwtech.co.uk/g3sek/cleansig/no-splat.htm

http://members.chello.nl/~w.hofman/pa8w/audio.htm

Lou
VK3ALB

31055. TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 01:34:30 UTC
From: John
Topic: 31055 Message: 31055

A member of our local ARC recently became a silent key. His widow has contacted our club to dispose of his equipment at Dayton this year. He had a TS830s; however the power cable can not be located.
Because we want to test the rig before taking it to Dayton, we need a wiring diagram in order to make up a new line cord. One of our members has the necessary 12 pin connector so all we need is the diagram.
If someone could assist me with the information or a website showing it, it would be appreciated not only by our club, but mostly by the SK's widow.
Thanks es 73, WA8KIW, John Levo, Hillsboro, OH

31056. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 02:17:09 UTC
From: n6wk@n6wk.com
Topic: 31055 Message: 31056

Every TS-830 I have seen has always had a 2 wire AC cord.
The TS-820 however is wired using a Jones Cinch plug.
Are you sure you are referring to a TS-830S?

Thanks,
Gordon
N6WK

On 4/28/2011 6:34 PM, John wrote:
>
> A member of our local ARC recently became a silent key. His widow has
> contacted our club to dispose of his equipment at Dayton this year. He
> had a TS830s; however the power cable can not be located.
> Because we want to test the rig before taking it to Dayton, we need a
> wiring diagram in order to make up a new line cord. One of our members
> has the necessary 12 pin connector so all we need is the diagram.
> If someone could assist me with the information or a website showing
> it, it would be appreciated not only by our club, but mostly by the
> SK's widow.
> Thanks es 73, WA8KIW, John Levo, Hillsboro, OH
>
>

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31057. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 02:25:21 UTC
From: Joseph Stiles
Topic: 31055 Message: 31057

John,

Sorry to hear about your RC member. The 830S does not have a detachable power cord...unless it has been modified somehow. It sound like it's an 520S or 820S. You can find the wiring diagram on Pg 7 of the TS-820S or TS 520S Operators Manual. You can see both at Gordon's web site: N6WK.com

good luck 73's joe wb7uqu

From: John <jlevo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 28, 2011 6:34:30 PM
Subject: [TS-520_820_530_830] TS830s power cord wiring information needed

A member of our local ARC recently became a silent key. His widow has contacted our club to dispose of his equipment at Dayton this year. He had a TS830s; however the power cable can not be located.
Because we want to test the rig before taking it to Dayton, we need a wiring diagram in order to make up a new line cord. One of our members has the necessary 12 pin connector so all we need is the diagram.
If someone could assist me with the information or a website showing it, it would be appreciated not only by our club, but mostly by the SK's widow.
Thanks es 73, WA8KIW, John Levo, Hillsboro, OH

[Non-text portions of this message have been removed]

31058. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 02:33:47 UTC
From: Chris Parnell
Topic: 31055 Message: 31058

My TS-830s has the 12 pin connector too.
It's the same as 'most' of the images of a back panel TS-830s on the internet....

I am attaching an image of the back of an 830s if it works, but google "TS-830s back panel" and it comes up with an image showing the 12 pin connector and serial number that reads TS-830s.

Cheers
Chris

On 29/04/2011, at 2:17 PM, n6wk@... wrote:

> Every TS-830 I have seen has always had a 2 wire AC cord.
> The TS-820 however is wired using a Jones Cinch plug.
> Are you sure you are referring to a TS-830S?
>
> Thanks,
> Gordon
> N6WK
>
>
> On 4/28/2011 6:34 PM, John wrote:
>>
>> A member of our local ARC recently became a silent key. His widow has
>> contacted our club to dispose of his equipment at Dayton this year. He
>> had a TS830s; however the power cable can not be located.
>> Because we want to test the rig before taking it to Dayton, we need a
>> wiring diagram in order to make up a new line cord. One of our members
>> has the necessary 12 pin connector so all we need is the diagram.
>> If someone could assist me with the information or a website showing
>> it, it would be appreciated not only by our club, but mostly by the
>> SK's widow.
>> Thanks es 73, WA8KIW, John Levo, Hillsboro, OH
>>
>>
>
> --
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[Non-text portions of this message have been removed]

31059. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 02:40:13 UTC
From: John Levo
Topic: 31055 Message: 31059

Sorry, I fat fingered the keyboard twice and missed it when proofreading. The rig is a TS 820s with a Clinch Jones connector.

WA8KIW

----- Original Message -----
From: Joseph Stiles
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, April 28, 2011 10:25 PM
Subject: Re: [TS-520_820_530_830] TS830s power cord wiring information needed

John,

Sorry to hear about your RC member. The 830S does not have a detachable power cord...unless it has been modified somehow. It sound like it's an 520S or 820S. You can find the wiring diagram on Pg 7 of the TS-820S or TS 520S Operators Manual. You can see both at Gordon's web site: N6WK.com

good luck 73's joe wb7uqu

_____
From: John <jlevo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, April 28, 2011 6:34:30 PM
Subject: [TS-520_820_530_830] TS830s power cord wiring information needed

A member of our local ARC recently became a silent key. His widow has contacted our club to dispose of his equipment at Dayton this year. He had a TS830s; however the power cable can not be located.
Because we want to test the rig before taking it to Dayton, we need a wiring diagram in order to make up a new line cord. One of our members has the necessary 12 pin connector so all we need is the diagram.
If someone could assist me with the information or a website showing it, it would be appreciated not only by our club, but mostly by the SK's widow.
Thanks es 73, WA8KIW, John Levo, Hillsboro, OH

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31060. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 02:50:34 UTC
From: n6wk@n6wk.com
Topic: 31055 Message: 31060

John,
go to my web page and download the TS-820S user manual
it shows how to wire the plug. It is on page 7 of the User manual

73,
Gordon
N6WK

www.n6wk.com/kenwood

On 4/28/2011 6:34 PM, John wrote:
>
> A member of our local ARC recently became a silent key. His widow has
> contacted our club to dispose of his equipment at Dayton this year. He
> had a TS830s; however the power cable can not be located.
> Because we want to test the rig before taking it to Dayton, we need a
> wiring diagram in order to make up a new line cord. One of our members
> has the necessary 12 pin connector so all we need is the diagram.
> If someone could assist me with the information or a website showing
> it, it would be appreciated not only by our club, but mostly by the
> SK's widow.
> Thanks es 73, WA8KIW, John Levo, Hillsboro, OH
>
>

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31061. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 03:16:07 UTC
From: John Levo
Topic: 31055 Message: 31061

That is exactly what I needed. Thank you so much.

The widow is in need of funds, so I just hope we can get a buyer for this rig. On the outside it is really clean. I hope the workings are as well.

Again, thanks. 73, WA8KIW

----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, April 28, 2011 10:50 PM
Subject: Re: [TS-520_820_530_830] TS830s power cord wiring information needed

> John,
> go to my web page and download the TS-820S user manual
> it shows how to wire the plug. It is on page 7 of the User manual
>
> 73,
> Gordon
> N6WK
>
>
>
> www.n6wk.com/kenwood
>
> On 4/28/2011 6:34 PM, John wrote:
>>
>> A member of our local ARC recently became a silent key. His widow has
>> contacted our club to dispose of his equipment at Dayton this year. He
>> had a TS830s; however the power cable can not be located.
>> Because we want to test the rig before taking it to Dayton, we need a
>> wiring diagram in order to make up a new line cord. One of our members
>> has the necessary 12 pin connector so all we need is the diagram.
>> If someone could assist me with the information or a website showing
>> it, it would be appreciated not only by our club, but mostly by the
>> SK's widow.
>> Thanks es 73, WA8KIW, John Levo, Hillsboro, OH
>>
>>
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31062. Re: TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 12:54:09 UTC
From: w5rkl
Topic: 31055 Message: 31062

HI Chris,

Attachments to the group using e-mail responses such as pictures, manuals and other files, are not allowed. This is to help prevent Trojan viruses and other bad things from getting into the system.

The TS-830S marketed for the U.S. does not have the 12 pin plug. A few 830s with the 12 pin power plug have made their way into the U.S., most likely due to private sales etc., but 830s marketed for the U.S. only have the 2 pin power plug.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> My TS-830s has the 12 pin connector too.
> It's the same as 'most' of the images of a back panel TS-830s on the internet....
>
> I am attaching an image of the back of an 830s if it works, but google "TS-830s back panel" and it comes up with an image showing the 12 pin connector and serial number that reads TS-830s.
>
> Cheers
> Chris
>
>
> ----------
>
>
>
>
>
>
> On 29/04/2011, at 2:17 PM, n6wk@... wrote:
>
> > Every TS-830 I have seen has always had a 2 wire AC cord.
> > The TS-820 however is wired using a Jones Cinch plug.
> > Are you sure you are referring to a TS-830S?
> >
> > Thanks,
> > Gordon
> > N6WK
> >
> >
> > On 4/28/2011 6:34 PM, John wrote:
> >>

> >> A member of our local ARC recently became a silent key. His widow has
> >> contacted our club to dispose of his equipment at Dayton this year. He
> >> had a TS830s; however the power cable can not be located.
> >> Because we want to test the rig before taking it to Dayton, we need a
> >> wiring diagram in order to make up a new line cord. One of our members
> >> has the necessary 12 pin connector so all we need is the diagram.
> >> If someone could assist me with the information or a website showing
> >> it, it would be appreciated not only by our club, but mostly by the
> >> SK's widow.
> >> Thanks es 73, WA8KIW, John Levo, Hillsboro, OH
> >>
> >>
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> > --
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> [Non-text portions of this message have been removed]
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31063. Re: [TS-520_820_530_830] TS830s power cord wiring information needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 12:54:16 UTC
From: howie wright
Topic: 31055 Message: 31063

I have owned two 830's that were purchased overseas, one in Sinapore and one in Japan, they both have the 12 pin plug, and also the versatile main transformer that can be wired for various differant ac supply voltages. They also have the removable rear access plate that allows for mounting the DS-2, DC to DC power inverter. Giving the 830 the ability to run off of 12vdc.

--- On Thu, 4/28/11, John <jlevo@...> wrote:

From: John <jlevo@...>
Subject: [TS-520_820_530_830] TS830s power cord wiring information needed
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, April 28, 2011, 6:34 PM

A member of our local ARC recently became a silent key. His widow has contacted our club to dispose of his equipment at Dayton this year. He had a TS830s; however the power cable can not be located.
Because we want to test the rig before taking it to Dayton, we need a wiring diagram in order to make up a new line cord. One of our members has the necessary 12 pin connector so all we need is the diagram.
If someone could assist me with the information or a website showing it, it would be appreciated not only by our club, but mostly by the SK's widow.
Thanks es 73, WA8KIW, John Levo, Hillsboro, OH

[Non-text portions of this message have been removed]

31064. Question of the day

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 14:52:08 UTC
From: Don D
Topic: 31064 Message: 31064

Does both tubes [6146B] have to be in the circuit to work or complete the circuit
Why i ask this question is i would like to take out one tube out and check the output then put it back and take out the other one and check its output to see if they have even output or to see if the output on both matches
would this work
will wait for feedback as to why i asked this question

thanks
Don

ve2ud

31065. Drake Fan Seeks TS-830 (Changing Direction!)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 14:40:19 UTC
From: ctrpoint2004
Topic: 31065 Message: 31065

Drake enthusiast looking for a nice TS-830 and any accessories. Time to move ahead but can't quite leave the hybrid domain. Contact off list at ctrpoint2004@.... Thanks & 73, Michael, WA0EPW, Saint Paul MN.

31066. Re: Question of the day

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 17:01:03 UTC
From: w5rkl
Topic: 31064 Message: 31066

Don,

The 6146 filaments are wired in "series". Therefore, if you pull one of the 6146 tubes, the filament circuit to the other 6146 is now "open". In the old days, Christmas lights were wired in series. If one lamp burnt out the rest of the lamps would not light.

The final tube filament series wiring is shown on the hybrid schematics.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Does both tubes [6146B] have to be in the circuit to work or complete the circuit
> Why i ask this question is i would like to take out one tube out and check the output then put it back and take out the other one and check its output to see if they have even output or to see if the output on both matches
> would this work
> will wait for feedback as to why i asked this question
>
> thanks
> Don
>
> ve2ud
>

31067. Re: [TS-520_820_530_830] Re: Question of the day

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 17:07:07 UTC
From: Mel Farrer
Topic: 31064 Message: 31067

The filament is 6.3 volts at 1.25 A = 5.04 ohm load.

I cheated and put a 5 ohm 10 W resistor across the removed tube filament pins and it worked. However, the load impedance is now different and the plate tuning and loading will be different than with two tubes. Otherwise is works fine.

Mel, K6KBE

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, April 29, 2011 10:01:03 AM
Subject: [TS-520_820_530_830] Re: Question of the day

Don,

The 6146 filaments are wired in "series". Therefore, if you pull one of the 6146 tubes, the filament circuit to the other 6146 is now "open". In the old days, Christmas lights were wired in series. If one lamp burnt out the rest of the lamps would not light.

The final tube filament series wiring is shown on the hybrid schematics.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@...> wrote:
>
> Does both tubes [6146B] have to be in the circuit to work or complete the
>circuit
> Why i ask this question is i would like to take out one tube out and check the
>output then put it back and take out the other one and check its output to see
>if they have even output or to see if the output on both matches
> would this work
> will wait for feedback as to why i asked this question
>
> thanks
> Don
>
> ve2ud
>

[Non-text portions of this message have been removed]

31068. Re: Question of the day

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 17:52:20 UTC
From: Don D
Topic: 31064 Message: 31068

thanks for the reply's
I stopped at a local repair shop and he told me to try taking out one tube and to do that check
I was sure that it could not be done,so would check first with you guys
Will not be taking my gear to that shop for repairs

thanks all
Don
ve2ud

--- In TS-520_820_530_830@yahoogroups.com, Mel Farrer <farrerfolks@...> wrote:
>
> The filament is 6.3 volts at 1.25 A = 5.04 ohm load.
>
> I cheated and put a 5 ohm 10 W resistor across the removed tube filament pins
> and it worked. However, the load impedance is now different and the plate
> tuning and loading will be different than with two tubes. Otherwise is works
> fine.
>
> Mel, K6KBE
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, April 29, 2011 10:01:03 AM
> Subject: [TS-520_820_530_830] Re: Question of the day
>
>
> Don,
>
> The 6146 filaments are wired in "series". Therefore, if you pull one of the 6146
> tubes, the filament circuit to the other 6146 is now "open". In the old days,
> Christmas lights were wired in series. If one lamp burnt out the rest of the
> lamps would not light.
>
> The final tube filament series wiring is shown on the hybrid schematics.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "Don D" <ve2ud@> wrote:

> >
> > Does both tubes [6146B] have to be in the circuit to work or complete the
> >circuit
> > Why i ask this question is i would like to take out one tube out and check the
> >output then put it back and take out the other one and check its output to see
> >if they have even output or to see if the output on both matches
> > would this work
> > will wait for feedback as to why i asked this question
> >
> > thanks
> > Don
> >
> > ve2ud
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31069. Worthwhile improvenents to 520 front end/mixer/IF?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-29 21:34:11 UTC
From: andy_westcott2004
Topic: 31069 Message: 31069

Hi guys.
Although my 520SE works well, I can't help wondering if there's any relatively simple way to reduce the internal noise the rig generates.

Modern metal film resistors for example are a lot quieter than the carbon ones used in these hybrids. Can any of the semiconductors be replaced with any benefit?

Any of you done this kind of thing and benefitted?
Thanks for any comments.

31070. cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-30 07:35:39 UTC
From: nihongostudent
Topic: 31070 Message: 31070

Greetings:
I have a TS-830S in the shop getting renewed and would like to buy some cw filters for it.I do not really understand the importance of where a filter goes in the IF chain.
YG455C 500 HZ filter for 455KHZ if
YG455CN 250HZcw filter for 455KHZ if
YK88C 500HZ cwfilter for 8.830 Mhz IF

INRAD sells compatible filters. Which filters should I buy for the sharpest selectivity on 20 and 15 CW and why.I appreciate your patience for these simple questions.
Richard
HS0ZFQ
ChiangRai, Thailand

31071. Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-30 21:04:52 UTC
From: w5rkl
Topic: 31070 Message: 31071

Hello Richard,

The sharpest INRAD filter for CW is the 250Hz filters. However, unless you intend on contesting and working DX Pile ups then I wouldn't install the 250Hz CW filters. I have the INRAD 250Hz CW filter in my Drake R4C, along with a number of other INRAD filters and Sherwood mods, and it is a rather sharp filter. It doesn't ring either and it really reduces adjacent frequency interference during pile ups. I don't work DX pile up but I bought the filter to just have it.

The TS-830 has "2" IF frequencies, 8.8Mhz and 455Khz. To use the filters properly you will need to buy both the 8Mhz and 455Khz filters. For example, for a sharp CW mode, you would need to install INRAD's #97 250Hz 8Mhz and #21 250Hz 455Khz filters. This will give you both 8Mhz and 455Khz CW filtering at 250Hz bandwidth.

For normal CW filtering, 400Hz, you would need to buy INRAD's #98 and #99 8Mhz and 455Hz filters. This would give you the best all around "general" CW filtering. Using these filters plus the IF shift you can reduce most adjacent frequency interference without having to go to the 250Hz filters.

http://www.qth.com/inrad/

Use the link above and select "filters" then select "Kenwood" then select "TS-830" and you will see the various INRAD filters offered for the 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@...> wrote:
>
> Greetings:
> I have a TS-830S in the shop getting renewed and would like to buy some cw filters for it.I do not really understand the importance of where a filter goes in the IF chain.
> YG455C 500 HZ filter for 455KHZ if
> YG455CN 250HZcw filter for 455KHZ if
> YK88C 500HZ cwfilter for 8.830 Mhz IF
>
> INRAD sells compatible filters. Which filters should I buy for the sharpest selectivity on 20 and 15 CW and why.I appreciate your patience for these simple questions.
> Richard
> HS0ZFQ
> ChiangRai, Thailand
>

31072. Re: Worthwhile improvenents to 520 front end/mixer/IF?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-30 21:13:34 UTC
From: w5rkl
Topic: 31069 Message: 31072

Hi Andy,

Personally, I wouldn't do anything to the 520. There is no real "simple" way to reduce thermal noise in the 520. If you try other solid state devices in hopes of reducing receiver noise you could end up inducing more problems in your 520 and end up with a 520 that simple doesn't work or if it works, the performance could easily be much less than it is now.

In addition, if you do not have the test equipment and skills, don't try changing original diodes for "pin diodes". More often than not, replacing the diodes with pin diodes has very little, if any, affect on receiver noise. Most hams who say you should do this do not have the test equipment and the skills to make "before" and "after" tests to determine what, if any, improvements have been done by replacing original diodes with pin diodes. The link below has a short but informative write up about this.

http://w8ji.com/receivers.htm

Scroll down the page to the "Pin Diode Myth" section and read what Tom has to say about this Pin Diode non-sense.

Again, I would not recommend making any changes to the 520 and don't be fooled by others who tell you to change the diodes to pin diodes.

Last but not least, it is your 520 and whether you leave your 520 as it is or not is entirely up to you. I am only providing you an answer to your question and what I think about all this receiver improvement non-sense. Again, it's up to you what you decide to do.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Hi guys.
> Although my 520SE works well, I can't help wondering if there's any relatively simple way to reduce the internal noise the rig generates.
>
> Modern metal film resistors for example are a lot quieter than the carbon ones used in these hybrids. Can any of the semiconductors be replaced with any benefit?
>
> Any of you done this kind of thing and benefitted?
> Thanks for any comments.
>

31073. Re: Worthwhile improvenents to 520 front end/mixer/IF?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-04-30 23:35:24 UTC
From: roberteleazer@rocketmail.com
Topic: 31069 Message: 31073

Andy:

I have both a TS-820S and a TS-520. For the TS-820S I replaced a couple tantulum capacitors since they have known age issues that can result in stability problems, increased noise, etc, and the rig had a lot of problems I was trying to correct.

I have not looked at my TS-520 for the same kind of problems because it did not seem to be as noisy as the TS-820S and I was not trying to fix the other problems the older tantalums might have been causing. The caps were in the carrier module and the PD/VCO module of the 820S. In the case of the carrier module one guy even recommnded replacing a a few of the electrolytic caps as well as the tantalum cap and using larger values to provide better power supply conditions. Unfortunately for my spare PD board replacing the tantalum that can cause noise with a ceramic bead cap of the same value apparantly resulted in some frequency instability, so if I ever have to use that board I'll have to change it back.

If I were you I would look at the TS-520 service manual and see if there are any tantalum caps that might be failing and causing noise or other problems. Unlike the semicoductors, replacing the caps with modern equivalents is unlikely to cause any problems. And it probably will be easier than the transistors as well, although not very easy - those little caps are in there pretty tight! Fortunately the new modern electrolytics tend to be smaller than the old ones.

Good luck and 73's!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Hi guys.
> Although my 520SE works well, I can't help wondering if there's any relatively simple way to reduce the internal noise the rig generates.
>
> Modern metal film resistors for example are a lot quieter than the carbon ones used in these hybrids. Can any of the semiconductors be replaced with any benefit?
>
> Any of you done this kind of thing and benefitted?
> Thanks for any comments.
>

31074. Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 03:51:32 UTC
From: David
Topic: 31070 Message: 31074

Richard,

I own an 830s, and have the Kenwood 500 hz and 2.4 KHZ filters in both IFs. They are not expensive if you keep an eye on QTH.com and Ebay. The results are astounding on SSB, and CW. With all the filters installed, you will be able to adjust the passband width down to as narrow as 150hz. I have owned a number of rigs including Ten Tec, and ICOM, and live a few miles from HRO where I can test all the new stuff, and I am still knocked out by the selectivity of the 830s with all of the filters.

I do not think that any of the newer rigs with DSP could do any better in the real world. The standard Kenwood Filters will do a great job!

Regards,

David

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Richard,
>
> The sharpest INRAD filter for CW is the 250Hz filters. However, unless you intend on contesting and working DX Pile ups then I wouldn't install the 250Hz CW filters. I have the INRAD 250Hz CW filter in my Drake R4C, along with a number of other INRAD filters and Sherwood mods, and it is a rather sharp filter. It doesn't ring either and it really reduces adjacent frequency interference during pile ups. I don't work DX pile up but I bought the filter to just have it.
>
> The TS-830 has "2" IF frequencies, 8.8Mhz and 455Khz. To use the filters properly you will need to buy both the 8Mhz and 455Khz filters. For example, for a sharp CW mode, you would need to install INRAD's #97 250Hz 8Mhz and #21 250Hz 455Khz filters. This will give you both 8Mhz and 455Khz CW filtering at 250Hz bandwidth.
>
> For normal CW filtering, 400Hz, you would need to buy INRAD's #98 and #99 8Mhz and 455Hz filters. This would give you the best all around "general" CW filtering. Using these filters plus the IF shift you can reduce most adjacent frequency interference without having to go to the 250Hz filters.
>
> http://www.qth.com/inrad/
>
> Use the link above and select "filters" then select "Kenwood" then select "TS-830" and you will see the various INRAD filters offered for the 830.
>
> 73s
> Mike
> W5RKL
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "nihongostudent" <richard_206@> wrote:
> >
> > Greetings:
> > I have a TS-830S in the shop getting renewed and would like to buy some cw filters for it.I do not really understand the importance of where a filter goes in the IF chain.
> > YG455C 500 HZ filter for 455KHZ if
> > YG455CN 250HZcw filter for 455KHZ if
> > YK88C 500HZ cwfilter for 8.830 Mhz IF
> >
> > INRAD sells compatible filters. Which filters should I buy for the sharpest selectivity on 20 and 15 CW and why.I appreciate your patience for these simple questions.
> > Richard
> > HS0ZFQ
> > ChiangRai, Thailand
> >
>

31075. Re: Worthwhile improvenents to 520 front end/mixer/IF?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 10:54:27 UTC
From: andy_westcott2004
Topic: 31069 Message: 31075

Thanks guys for your replies.
In the light of what you have both said, I'll leave well alone and accept the idea that 'if it ain't broke, don't fix it.'

It's just that I wondered if the old carbon resistors in the front end may be contributing to receiver noise and the unit could have benefitted from changing one or two in critical areas for the modern low noise metal film types.

Thinking about it though, band noise is so much higher than receiver noise that it can't really affect anything significantly.

Love the old radio, I use it almost exclusively on digital modes, so she'll stay as she is. :)

31076. 520SE NB board alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 13:11:10 UTC
From: andy_westcott2004
Topic: 31076 Message: 31076

OK, I'm checking some of the simpler adjustment jobs I can do in my 520.

I'm having a disagreement with the manual though, regarding the NB board alignment. (X54-1080-10)

Part of the instructions say adjust T6 and T7 for a MINIMUM voltage reading at the collector of Q6, surely this is incorrect?

I can easily adjust for a PEAK in the voltage with T6 & T7 and the peak is well-defined at about 0.6 volts, but any setting other than this reduces the voltage, in either direction, making adjusting for a minimum meaningless.

Is it possible the manual I have contains a misprint and instead of 'minimum' it should read 'maximum'? Or maybe the circuit has a problem.

Guidance much appreciated.

31077. Re: 20 m does not display on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 18:19:46 UTC
From: scott.schillereff
Topic: 31051 Message: 31077

Hi Joe,
I hooked up a short wire antenna and could receive signals on bands with a digital display, however nothing but audio hiss on 20m. I think it is a good starting point to clean off the band switch wafers, as you suggest. I will need to buy the Deoxit. I understand there are different types. Can you suggest the best variety and where to get it (e.g., Radio Shack or specialty electronics shop?).

Many thanks,
Scott

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Scott,
>
> Welcome aboard. Does the rig seem receive on 20M? I would recommend
> cleaning the band switch wafers on the RF board...and...the other in the final
> cage area. Make sure rig is turned OFF AND UNPLUGGED...let it sit for a
> bit...and check the HV capacitors for voltage before rooting around in/near the
> final cage area...there's about 900 volts lurking there. DEOXIT works
> well...along with some "canned air." This a good place to start...and sure can't
> hurt. There may be other problems...but try this simple thing first.....
> then let us know.....good luck.....
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: scott.schillereff <scott.schillereff@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, April 27, 2011 6:31:03 PM
> Subject: [TS-520_820_530_830] 20 m does not display on TS-820S
>
>
> Hello,
> I am a new member and this is my first post. I have a TS-820S that does not
> display frequencies on the digital display for the 20m band. All other bands
> fine; but when I change the band switch to 20m, the display just goes blank.
>
>
> I had been having trouble with erratic digital display on all bands(aside from
> the blanked 20m), so I did some web research and learned about the fix of
> cleaning the varnish off the corner screw mounts of the circuit boards in the
> Counting Assembly Unit. I did this, and presto, the display on all bands was

> perfect - except 20m still blank!
>
> Any ideas of cause and way to correct the lack of display on 20m?
>
> Thanks and 73s
> Scott
>
>
>
>
> [Non-text portions of this message have been removed]
>

31078. Re: 520SE NB board alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 18:34:04 UTC
From: w5rkl
Topic: 31076 Message: 31078

Hi Andy,

No the adjustment stated in the service manual is correct.

If you read the Noise Blanker circuit description then the noise limiter adjustment will make more sense.

Basically, Q6 controls the gain of Q3, Q7, and Q4. Q5 acts as a switch to, vary rapidly, open and close the signal path (through Q1, T4 and T5 to Noise Blanker's NBO output terminal) when noise pulses are present on the VFO mixer signal that is applied to the Noise Blanker. The VFO output signal is "always" applied to the Noise Blanker board. The Noise Blanker circuit, consisting of Q2, Q3, Q7, Q6, and Q5 is only activated when the NB switch is turned ON. With the NB switch turned OFF, the VFO Mixer signal appears at Q1 and Q2 but is blocked by the reduced gain of Q3, Q7, and Q4 and Q5 and Q6 are turned OFF.

Q6, when pulse noise is present, controls the gain of noise amplifier Q3, Q7, and Q4 by acting upon the rectified noise pulses through diodes D5 and D6.

When noise is present and the NB switch is turned ON, the VFO signal is applied not only to Q1 but also to noise gate Q2, then to noise amplifiers Q3, Q7, and Q4. The output of Q4 is then applied to diodes D5 and D6 where the noise signal is rectified into DC pulses.

The DC pulses are then applied to the base of Q6, turning Q6 ON. This causes noise amplifiers Q3, Q7, and Q4 to operate at maximum gain.

At the same time, the DC pulses are also applied to the base of Q5 causing Q5 to turn ON, grounding the center tap of T4 and effectively "opening" the signal path through the noise limiter, hence no output at the "NBO" terminal.

The length of time Q5 is turned ON is based on the fixed AGC type time constant of R3 and C7.

The opening and closing time periods of the noise blanker's signal path is based on the AGC time constant of R3 and C7.

By adjusting T5 and T6 on the Noise Blanker board with a "noise free" RF signal as stated in the service manual (the adjustment does not say to inject a signal with noise), you are basically biasing Q6 "OFF" (minimum Collector current) so the noise amplifiers Q3, Q7, and Q4 are at minimum gain.

A signal with noise will be applied not only to Q1, T4, and T5, but also to noise gate Q2 and noise amplifiers Q3, Q7, and Q4 and support circuitry. By opening and closing the signal path very rapidly, on noise peaks, the signal appearing at the Noise Blanker "NBO" output terminal will be noise free, or so we hope.

The noise limiter will not acts on all types of noise. The noise blanker is designed to acts on "pulse" type noises such as arcing from power lines and automobile ignition noises. Fast switching type noise such as found in computers and other electronic devices and

Corona noise, the noise limiter will be useless.

Another problem with noise limiters is the presence of what I call "Phantom signals", signals that "appear" to sound "raspy" on the frequency the 520 is tuned to. Those signals are typically not operating at the 520's operating frequency but rather quite a bit away from the 520's operating frequency. This is caused by the noise limiter's act to eliminate noise and is not an interfering stations on your frequency. Turning the noise limiter OFF will cause these "Phantom" signals to disappear. These "Phantom" signals can be caused by CW and sideband stations and are not necessarily resulting from "splatter". When the signal path is "closed", by the action of the noise limiter, the gain of the receive is at maximum for a very short duration. Why? Because the noise limiter output signal is "before" the crystal filter and the bandwidth of that signal is much wider than the signal that appears at the output of the crystal filters. Therefore, by the rapid opening and closing of the signal path through the noise limiter causes the receiver's gain to be at maximum (AGC control is on the IF Unit and "after" the crystal filters) gain. This results in those "phantom" signals to appear as though they are very close to your operating frequency when in most cases they are 5Khz to 10Khz away from your operating frequency. In most cases, these phantom signals are not caused by splatter but rather receiver maximum gain and much wider bandwidth of the signal being processed through the noise blanker. The bandwidth is approximately "500Khz" since the "RIF" 8Mhz (8.895Mhz to 8.395Mhz) signal bandwidth must be 500Khz wide (8.895 - 8.395 = 500Khz). As I said, the signal passing through the noise blanker is "before" the IF Unit crystal filters.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> OK, I'm checking some of the simpler adjustment jobs I can do in my 520.
>
> I'm having a disagreement with the manual though, regarding the NB board alignment. (X54-1080-10)
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> Part of the instructions say adjust T6 and T7 for a MINIMUM voltage reading at the collector of Q6, surely this is incorrect?
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> Is it possible the manual I have contains a misprint and instead of 'minimum' it should read 'maximum'? Or maybe the circuit has a problem.
>
> Guidance much appreciated.
>

31079. Re: 520SE NB board alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 18:38:09 UTC
From: w5rkl
Topic: 31076 Message: 31079

The following statement made in my recent response should say the following:

"When noise is present and the NB switch is turned ON, the VFO mixer output signal is applied.."

and NOT as original said, as follows:

"When noise is present and the NB switch is turned ON, the VFO signal is applied.."

I forgot to include the words "mixer output" to the sentence.

Sorry about that.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Andy,
>
> No the adjustment stated in the service manual is correct.
>
> If you read the Noise Blanker circuit description then the noise limiter adjustment will make more sense.
>
> Basically, Q6 controls the gain of Q3, Q7, and Q4. Q5 acts as a switch to, vary rapidly, open and close the signal path (through Q1, T4 and T5 to Noise Blanker's NBO output terminal) when noise pulses are present on the VFO mixer signal that is applied to the Noise Blanker. The VFO output signal is "always" applied to the Noise Blanker board. The Noise Blanker circuit, consisting of Q2, Q3, Q7, Q6, and Q5 is only activated when the NB switch is turned ON. With the NB switch turned OFF, the VFO Mixer signal appears at Q1 and Q2 but is blocked by the reduced gain of Q3, Q7, and Q4 and Q5 and Q6 are turned OFF.
>
> Q6, when pulse noise is present, controls the gain of noise amplifier Q3, Q7, and Q4 by acting upon the rectified noise pulses through diodes D5 and D6.
>
> When noise is present and the NB switch is turned ON, the VFO signal is applied not only to Q1 but also to noise gate Q2, then to noise amplifiers Q3, Q7, and Q4. The output of Q4 is then applied to diodes D5 and D6 where the noise signal is rectified into DC pulses.
>
> The DC pulses are then applied to the base of Q6, turning Q6 ON. This causes noise amplifiers Q3, Q7, and Q4 to operate at maximum gain.
>
> At the same time, the DC pulses are also applied to the base of Q5 causing Q5 to turn ON, grounding the center tap of T4 and effectively "opening" the signal path through the noise limiter, hence no output at the "NBO" terminal.

>
> The length of time Q5 is turned ON is based on the fixed AGC type time constant of R3 and C7.
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> The opening and closing time periods of the noise blanker's signal path is based on the AGC time constant of R3 and C7.
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> A signal with noise will be applied not only to Q1, T4, and T5, but also to noise gate Q2 and noise amplifiers Q3, Q7, and Q4 and support circuitry. By opening and closing the signal path very rapidly, on noise peaks, the signal appearing at the Noise Blanker "NBO" output terminal will be noise free, or so we hope.
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> The noise limiter will not acts on all types of noise. The noise blanker is designed to acts on "pulse" type noises such as arcing from power lines and automobile ignition noises. Fast switching type noise such as found in computers and other electronic devices and Corona noise, the noise limiter will be useless.
>
> Another problem with noise limiters is the presence of what I call "Phantom signals", signals that "appear" to sound "raspy" on the frequency the 520 is tuned to. Those signals are typically not operating at the 520's operating frequency but rather quite a bit away from the 520's operating frequency. This is caused by the noise limiter's act to eliminate noise and is not an interfering stations on your frequency. Turning the noise limiter OFF will cause these "Phantom" signals to disappear. These "Phantom" signals can be caused by CW and sideband stations and are not necessarily resulting from "splatter". When the signal path is "closed", by the action of the noise limiter, the gain of the receive is at maximum for a very short duration. Why? Because the noise limiter output signal is "before" the crystal filter and the bandwidth of that signal is much wider than the signal that appears at the output of the crystal filters. Therefore, by the rapid opening and closing of the signal path through the noise limiter causes the receiver's gain to be at maximum (AGC control is on the IF Unit and "after" the crystal filters) gain. This results in those "phantom" signals to appear as though they are very close to your operating frequency when in most cases they are 5Khz to 10Khz away from your operating frequency. In most cases, these phantom signals are not caused by splatter but rather receiver maximum gain and much wider bandwidth of the signal being processed through the noise blanker. The bandwidth is approximately "500Khz" since the "RIF" 8Mhz (8.895Mhz to 8.395Mhz) signal bandwidth must be 500Khz wide (8.895 - 8.395 = 500Khz). As I said, the signal passing through the noise blanker is "before" the IF Unit crystal filters.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@>
wrote:

> >
> > OK, I'm checking some of the simpler adjustment jobs I can do in my 520.
> >
> > I'm having a disagreement with the manual though, regarding the NB board alignment. (X54-1080-10)
> >
> > Part of the instructions say adjust T6 and T7 for a MINIMUM voltage reading at the collector of Q6, surely this is incorrect?
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> > I can easily adjust for a PEAK in the voltage with T6 & T7 and the peak is well-defined at about 0.6 volts, but any setting other than this reduces the voltage, in either direction, making adjusting for a minimum meaningless.
> >
> > Is it possible the manual I have contains a misprint and instead of 'minimum' it should read 'maximum'? Or maybe the circuit has a problem.
> >
> > Guidance much appreciated.
> >
>

31080. Re: [TS-520_820_530_830] Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 18:53:37 UTC
From: pmarkavage@juno.com
Topic: 31070 Message: 31080

Actually, if you really want to see unbelievable filter action
(brick-wall, steep shirts, bandwidth adjustable from 0 to 20 KHz,
adjustable passband that's incredible), you should play with a FlexRadio
5000A. It's hard to go back to any other rig after you play with a
software defined rig.

Pete, wa2cwa

On Sun, 01 May 2011 03:51:32 -0000 "David" <davidcuttler@...>
writes:
> Richard,
>
> I own an 830s, and have the Kenwood 500 hz and 2.4 KHZ filters in
> both IFs. They are not expensive if you keep an eye on QTH.com and
> Ebay. The results are astounding on SSB, and CW. With all the
> filters installed, you will be able to adjust the passband width
> down to as narrow as 150hz. I have owned a number of rigs including
> Ten Tec, and ICOM, and live a few miles from HRO where I can test
> all the new stuff, and I am still knocked out by the selectivity of
> the 830s with all of the filters.
>
> I do not think that any of the newer rigs with DSP could do any
> better in the real world. The standard Kenwood Filters will do a
> great job!
>
> Regards,
>
> David

31081. Re: [TS-520_820_530_830] Re: 20 m does not display on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 19:11:57 UTC
From: Joseph Stiles
Topic: 31051 Message: 31081

Hey Scott,

The DEOXIT D5 is what is I use...the are others...but this has worked well for me. RadioShack used to have a small spray can...but I can not confirm that...I buy mine on-line from "Muscians Friend." They sell well...music stuff...amps..tubes..but have the cheapest price on the DEOXIT...5.0 oz spray....a little goes a long way...you can find "canned air" Wal Mart..COSTCO...and some other stores...that usually have computer/electronic stuff...the most common is "DUST OFF." Mike...W5RKL has a very good point...you may have a malfunction of the 20M VCO...but a good cleaning...is a simple & easy place to start. One or more contacts on the band switch wafer(s) for 20M may have "gunk" or are otherwise unable to pass a signal. The VCO adjustment..is not difficult...just a bit scary...the first time. Read the service manual section regarding this several times..look at the part(s) concerned and "GO FOR IT."......GOOD LUCK...keep us up on your progress

73's joe wb7uqu

From: scott.schillereff <scott.schillereff@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 1, 2011 11:19:46 AM
Subject: [TS-520_820_530_830] Re: 20 m does not display on TS-820S

Hi Joe,
I hooked up a short wire antenna and could receive signals on bands with a digital display, however nothing but audio hiss on 20m. I think it is a good starting point to clean off the band switch wafers, as you suggest. I will need to buy the Deoxit. I understand there are different types. Can you suggest the best variety and where to get it (e.g., Radio Shack or specialty electronics shop?).

Many thanks,
Scott

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Scott,
>
> Welcome aboard. Does the rig seem receive on 20M? I would recommend
> cleaning the band switch wafers on the RF board...and...the other in the final

> cage area. Make sure rig is turned OFF AND UNPLUGGED...let it sit for a
> bit...and check the HV capacitors for voltage before rooting around in/near the
>
> final cage area...there's about 900 volts lurking there. DEOXIT works

> well...along with some "canned air." This a good place to start...and sure
>can't
>
> hurt. There may be other problems...but try this simple thing first.....
> then let us know.....good luck.....
>
> 73's joe wb7uqu
>
>
>
>
> _____
> From: scott.schillereff <scott.schillereff@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, April 27, 2011 6:31:03 PM
> Subject: [TS-520_820_530_830] 20 m does not display on TS-820S
>
>
> Hello,
> I am a new member and this is my first post. I have a TS-820S that does not
> display frequencies on the digital display for the 20m band. All other bands
> fine; but when I change the band switch to 20m, the display just goes blank.
>
>
> I had been having trouble with erratic digital display on all bands(aside from

> the blanked 20m), so I did some web research and learned about the fix of
> cleaning the varnish off the corner screw mounts of the circuit boards in the
> Counting Assembly Unit. I did this, and presto, the display on all bands was
> perfect - except 20m still blank!
>
> Any ideas of cause and way to correct the lack of display on 20m?
>
> Thanks and 73s
> Scott
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31082. ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 22:20:54 UTC
From: gerryattrick69
Topic: 31082 Message: 31082

One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver

Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.

I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.

Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.

Any ideas would be most appreciated

31083. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-01 23:23:57 UTC
From: Joe Loverti
Topic: 31082 Message: 31083

I recently purchased a near mint condition TS-820S for $550. When I say mint, I mean mint... full output on all bands is 100 watts+ and the rig is clean as a whistle with original box and packing. That price also included an equally mint MK-50 microphone with original box. I can't help with the receiver you listed.

[Non-text portions of this message have been removed]

31084. Re: [TS-520_820_530_830] ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 00:50:04 UTC
From: Megan and john Swarbrick
Topic: 31082 Message: 31084

Hi,

I'd say trying to compare prices with NZ and what folk pay for stuff in the US would be difficult.

The best way iMHO of getting an indication of price would be to take a look on Trademe. There is quite often a bit of 'Vintage' Kenwood kit on there.

That will give you an indication TM prices tend to be a 'bit' higher than say a junk sale or ham fest table price as TM garners a larger audience.

HTH

John

--- On Mon, 2/5/11, gerryattrick69 <anicholson@...> wrote:

From: gerryattrick69 <anicholson@adhb.govt.nz>
Subject: [TS-520_820_530_830] ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, 2, May, 2011, 10:20 AM

One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver

Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.

I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.

Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.

Any ideas would be most appreciated

[Non-text portions of this message have been removed]

31085. Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 01:01:16 UTC
From: David
Topic: 31070 Message: 31085

If I wanted to play with a computer instead of a radio, I would consider a flex, but this discussion is regarding a gentleman who wants to choose filters for his TS-830S, not buy a flex.

Regarding SDR, I built a Soft rock, and it was interesting, but I still like my 830S.

All is not perfect in the flex world either. Just read about all the issues folks have had trying to get it to work, and the problems that they have had on the computer side of it. Heck They are still trying to get the 1500 to work on CW, that's why there have been so many used ones only weeks old up for sale.

David

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Actually, if you really want to see unbelievable filter action
> (brick-wall, steep shirts, bandwidth adjustable from 0 to 20 KHz,
> adjustable passband that's incredible), you should play with a FlexRadio
> 5000A. It's hard to go back to any other rig after you play with a
> software defined rig.
>
> Pete, wa2cwa
>
> On Sun, 01 May 2011 03:51:32 -0000 "David" <davidcuttler@...>
> writes:
> > Richard,
> >
> > I own an 830s, and have the Kenwood 500 hz and 2.4 KHZ filters in
> > both IFs. They are not expensive if you keep an eye on QTH.com and
> > Ebay. The results are astounding on SSB, and CW. With all the
> > filters installed, you will be able to adjust the passband width
> > down to as narrow as 150hz. I have owned a number of rigs including
> > Ten Tec, and ICOM, and live a few miles from HRO where I can test
> > all the new stuff, and I am still knocked out by the selectivity of
> > the 830s with all of the filters.
> >
> > I do not think that any of the newer rigs with DSP could do any
> > better in the real world. The standard Kenwood Filters will do a
> > great job!
> >
> > Regards,
> >
> > David
>

31086. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 00:24:53 UTC
From: kd8hmo_us
Topic: 31082 Message: 31086

I gave $400 for a mint condition TS-520S and I thought that was a fair deal. It was spotless and hard to believe it was that old. It came with all the boxes, packing and manuals. The owner also included a nice MC-50 microphone with it's box and manual too. I have seen final Ebay bids on junk (according to the pic) radios that were insanely high and low bids on supposedly nice radios.

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> I recently purchased a near mint condition TS-820S for $550. When I say
> mint, I mean mint... full output on all bands is 100 watts+ and the rig is
> clean as a whistle with original box and packing. That price also included
> an equally mint MK-50 microphone with original box. I can't help with the
> receiver you listed.
>
>
> [Non-text portions of this message have been removed]
>

31087. Re: [TS-520_820_530_830] Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 03:36:40 UTC
From: pmarkavage@juno.com
Topic: 31070 Message: 31087

I was relating filter performance between the two rigs not what you might want or not want to buy or what issues/problems etc. might be related to either rig which are not uncommon in the life cycle of any product.

Pete, wa2cwa

On Mon, 02 May 2011 01:01:16 -0000 "David" <davidcuttler@...>
writes:
> If I wanted to play with a computer instead of a radio, I would
> consider a flex, but this discussion is regarding a gentleman who
> wants to choose filters for his TS-830S, not buy a flex.
>
> Regarding SDR, I built a Soft rock, and it was interesting, but I
> still like my 830S.
>
> All is not perfect in the flex world either. Just read about all the
> issues folks have had trying to get it to work, and the problems
> that they have had on the computer side of it. Heck They are still
> trying to get the 1500 to work on CW, that's why there have been so
> many used ones only weeks old up for sale.
>
> David

31088. Re: [TS-520_820_530_830] Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 04:14:20 UTC
From: Chuck Goelz
Topic: 31070 Message: 31088

Actually Pete & David, I think it would be interesting to present your views on the performance of older radios with crystal filters compared to the modern IF-DSP filter technology... Personally, I don't think DSP capability is quite there yet, but is very close. But I could be wrong... The newest radio that I have is a TS-450SAT. The oldest is my D-Twins. And the 520, and the 440SAT. I love them all, but for everyday use, the 450 (full complement of filters for CW & SSB) wins, hands down! Now, if you want to lend me a Flex for a few months, it might (or not) change my mind!

Comments??? Or maybe this group shouldn't participate in discussions about new technologies??? Just my drivel...

Cheers, 73,
Chuck, WA3CEJ

----- Original Message -----
From: pmarkavage@...
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 01, 2011 11:36 PM
Subject: Re: [TS-520_820_530_830] Re: cw filters for TS-830S

I was relating filter performance between the two rigs not what you might
want or not want to buy or what issues/problems etc. might be related to
either rig which are not uncommon in the life cycle of any product.

Pete, wa2cwa

On Mon, 02 May 2011 01:01:16 -0000 "David" <davidcuttler@...>
writes:
> If I wanted to play with a computer instead of a radio, I would
> consider a flex, but this discussion is regarding a gentleman who
> wants to choose filters for his TS-830S, not buy a flex.
>
> Regarding SDR, I built a Soft rock, and it was interesting, but I
> still like my 830S.
>
> All is not perfect in the flex world either. Just read about all the
> issues folks have had trying to get it to work, and the problems
> that they have had on the computer side of it. Heck They are still
> trying to get the 1500 to work on CW, that's why there have been so
> many used ones only weeks old up for sale.
>
> David

[Non-text portions of this message have been removed]

31089. Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 05:02:21 UTC
From: David
Topic: 31070 Message: 31089

Chuck,

I have owned an Icom 746 Pro, and when it was cranked down to a narrow bandwith for CW, the signal sounded like breaking glass. I also owned a Ten Tec OMNI VII, and the dsp on it did not seem impressive, and these are modern rigs.

The two best sounding radios I have owned, are the Ten Tec Corsair II, and my present rig the TS-830S. Both of them had a full complement of crystal filters, and I could listen to them for hours on either SSB or CW without fatigue.

I believe that the two worst things that have happened to Ham Transceivers are General coverage which moved the first IF to a high frequency where the availability of narrow crystal filters at a reasonable cost does not exist, and the use of microprocessors in the same radios to narrow the IF signal.

By going to DSP, the radio manufactures have been able to save a considerable amount of money by eliminating the cost of either crystal or mechanical IF filters, and the result are rigs that sound like crap! It's all about the cost of manufacturing.

Have you seen any of the newer up conversion radios that offer a 500hz filter in the first IF where most of the IMD takes place? Look at the new Kenwood 590S. The narrow 500hz filter is only offered on the bands that are down conversion. The result is the 2khz dynamic range is very degraded on the up conversion bands in the same radio.

Some idiot just did a review of it for this months QST, and saw that the 17 meter rating (up conversion all dsp) on Sherwood engineering's web site was only one step under the 20 meter down conversion rating. He forgot to mention that the 17 meter results were just there for comparison, and the 17 meter results were way down the chart for actual performance. Here is a radio with both up and down conversion, and the performance of the down conversion with true crystal filters comes out way ahead.

If you think I am making this up, just look at the width of the few filters offered for the current up conversion general coverage rigs today. if they re offered at all for the first IF, they are 15 to 25 KHZ wide, and they rely on dsp to make up for it.

so much for my rant. I need to go to work in the morning so I will go to bed.

David - KE6YX

--- In TS-520_820_530_830@yahoogroups.com, "Chuck Goelz" <c.goelz@...> wrote:
>
> Actually Pete & David, I think it would be interesting to present your views on the performance of older radios with crystal filters compared to the modern IF-DSP filter technology... Personally, I don't think DSP capability is quite there yet, but is very close. But I could be wrong... The newest radio that I have is a TS-450SAT. The oldest is my D-Twins. And the 520, and the 440SAT. I love them all, but for everyday use, the 450 (full complement of filters for CW & SSB) wins, hands down! Now, if you want to lend me a

Flex for a few months, it might (or not) change my mind!
>
> Comments??? Or maybe this group shouldn't participate in discussions about new technologies??? Just my drivel...
>
> Cheers, 73,
> Chuck, WA3CEJ
>
> ----- Original Message -----
> From: pmarkavage@...
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, May 01, 2011 11:36 PM
> Subject: Re: [TS-520_820_530_830] Re: cw filters for TS-830S
>
>
>
> I was relating filter performance between the two rigs not what you might
> want or not want to buy or what issues/problems etc. might be related to
> either rig which are not uncommon in the life cycle of any product.
>
> Pete, wa2cwa
>
> On Mon, 02 May 2011 01:01:16 -0000 "David" <davidcuttler@...>
> writes:
> > If I wanted to play with a computer instead of a radio, I would
> > consider a flex, but this discussion is regarding a gentleman who
> > wants to choose filters for his TS-830S, not buy a flex.
> >
> > Regarding SDR, I built a Soft rock, and it was interesting, but I
> > still like my 830S.
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> > All is not perfect in the flex world either. Just read about all the
> > issues folks have had trying to get it to work, and the problems
> > that they have had on the computer side of it. Heck They are still
> > trying to get the 1500 to work on CW, that's why there have been so
> > many used ones only weeks old up for sale.
> >
> > David
>
>
>
>
> [Non-text portions of this message have been removed]
>

31090. Re: [TS-520_820_530_830] Re: cw filters for TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 05:50:36 UTC
From: Chuck Goelz
Topic: 31070 Message: 31090

David,

Nicely presented and clearly thought out. And the first paragraph lends a lot of credibility! Thank you for your response. Maybe it doesn't belong here in the Hybrid group, but I can't think of another group where I could have received such a meaningful reply...

I do hope to hear from "the other side"... Just for balance...

Thank You!!

Cheers, 73,
Chuck WA3CEJ

----- Original Message -----
From: David
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, May 02, 2011 1:02 AM
Subject: [TS-520_820_530_830] Re: cw filters for TS-830S

Chuck,

I have owned an Icom 746 Pro, and when it was cranked down to a narrow bandwith for CW, the signal sounded like breaking glass. I also owned a Ten Tec OMNI VII, and the dsp on it did not seem impressive, and these are modern rigs.

The two best sounding radios I have owned, are the Ten Tec Corsair II, and my present rig the TS-830S. Both of them had a full complement of crystal filters, and I could listen to them for hours on either SSB or CW without fatigue.

I believe that the two worst things that have happened to Ham Transceivers are General coverage which moved the first IF to a high frequency where the availability of narrow crystal filters at a reasonable cost does not exist, and the use of microprocessors in the same radios to narrow the IF signal.

By going to DSP, the radio manufactures have been able to save a considerable amount of money by eliminating the cost of either crystal or mechanical IF filters, and the result are rigs that sound like crap! It's all about the cost of manufacturing.

Have you seen any of the newer up conversion radios that offer a 500hz filter in the first IF where most of the IMD takes place? Look at the new Kenwood 590S. The narrow 500hz filter is only offered on the bands that are down conversion. The result is the 2khz dynamic range is very degraded on the up conversion bands in the same radio.

Some idiot just did a review of it for this months QST, and saw that the 17 meter rating (up conversion all dsp) on Sherwood engineering's web site was only one step under the 20 meter down conversion rating. He forgot to mention that the 17 meter results were just there for comparison, and the 17 meter results were way down the chart for actual performance. Here is a radio with both up and down conversion, and the performance of the

down conversion with true crystal filters comes out way ahead.

If you think I am making this up, just look at the width of the few filters offered for the current up conversion general coverage rigs today. if they re offered at all for the first IF, they are 15 to 25 KHZ wide, and they rely on dsp to make up for it.

so much for my rant. I need to go to work in the morning so I will go to bed.

David - KE6YX

--- In TS-520_820_530_830@yahoogroups.com, "Chuck Goelz" <c.goelz@...> wrote:
>
> Actually Pete & David, I think it would be interesting to present your views on the performance of older radios with crystal filters compared to the modern IF-DSP filter technology... Personally, I don't think DSP capability is quite there yet, but is very close. But I could be wrong... The newest radio that I have is a TS-450SAT. The oldest is my D-Twins. And the 520, and the 440SAT. I love them all, but for everyday use, the 450 (full complement of filters for CW & SSB) wins, hands down! Now, if you want to lend me a Flex for a few months, it might (or not) change my mind!
>
> Comments??? Or maybe this group shouldn't participate in discussions about new technologies??? Just my drivel...
>
> Cheers, 73,
> Chuck, WA3CEJ
>
> ----- Original Message -----
> From: pmarkavage@...
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sunday, May 01, 2011 11:36 PM
> Subject: Re: [TS-520_820_530_830] Re: cw filters for TS-830S
>
>
>
>
> I was relating filter performance between the two rigs not what you might
> want or not want to buy or what issues/problems etc. might be related to
> either rig which are not uncommon in the life cycle of any product.
>
> Pete, wa2cwa
>
> On Mon, 02 May 2011 01:01:16 -0000 "David" <davidcuttler@...>
> writes:
> > If I wanted to play with a computer instead of a radio, I would
> > consider a flex, but this discussion is regarding a gentleman who
> > wants to choose filters for his TS-830S, not buy a flex.
> >
> > Regarding SDR, I built a Soft rock, and it was interesting, but I
> > still like my 830S.
> >
> > All is not perfect in the flex world either. Just read about all the
> > issues folks have had trying to get it to work, and the problems
> > that they have had on the computer side of it. Heck They are still

> > trying to get the 1500 to work on CW, that's why there have been so
> > many used ones only weeks old up for sale.
> >
> > David
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31091. WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 15:18:31 UTC
From: Dennis
Topic: 31091 Message: 31091

Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.

The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.

New lights have been installed and I can see again! HI HI.

One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?

Dennis n5dpk

31092. TS-520 and TVI

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 15:38:00 UTC
From: ki4ax
Topic: 31092 Message: 31092

Mike and the group: I seem to be having a problem with TVI. I am using a TS-520 and have been operating around 14.200 and blank the TV out when transmitting. I am using an inverted v antenna with a 1:1 balun at the feed point. The antenna is cut for the band/frequency that I am operating on. The 20m inverted v is in close proximity to the TV antenna... I have not measured the distance but it looks like 10 to 15 feet. I have operated other antennas, in the past, on different bands and at further distances from the antenna and have always had a problem with TVI. Anyone have any ideas or have had similar experiences? I have been looking in the manuals and schematics for a TVI filter but have not been able to ID anything as such. I know TVI can be fickle but would like to hear about some solutions (the simpler the better) that others have had success with and about any inherent problems with the TS-520 pertaining to TVI, if there is any.

Thanks,

Dan KI4AX

31093. Re: [TS-520_820_530_830] ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 16:13:10 UTC
From: Charles Rodecap
Topic: 31082 Message: 31093

Can you post good quality pictures of this unit? This may get some broad figures.

--- On Sun, 5/1/11, gerryattrick69 <anicholson@adhb.govt.nz> wrote:

From: gerryattrick69 <anicholson@...>
Subject: [TS-520_820_530_830] ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY
To: TS-520_820_530_830@yahoogroups.com
Date: Sunday, May 1, 2011, 6:20 PM

One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver

Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.

I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.

Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.

Any ideas would be most appreciated

[Non-text portions of this message have been removed]

31094. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 16:30:12 UTC
From: ve7fmn
Topic: 31082 Message: 31094

Well here is the bad news that is intended to counter the good news. Yesterday afternoon I spoke to the former owner of a long time ham radio gear store in Vancouver, BC. I say former because though there are still radios being bought and sold, there was not enough traffic to pay the rent so the store front has become former, while the owner has retreated to his garage since the beginning of this year (2011). In the past years Stan really provided a valuable service to the west coast ham community in recycling used ham gear on the shelves alongside his newer offerings. The last two consignment TS-820s went out the door as movie props because no homes could be found for them. They were incinerated inside the special effects stage.
He confirms that while there was interest in the old ways, not one offer over $100.00 to $150.00 for a complete station. Sorry guys, only the faithful will pay to play.
YMMV, but remember how old this stuff is. It will take a lot of elbow grease and some money to bring everything up to the values we would like to see. Cheers

--- In TS-520_820_530_830@yahoogroups.com, "gerryattrick69" <anicholson@...> wrote:
>
> One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver
>
> Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.
>
> I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.
>
> Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.
>
> Any ideas would be most appreciated
>

31095. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 16:27:23 UTC
From: ve7fmn
Topic: 31082 Message: 31095

Well here is the bad news that is intended to counter the good news. Yesterday afternoon I spoke to the former owner of a long time ham radio gear store in Vancouver, BC. I say former because though there are still radios being bought and sold, there was not enough traffic to pay the rent so the store front has become former, while the owner has retreated to his garage since the beginning of this year (2011). In the past years Stan really provided a valuable service to the west coast ham community in recycling used ham gear on the shelves alongside his newer offerings. The last two consignment TS-829s went out the door as movie props because no homes could be found for them. They were incinerated inside the special effects stage. He confirms that while there was interest in the old ways, not one offer over $100.00 to $150.00 for a complete station. Sorry guys, only the faithful will pay to play. YMMV, but remember how old this stuff is. It will take a lot of elbow grease and some money to bring everything up to the values we would like to see. Cheers

--- In TS-520_820_530_830@yahoogroups.com, "gerryattrick69" <anicholson@...> wrote:
>
> One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver
>
> Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.
>
> I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.
>
> Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.
>
> Any ideas would be most appreciated
>

31096. Re: [TS-520_820_530_830] WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 16:58:19 UTC
From: John Davidson
Topic: 31091 Message: 31096

I have a preset button on my car radios for WWJ.
950 kHz, CBS all news format, 50 kW directional north, heard over most of eastern lower Michigan.

From: Dennis <n5dpk1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 2, 2011 11:18:31 AM
Subject: [TS-520_820_530_830] WWV reception

One thing I just noticed. WWJ setting does not work. . Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?

Dennis n5dpk

[Non-text portions of this message have been removed]

31097. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 16:52:34 UTC
From: kd0fds
Topic: 31082 Message: 31097

I paid a $135 adoption fee for my tech special TS-820s tranceiver only.

I would say the radio was in "partially working condition." I've read or seen pictures of worse and it did actually turn on, so I would call it "poor" condition. Just a step up from "bad" where a unit won't even power up.

With the help of this group, I hope to actually make a contact very very soon on the repaired radio.

31098. Re: [TS-520_820_530_830] WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 17:10:43 UTC
From: Dennis Kippa
Topic: 31091 Message: 31098

Sorry about the typo, WWV

On Mon, May 2, 2011 at 11:58 AM, John Davidson <k8jd@...> wrote:

>
>
> I have a preset button on my car radios for WWJ.
> 950 kHz, CBS all news format, 50 kW directional north, heard over most of
> eastern lower Michigan.
>
> _____
> From: Dennis <n5dpk1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, May 2, 2011 11:18:31 AM
> Subject: [TS-520_820_530_830] WWV reception
>
>
> One thing I just noticed. WWJ setting does not work. . Did Kenwood make
> some TS
> 520s without the WWJ receive but leave it on the band select switch?
>
> Dennis n5dpk
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

31099. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 17:23:09 UTC
From: PGA
Topic: 31082 Message: 31099

Over here the TS820 does 300 to 400 Euros, depending on condition, the 9R59 does 100 euro max. In the USA they tend to be cheaper, around the same price in $$.
I monitor the dutch sales for years now, and the prices are going up, some 10%/year, so it is a good investment.

YMMV,

73, Wim Penders PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "ve7fmn" <fsmeier@...> wrote:
>
>
>
>
> Well here is the bad news that is intended to counter the good news. Yesterday afternoon I spoke to the former owner of a long time ham radio gear store in Vancouver, BC. I say former because though there are still radios being bought and sold, there was not enough traffic to pay the rent so the store front has become former, while the owner has retreated to his garage since the beginning of this year (2011). In the past years Stan really provided a valuable service to the west coast ham community in recycling used ham gear on the shelves alongside his newer offerings. The last two consignment TS-820s went out the door as movie props because no homes could be found for them. They were incinerated inside the special effects stage.
> He confirms that while there was interest in the old ways, not one offer over $100.00 to $150.00 for a complete station. Sorry guys, only the faithful will pay to play.
> YMMV, but remember how old this stuff is. It will take a lot of elbow grease and some money to bring everything up to the values we would like to see. Cheers
>
> --- In TS-520_820_530_830@yahoogroups.com, "gerryattrick69" <anicholson@> wrote:
> >
> > One of the guys here at work has been asked to get an idea of the value of A TS 820S and a (KENWOOD)Trio 9-59D Receiver
> >
> > Not only am I new to ham radio and so know very little about value of rigs but there are few hams that I know who might be able to give me an idea.
> >
> > I appreciate that much will depend on condition but I am assuming them to be in good to fair condition to be safe as I have not seen them myself.This is probably the best place to get a response from someone in NZ about the value of one or both rigs.
> >
> > Even an idea of US values would help. I could even be interested in the 820S myself but I would want to be sure that I was not ripping the widow off through ignorance. I'd also like her to have an idea of value if anyone should turn up and make an offer.
> >
> > Any ideas would be most appreciated
> >

>

31100. Re: WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 17:33:50 UTC
From: w5rkl
Topic: 31091 Message: 31100

Dennis, I believe you mean "JJY/WWV" not "WWJ".

JJY/WWV band switch setting has it's own antenna transformer T5 and RF amplifier Q5, it's own local crystal oscillator Q8 (23.895Mhz crystal), and it's own mixer transformer T4 and mixer Q4. These circuits comprise the WWV/JJY RF Unit initial signal path and processing stages.

With the band switch set to WWV/JJY, the 15Mhz signal flows through trap coil T6 then through JJY/WWV antenna transformer T5 to the RF amplifier Q5 where it is amplified. The amplified signal is then applied to mixer Q4 where it is mixed with the JJY/WWV local crystal oscillator signal (Q8), 23.895Mhz, producing a sum and difference signal, where the "Difference" signal, 8.895Mhz (23.895 - 15.000 = 8.895Mhz), becomes the "RIF" signal that is applied to IF Unit over the "RIF" signal path.

I recommend using a signal generator set to 15Mhz, inject the 15Mhz signal at the 520's rear panel antenna connector (SO-239) at a low level, and trace the sig gen signal through the JJY/WWV signal path to locate the source of the JJY/WWV problem. Since the 520 works on other bands, the problem is limited to the JJY/WWV signal path and associated JJY/WWV components.

To follow what I have stated above, study/review the RF Unit schematic in the 520 service and operator's manuals.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@...> wrote:
>
> Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.
>
> The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.
>
> New lights have been installed and I can see again! HI HI.
>
> One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?
>
> Dennis n5dpk
>

31101. Re: 520SE NB board alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 18:28:37 UTC
From: andy_westcott2004
Topic: 31076 Message: 31101

Mike, thanks very much for your excellent decription of the way the noise blanker circuit works, and your description of the phantom noise this type of circuit can generate.

As an update and in the light of what you had written, I think I must have been measuring the voltage at the BASE of Q6, not the collector, hence the 0.6 or so volts I was seeing. This of course would be at a maximum with T6 and T7 peaked, which I was observing.

I'll have another bash and measure at another point - maybe Q6's leads don't conform to the pattern I was assuming.

31102. Re: [TS-520_820_530_830] WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-02 23:55:18 UTC
From: John Davidson
Topic: 31091 Message: 31102

I just had to jump in and promo my favorite news radio station ! :D

----- Original Message ----
From: Dennis Kippa <n5dpk1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 2, 2011 1:10:43 PM
Subject: Re: [TS-520_820_530_830] WWV reception

Sorry about the typo, WWV

On Mon, May 2, 2011 at 11:58 AM, John Davidson <k8jd@...> wrote:

>
>
> I have a preset button on my car radios for WWJ.
> 950 kHz, CBS all news format, 50 kW directional north, heard over most of
> eastern lower Michigan.
>
> _____
> From: Dennis <n5dpk1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, May 2, 2011 11:18:31 AM
> Subject: [TS-520_820_530_830] WWV reception
>
>
> One thing I just noticed. WWJ setting does not work. . Did Kenwood make
> some TS
> 520s without the WWJ receive but leave it on the band select switch?
>
> Dennis n5dpk
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

31103. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 00:07:58 UTC
From: wontgoquietly
Topic: 31082 Message: 31103

I picked up a TS-820s locally in Indiana for $300 last fall. It's not what I would call "mint" as there are some minor scuffs on the lid, but everything else is flawless and it works great.

I think it was worth every penny.

Tim
W9THD

31104. Re: WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 01:20:54 UTC
From: roberteleazer@rocketmail.com
Topic: 31091 Message: 31104

I know that on the TS-820S they use a 15MHZ WWV frequency while on my TS-520 the WWV frequency is 10MHZ.

Did they go to a 15 MHZ WWV freq on the TS-520S?

Thanks,

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Dennis, I believe you mean "JJY/WWV" not "WWJ".
>
> JJY/WWV band switch setting has it's own antenna transformer T5 and RF amplifier Q5, it's own local crystal oscillator Q8 (23.895Mhz crystal), and it's own mixer transformer T4 and mixer Q4. These circuits comprise the WWV/JJY RF Unit initial signal path and processing stages.
>
> With the band switch set to WWV/JJY, the 15Mhz signal flows through trap coil T6 then through JJY/WWV antenna transformer T5 to the RF amplifier Q5 where it is amplified. The amplified signal is then applied to mixer Q4 where it is mixed with the JJY/WWV local crystal oscillator signal (Q8), 23.895Mhz, producing a sum and difference signal, where the "Difference" signal, 8.895Mhz (23.895 - 15.000 = 8.895Mhz), becomes the "RIF" signal that is applied to IF Unit over the "RIF" signal path.
>
> I recommend using a signal generator set to 15Mhz, inject the 15Mhz signal at the 520's rear panel antenna connector (SO-239) at a low level, and trace the sig gen signal through the JJY/WWV signal path to locate the source of the JJY/WWV problem. Since the 520 works on other bands, the problem is limited to the JJY/WWV signal path and associated JJY/WWV components.
>
> To follow what I have stated above, study/review the RF Unit schematic in the 520 service and operator's manuals.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@> wrote:
> >
> > Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.

> >
> > The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.
> >
> > New lights have been installed and I can see again! HI HI.
> >
> > One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?
> >
> > Dennis n5dpk
> >
>

31105. Re: WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 03:37:01 UTC
From: w5rkl
Topic: 31091 Message: 31105

Hi Robert,

Yes, the TS-520S JJY/WWV operates on 15Mhz.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> I know that on the TS-820S they use a 15MHZ WWV frequency while on my TS-520 the WWV frequency is 10MHZ.
>
> Did they go to a 15 MHZ WWV freq on the TS-520S?
>
> Thanks,
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Dennis, I believe you mean "JJY/WWV" not "WWJ".
> >
> > JJY/WWV band switch setting has it's own antenna transformer T5 and RF amplifier Q5, it's own local crystal oscillator Q8 (23.895Mhz crystal), and it's own mixer transformer T4 and mixer Q4. These circuits comprise the WWV/JJY RF Unit initial signal path and processing stages.
> >
> > With the band switch set to WWV/JJY, the 15Mhz signal flows through trap coil T6 then through JJY/WWV antenna transformer T5 to the RF amplifier Q5 where it is amplified. The amplified signal is then applied to mixer Q4 where it is mixed with the JJY/WWV local crystal oscillator signal (Q8), 23.895Mhz, producing a sum and difference signal, where the "Difference" signal, 8.895Mhz (23.895 - 15.000 = 8.895Mhz), becomes the "RIF" signal that is applied to IF Unit over the "RIF" signal path.
> >
> > I recommend using a signal generator set to 15Mhz, inject the 15Mhz signal at the 520's rear panel antenna connector (SO-239) at a low level, and trace the sig gen signal through the JJY/WWV signal path to locate the source of the JJY/WWV problem. Since the 520 works on other bands, the problem is limited to the JJY/WWV signal path and associated JJY/WWV components.
> >
> > To follow what I have stated above, study/review the RF Unit schematic in the 520 service and operator's manuals.
> >
> > 73s

> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@> wrote:
> > >
> > > Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.
> > >
> > > The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.
> > >
> > > New lights have been installed and I can see again! HI HI.
> > >
> > > One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?
> > >
> > > Dennis n5dpk
> > >
> >
>

31106. Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 17:14:35 UTC
From: kd8hmo_us
Topic: 31106 Message: 31106

I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?

31107. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 18:18:03 UTC
From: pmarkavage@juno.com
Topic: 31106 Message: 31107

Exotic or highly specialized tools and test equipment are generally not required to repair them. Unfortunately, the older they get, the harder it becomes to sometimes find unique parts for specific models.

On Tue, 03 May 2011 17:14:35 -0000 "kd8hmo_us" <burwell.rick@...> writes:
> I would love to hear the reasons why we should restore and keep these
> radios in action. When I was a kid in the late 70's and early 80's I
> remember drooling over the ads for them. I know their on-air sound
> is still unbeatable yet today. Im sure there are other advantages
> from the old-school circuitry and designs. Anyone care to add to the
> list?

31108. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 18:55:57 UTC
From: Joseph Stiles
Topic: 31106 Message: 31108

Have you ever marveled at a beautiful old boat, car, motorcycle, or airplane that's been restored and works as new..and still turns heads. Just think of all the "stuff" that could be lost if this never happens...anyway...I think it is just fun..and cool...to have to "operate it" and not just turn it on. my dollars worth...(used to be 2cents).....

73's joe wb7uqu

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 3, 2011 11:18:03 AM
Subject: Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Exotic or highly specialized tools and test equipment are generally not required to repair them. Unfortunately, the older they get, the harder it becomes to sometimes find unique parts for specific models.

On Tue, 03 May 2011 17:14:35 -0000 "kd8hmo_us" <burwell.rick@...> writes:
> I would love to hear the reasons why we should restore and keep these
> radios in action. When I was a kid in the late 70's and early 80's I
> remember drooling over the ads for them. I know their on-air sound
> is still unbeatable yet today. Im sure there are other advantages
> from the old-school circuitry and designs. Anyone care to add to the
> list?

[Non-text portions of this message have been removed]

31109. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 19:27:32 UTC
From: Chris Meyer
Topic: 31106 Message: 31109

That is why it is always good to buy two or more to be able to canibalize for parts....
On May 3, 2011, at 11:18 AM, pmarkavage@... wrote:

> Exotic or highly specialized tools and test equipment are generally not
> required to repair them. Unfortunately, the older they get, the harder it
> becomes to sometimes find unique parts for specific models.
>
> On Tue, 03 May 2011 17:14:35 -0000 "kd8hmo_us" <burwell.rick@...>
> writes:
> > I would love to hear the reasons why we should restore and keep these
> > radios in action. When I was a kid in the late 70's and early 80's I
> > remember drooling over the ads for them. I know their on-air sound
> > is still unbeatable yet today. Im sure there are other advantages
> > from the old-school circuitry and designs. Anyone care to add to the
> > list?
>

[Non-text portions of this message have been removed]

31110. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 20:12:46 UTC
From: Geoff Hegarty
Topic: 31106 Message: 31110

It was the 70s, when analog technology was at its peak. This is recognised in the audio equipment of the period which is also revered and widely collected. Microprocessors appeared shortly after our hybrids were designed, heralding digitally controlled radio (and digital everything else). Digital gear tends to exclude the user - it doesn't allow the freedom to play with it as much - so it was the end of an era in that sense as well. Beautifully designed front panels - lots of knobs that you can feel are actually doing something - so there's an aesthetic and touchy-feely sense to them which is very appealing to the user. Very human radios.

Geoff
VK2HQA

_____
From: kd8hmo_us <burwell.rick@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 4 May 2011 3:14 AM
Subject: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?

[Non-text portions of this message have been removed]

31111. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 21:02:17 UTC
From: roberteleazer@rocketmail.com
Topic: 31106 Message: 31111

The reason I bought first my TS-520 and fixed it and then my TS-820S and fixed it as well is that you will not find better - or even equal - performance for the price.

I also have a Heathkit HW-100 I am - slowly - working on to get operational. But while there is an aura about the American-made Heathkits that nothing else has, I think that at its best that rig will never come up to the performance of the 520 and 820, and it is only a little bit cheaper than the Kenwoods at today's prices.

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo_us" <burwell.rick@...> wrote:
>
> I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?
>

31112. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 21:17:43 UTC
From: Dennis Kippa
Topic: 31106 Message: 31112

If you ever restored a 65 Mustang and drove it after you put in all that work, you know why it is worth bringing a old Kenwood back to life.

Dennis n5dpk

On Tue, May 3, 2011 at 12:14 PM, kd8hmo_us <burwell.rick@...> wrote:

>
>
> I would love to hear the reasons why we should restore and keep these
> radios in action. When I was a kid in the late 70's and early 80's I
> remember drooling over the ads for them. I know their on-air sound is still
> unbeatable yet today. Im sure there are other advantages from the old-school
> circuitry and designs. Anyone care to add to the list?
>
>
>

[Non-text portions of this message have been removed]

31113. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 21:19:18 UTC
From: Jojo Vicencio DU1VHY
Topic: 31106 Message: 31113

Have you seen the look in the eyes of the new hams whenever they watch you tune the TS-520? That in itself is worth the money.

73,

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

From: kd8hmo_us <burwell.rick@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 4, 2011 1:14:35 AM
Subject: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?

[Non-text portions of this message have been removed]

31114. TS 820s power cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 21:31:03 UTC
From: John
Topic: 31114 Message: 31114

Thanks to those who responded to my recent request for the wiring for the TS820s power cord. A new cord was wired but the rig still does not power up. No 120 power is getting to the transformer. The switch and fuse check OK. A Kenwood commercial radio tech is currently looking at the rig and believes there may be a wiring difference between the TS 820 and the TS820s. Any tips or suggestions? Thanks in advance.

WA8KIW

31115. Re: [TS-520_820_530_830] TS 820s power cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 21:42:05 UTC
From: n6wk@n6wk.com
Topic: 31114 Message: 31115

There is NO wiring difference between the TS-820 and the TS-820S
Be sure to look at the Cinch Jones connector carefully and wire by the terminal number, not by looking as some of the views shown in the manual are actually the reverse side.
The terminal numbers would be correct though.
here is the wiring
http://www.n6wk.com/kenwood/TS-820S-%20High%20Res%20Schematic.pdf
Bottom of page 1 towards the Left side shows the PLUG wiring. The rig wiring for the plug is over on the bottom right of page 2.
Be sure to check S-16 Power switch, to be sure it works.

Gordon

On 5/3/2011 2:31 PM, John wrote:
>
> Thanks to those who responded to my recent request for the wiring for
> the TS820s power cord. A new cord was wired but the rig still does not
> power up. No 120 power is getting to the transformer. The switch and
> fuse check OK. A Kenwood commercial radio tech is currently looking at
> the rig and believes there may be a wiring difference between the TS
> 820 and the TS820s. Any tips or suggestions? Thanks in advance.
>
> WA8KIW
>
>

--
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31116. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 22:14:13 UTC
From: andy_westcott2004
Topic: 31106 Message: 31116

I feel they represent the last line of equipment where a novice could look inside and actually recognise some of the components.

With modern LSI and surface mount designs this is not the case - the circuit boards look... boring.

Inside a Kenwood hybrid you can actually see it working, you can see the variable capcitors being moved by a shaft or delicate chains and best of all, those glass thingies that get hot!

Besides by beloved 520 I also have a couple of 430s, these latter radios probably being the most recent TX equipment I will ever buy - I just do not like menus where you have to dig deep just to alter what should be accessible via a front panel knob.

Then there's that smell...
Open the case and sniff the circuit boards - that's REAL electronics. :)

31117. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 22:26:25 UTC
From: Jojo Vicencio DU1VHY
Topic: 31106 Message: 31117

My friends on the air in DU-land know when I am using the TS-520. The other rig I have is the TS-570 D/G. I use a public address paging mic with my 520 and the audio is just wonderful. No equalizer in between.

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

From: kd8hmo_us <burwell.rick@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 4, 2011 1:14:35 AM
Subject: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?

[Non-text portions of this message have been removed]

31118. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-03 23:51:44 UTC
From: rkeuler
Topic: 31106 Message: 31118

Besides the outstanding performance the old Kenwood rigs provided, I think there was more room for quality construction, and quality was important in those years. Now everything is so competitive that all the engineering is a compromise between performance vs low cost, with no room for cosmetics. The Kenwoods were good design, quality construction, and beautiful design, and always worth restoring.

I also like the performance of the current black box rigs, but I hate looking at them. :-)

Ron WB9BDZ

[Non-text portions of this message have been removed]

31119. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 00:21:28 UTC
From: Bryan Sanders
Topic: 31106 Message: 31119

The Kenwood hybrids are like a 52 Mercury or a 69 Chevelle...classics. They were built during the era of quality. That is why they are still around. The receive was outstanding, the output power was above average, and most of all easy to operate. You would be hard pressed to find a heartier tube than the 6146's. They had a really classy look to them and the audio is hard to beat. I have owned an 820s, 830s, and a 520. I currently own the 520 and kick myself for getting rid of my 830s. Someday I will have another 830s.

--
Bryan

[Non-text portions of this message have been removed]

31120. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 01:12:46 UTC
From: AI4WM Bill
Topic: 31106 Message: 31120

Less expensive, better sounding and better quality than the new stuff.
Plus no menus, not digital (ok CW--the original digital mode), and just plain fun to use, restore & repair if needed.
73,

Bill

AI4WM

--- On Tue, 5/3/11, kd8hmo_us <burwell.rick@...> wrote:

From: kd8hmo_us <burwell.rick@...>
Subject: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, May 3, 2011, 1:14 PM

I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?

[Non-text portions of this message have been removed]

31121. part question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 02:01:29 UTC
From: Joseph Stiles
Topic: 31121 Message: 31121

Greetings group,

A short time ago there was a message thread concerning the numbers on the various circuit boards. This involved the number(s) on the FOIL side, I guess it denotes production changes...and from what I understand some boards are not interchangeable(same model) unless the number on the back of the board is the same. Is this correct?

73's joe wb7uqu

[Non-text portions of this message have been removed]

31122. Re: [TS-520_820_530_830] Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 03:50:12 UTC
From: jeffrey lord
Topic: 31106 Message: 31122

Andy ,

I agree whole heartedly , I have a TS 520S, and when I am asked about my Radio , other Amatuers congratulate me on the choice of SET.

Thes HYBRID sets are maore forgiving with high antenna mismatch, have better transmit and rec audio than modern solid state equipment.

Fine some do not have all the bells and whistles, but it is a joy to operate a set with KNOBS and not KEY PAD.

MAY THEY LIVE LONG AND PROSPER.
Leff
VK4FNRS

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, 3 May 2011 2:14 PM
Subject: Re: [TS-520_820_530_830] Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

I feel they represent the last line of equipment where a novice could look inside and actually recognise some of the components.

With modern LSI and surface mount designs this is not the case - the circuit boards look... boring.

Inside a Kenwood hybrid you can actually see it working, you can see the variable capcitors being moved by a shaft or delicate chains and best of all, those glass thingies that get hot!

Besides by beloved 520 I also have a couple of 430s, these latter radios probably being the most recent TX equipment I will ever buy - I just do not like menus where you have to dig deep just to alter what should be accessible via a front panel knob.

Then there's that smell...
Open the case and sniff the circuit boards - that's REAL electronics. :)

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31123. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 04:17:21 UTC
From: Alan Nicholson (ADHB)
Topic: 31082 Message: 31123

Thanks for your input guys.

I have passed on the comment verbatim and suggested that, although I was interested I could not offer what I considered a reasonable price and that he might like to put them up on TradeMe (local Ebay) with a reserve and I would be happy to put in an initial bid to get things going.

He has countered with an offer to me to take the whole lot for $NZ200 and I have accepted and will take them tonight.

I am not sure that I actually want the receiver myself - I will wait until I have it in my hands and decide. If I don't keep it and sell it on then I will make sure he gets the money that I get for it.

Hmmm....I only really wanted the 520S when I started getting interested but somehow I now seem to have an almost full set with a 520S,530S &820S...and I still do not have my Certificate or a VHF/UHF rig. What goes nicely with the sets I have? Decisions, decisions.

Oh well as a couple of older hams have said "You can never have too many radios"

I hate to break the news to my XYL as she is already complaining about the PCs I have collected...time to rationalise I think. Maybe I need to splash out on a set of HS5 headphones now as she is complaining about me drowning out the TV...or maybe I should move out of the dining room and into the study

Back to my study for the licence

73

Alan Nicholson

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Scanned by MailMarshal - Marshal8e6's comprehensive email content security solution.
Download a free evaluation of MailMarshal at www.marshal.com
##

31124. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 06:33:59 UTC
From: Walter Breining
Topic: 31106 Message: 31124

Great thread. Thank you for posting it.
Vy 73, Walt N9WB

----- Original Message -----
From: "Chris Meyer" <chrismeyer100@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 03, 2011 2:27 PM
Subject: Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

> That is why it is always good to buy two or more to be able to canibalize
> for parts....
> On May 3, 2011, at 11:18 AM, pmarkavage@... wrote:
>
>> Exotic or highly specialized tools and test equipment are generally not
>> required to repair them. Unfortunately, the older they get, the harder it
>> becomes to sometimes find unique parts for specific models.
>>
>> On Tue, 03 May 2011 17:14:35 -0000 "kd8hmo_us" <burwell.rick@...>
>> writes:
>> > I would love to hear the reasons why we should restore and keep these
>> > radios in action. When I was a kid in the late 70's and early 80's I
>> > remember drooling over the ads for them. I know their on-air sound
>> > is still unbeatable yet today. Im sure there are other advantages
>> > from the old-school circuitry and designs. Anyone care to add to the
>> > list?
>>
>
>
>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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31125. Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 10:35:04 UTC
From: jwpjj@aol.com
Topic: 31106 Message: 31125

Just me 2 cents. I own a wonderful TS-530s and its still ticking. The audio from it and out of it is outstanding. Its easy to tune to jump from band to band, yes its a learning curve, but so much easier than digging for menus in the newer radios of today. Someone mentioned its like driving a 52 Merc or 69 chevelle, lets add a 56 Chevy Convertible to that feeling.

-----Original Message-----
From: Walter Breining <n9wb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 4, 2011 2:33 am
Subject: Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Great thread. Thank you for posting it.
Vy 73, Walt N9WB

----- Original Message -----
From: "Chris Meyer" <chrismeyer100@sbcglobal.net>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 03, 2011 2:27 PM
Subject: Re: [TS-520_820_530_830] Reasons Why The Kenwood Hybrids Should be Restored And Collected?

> That is why it is always good to buy two or more to be able to canibalize
> for parts....
> On May 3, 2011, at 11:18 AM, pmarkavage@... wrote:
>
>> Exotic or highly specialized tools and test equipment are generally not
>> required to repair them. Unfortunately, the older they get, the harder it
>> becomes to sometimes find unique parts for specific models.
>>
>> On Tue, 03 May 2011 17:14:35 -0000 "kd8hmo_us" <burwell.rick@...>
>> writes:
>> > I would love to hear the reasons why we should restore and keep these
>> > radios in action. When I was a kid in the late 70's and early 80's I
>> > remember drooling over the ads for them. I know their on-air sound
>> > is still unbeatable yet today. Im sure there are other advantages
>> > from the old-school circuitry and designs. Anyone care to add to the
>> > list?
>>
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>
> [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31126. Re: part question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 10:48:17 UTC
From: w5rkl
Topic: 31121 Message: 31126

Morning Joe,

What you are referring to is my comments about replacing boards in the hybrids and my experience replacing the AF AVR UNIT board in my 820.

The 820 service manual, page 57, shows a schematic and transparent picture of the AF AVR UNIT board. The schematic is for an AF AVR UNIT board with a foil side "J25-1381-13" number BUT the transparent picture is for an AF AVR UNIT board with a "J25-1381-03" foil side number board. These 2 boards are not interchangeable even though they will fit in any 820 and the plugs will plug into the board in any 820.

I said it "appears" that the foil side numbers indicate differences in board circuit design and when replacing boards, make sure the foil side board numbers are the same.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> A short time ago there was a message thread concerning the numbers on the
> various circuit boards. This involved the number(s) on the FOIL side, I guess it
> denotes production changes...and from what I understand some boards are not
> interchangeable(same model) unless the number on the back of the board is the
> same. Is this correct?
>
> 73's joe wb7uqu
>
>
> [Non-text portions of this message have been removed]
>

31127. Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 11:41:44 UTC
From: f5bcz
Topic: 31127 Message: 31127

Hi all,

I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
Someone he made the change and is it effective ?

Many thanks

31128. Re: WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 14:30:14 UTC
From: gregg.paynter
Topic: 31091 Message: 31128

Use a plastic rod or similar non conductive screwdriver etc. to tap on items in the signal path. If you suddenly get reception when tapping on a particular component, turn it off and resolder that part. That's how I fixed the same wwv problem on mine. if no joy, then break out the oscilliscope and trace the injected signal to find the problem.

over the years, with unequal coefficients of expansion and contraction, its not unusual for joints to work loose.

--- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@...> wrote:
>
> Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.
>
> The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.
>
> New lights have been installed and I can see again! HI HI.
>
> One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?
>
> Dennis n5dpk
>

31129. 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 15:03:23 UTC
From: w9glc
Topic: 31129 Message: 31129

About one year ago I acquired a Kenwood 820s. The condition is good and I use it regularly. I like this radio a lot but am not a tech and have no idea how to service it. My idea of servicing anything is to get a bigger hammer. So I will leave it to the pros. A full restoration is not needed at all. I think tune up is in order. The radio does drift off frequency a bit even after hours of operation, not a big problem but not sure if this is common. I think new tubes are in order as I am sure I am not getting full power. I also don't think I am getting full band coverage on each band, mostly 10 and 15 meters. Does anyone have any ideas for work to be done when I have a tune up done? Some day I would like to upgrade to a 830s Gold Edition that is in excellent condition and keep the 820s in reserve. Thanks for the help !

31130. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 16:17:18 UTC
From: w5rkl
Topic: 31129 Message: 31130

How do you know the tubes need to be replaced? What is telling you the tubes need to be replaced?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w9glc" <gcooper76@...> wrote:
>
> About one year ago I acquired a Kenwood 820s. The condition is good and I use it regularly. I like this radio a lot but am not a tech and have no idea how to service it. My idea of servicing anything is to get a bigger hammer. So I will leave it to the pros. A full restoration is not needed at all. I think tune up is in order. The radio does drift off frequency a bit even after hours of operation, not a big problem but not sure if this is common. I think new tubes are in order as I am sure I am not getting full power. I also don't think I am getting full band coverage on each band, mostly 10 and 15 meters. Does anyone have any ideas for work to be done when I have a tune up done? Some day I would like to upgrade to a 830s Gold Edition that is in excellent condition and keep the 820s in reserve. Thanks for the help !
>

31131. Re: Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 16:19:50 UTC
From: w5rkl
Topic: 31127 Message: 31131

The 830 has an audio response between 400Hz to 2.6Khz. Since your voice tone is primary bass frequencies, changing capacitors will only cause the low end frequencies to drop off sooner than 400Hz. I wouldn't change anything in the 830, leave it alone.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "f5bcz" <f5bcz@...> wrote:
>
> Hi all,
>
> I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
> Someone he made the change and is it effective ?
>
> Many thanks
>

31132. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 16:21:29 UTC
From: Bill
Topic: 31106 Message: 31132

Hi,

I have the 599 Twins. I have used 520's and 820's - usually at Field Day. There have already been some very good comments about these radios. It is possible to get better receive performance but it's not trivial. I am not really familiar with the 530/830 radios but I like to dig out really weak signals in the CW mode. I turn off the computers and anything else *digital* that is under my control because I can hear the background 'noise' drop when I do. That is far below anything that moves the S-meters. Did you ever hear about QRP operation?

In my experience the newer gear automatically selects the receive filter for you (because you are too dumb to make your own choices). I often open up the filtering and my R-599 allows me to use whatever filter I want (I have a full set of filters). Sometimes it's less fatiguing to use the gray filter between the ears than the narrowest filters in the radios.

The transmitters are pretty rugged and reliable. We can get parts without too much trouble. I have already had to make substitutions for some of the solid state parts. I think that an IC failure would only require a little bit of study to select a substitute or other workaround.

I have radios and test gear here made in the 30s, 40's and 50's and all of it still works just fine. Obviously gear that old is subject to failures but also we can get parts. It's fun and easy to use all of those oldies. How long do you suppose the fancy new radios will last? My Kenwood was made over 40 years ago. Where do you suppose the new computer controlled, self operating radios will be in 40 years?

73,

Bill KU8H

MI QRP Club M-1778

31133. Re: WWV reception

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 16:23:11 UTC
From: w5rkl
Topic: 31091 Message: 31133

Dennis,

It is quite possible a previous owner has messed with the JJY/WWV RF Unit adjustment which will affect the JJY/WWV receive signal level.

Since you "can" hear the calibrator signal with the band switch set to JJY/WWV then I would check the JJY/WWV RF Unit alignment first before doing anything else. Do you have the 520S service manual? If not then I recommend downloading it from Gordon's website;

www.n6wk.com/kenwood/

and review the alignment instructions.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Dennis" <n5dpk1@...> wrote:
>
> Let me first thank many of you for helping get this basket case TS 520s working well once again. It has been fun.
>
> The 80 meter crystal fixed the problem on that band and 160 meters now produces 95 watts output.
>
> New lights have been installed and I can see again! HI HI.
>
> One thing I just noticed. WWJ setting does not work. No receive but I do hear a weak 25 kc calibrator signal. The schematic shows adjusting coils for that band. My radio does not have these adjustments. Did Kenwood make some TS 520s without the WWJ receive but leave it on the band select switch?
>
> Dennis n5dpk
>

31134. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 16:51:27 UTC
From: w9glc
Topic: 31129 Message: 31134

To be honest I don't know. I am getting about 50-60 watts out so my thought was the tubes. Remember, I am a bigger hammer technician only

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> How do you know the tubes need to be replaced? What is telling you the tubes need to be replaced?
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w9glc" <gcooper76@> wrote:
> >
> > About one year ago I acquired a Kenwood 820s. The condition is good and I use it regularly. I like this radio a lot but am not a tech and have no idea how to service it. My idea of servicing anything is to get a bigger hammer. So I will leave it to the pros. A full restoration is not needed at all. I think tune up is in order. The radio does drift off frequency a bit even after hours of operation, not a big problem but not sure if this is common. I think new tubes are in order as I am sure I am not getting full power. I also don't think I am getting full band coverage on each band, mostly 10 and 15 meters. Does anyone have any ideas for work to be done when I have a tune up done? Some day I would like to upgrade to a 830s Gold Edition that is in excellent condition and keep the 820s in reserve. Thanks for the help !
> >
>

31135. Re: [TS-520_820_530_830] Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 17:39:14 UTC
From: Chris Meyer
Topic: 31106 Message: 31135

Bill, any idea of what test gear wwould be necessary to be able to tube gear, and hybrids like the Kenwoods?

Chris
KI6EQW
On May 4, 2011, at 9:21 AM, Bill wrote:

> Hi,
>
> I have the 599 Twins. I have used 520's and 820's - usually at Field Day. There have already been some very good comments about these radios. It is possible to get better receive performance but it's not trivial. I am not really familiar with the 530/830 radios but I like to dig out really weak signals in the CW mode. I turn off the computers and anything else *digital* that is under my control because I can hear the background 'noise' drop when I do. That is far below anything that moves the S-meters. Did you ever hear about QRP operation?
>
> In my experience the newer gear automatically selects the receive filter for you (because you are too dumb to make your own choices). I often open up the filtering and my R-599 allows me to use whatever filter I want (I have a full set of filters). Sometimes it's less fatiguing to use the gray filter between the ears than the narrowest filters in the radios.
>
> The transmitters are pretty rugged and reliable. We can get parts without too much trouble. I have already had to make substitutions for some of the solid state parts. I think that an IC failure would only require a little bit of study to select a substitute or other workaround.
>
> I have radios and test gear here made in the 30s, 40's and 50's and all of it still works just fine. Obviously gear that old is subject to failures but also we can get parts. It's fun and easy to use all of those oldies. How long do you suppose the fancy new radios will last? My Kenwood was made over 40 years ago. Where do you suppose the new computer controlled, self operating radios will be in 40 years?
>
> 73,
>
> Bill KU8H
>
> MI QRP Club M-1778
>
>

[Non-text portions of this message have been removed]

31136. Re: [TS-520_820_530_830] Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 19:01:03 UTC
From: John Davidson
Topic: 31129 Message: 31136

Is this on SSB or CW/??
CW key down, loaded and dipped Plate current 200 MA on any band below 15 M
should yeild 100 W output on as known good wattmeter,
SSB on voice peaks on most watt meters about 20-30 watts is normal, much more
will be distorted..

From: w9glc <gcooper76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 4, 2011 12:51:27 PM
Subject: [TS-520_820_530_830] Re: 820s Tune Up

To be honest I don't know. I am getting about 50-60 watts out so my thought was
the tubes. Remember, I am a bigger hammer technician only

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> How do you know the tubes need to be replaced? What is telling you the tubes
>need to be replaced?
>
> 73s
> Mike
> W5RKL
>

[Non-text portions of this message have been removed]

31137. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 20:48:52 UTC
From: james27613
Topic: 31106 Message: 31137

Hi,

Before I got my General license I snapped up my TS-520 with matching vfo, speaker and the Spectronics DFD-K nixie tube digital display.
It was in great shape, just needed a normal cleaning and deoxit.

I got the radio for the educational factor, you've got to work a bit
to get the radio tuned instead of using a keypad on the new radios.

I get a kick out of using PSK with the 520.

I also have the 530 that I also enjoy using.

73 james ke4drn

31138. Re: [TS-520_820_530_830] Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 22:11:00 UTC
From: Walter Breining
Topic: 31127 Message: 31138

This change slightly raises the high frequency audio limit and makes the radio be slightly more full and less pinched. I think that this change would slightly benefit almost any voice. It will help some but I do not think that it will totally solve your problem.

If your mike is not an MC35-S it is the wrong impedance for a TS 830.
The MC 35-S is high impedance and is the correct match for your radio but the MC-35 that is not the S model is 500 ohms and will be a bit weak on your radio.

Even the MC 35-S is probably not the best choice for your radio. Heil sound can provide you with a good sounding mike for your voice. Be sure to tell them what radio you have and your problem with a bassy or muffled sound.

There are other solutions. A Astatic D-104 will be higher pitched. A non amplified one will be extremely higher pitched on your radio. It may sound too high or thin. A D-104 on a amplified stand will still be higher pitched but not as much. A D-104 with the FET mod that is in the files section of this group will be flatter yet but still have lots of articulation. If you do go with an amplified D-104, use the TUG-8 stand and not the TUG-9 stand. The TUG-9 stand does not work as well although it can be modified to act like the TUG-8. It is a bit of work to do.

A Shure 444 or a Shure 444D will have a higher response than the MC-35 and may be a good choice. The best choice of the two probably would be the 444 that is not the D model. It is high impedance only. The 444D is dual impedance and seems a bit flatter. The D model should be run on high impedance with your Kenwood.

Some of the very old Shure mikes, both desk and hand mikes from the 60s were ceramic and were high impedance. Ceramic mikes have a great deal of high frequency rise. Not all ceramic mikes were high impedance but most were. These were used on very olde CB rigs especially tube type, and commercial two way radios. Some very early PA paging mikes were also of this type.

Last but not least, if your MC-35 is the S model, try placing a .02 microfarad capacitor in series with the live mike audio lead. As a temporary test that can be done at the plug. This will drop the level a bit so you will need to increase the mike gain.

I doubt if the MC-50 or MC-60 will help much but if you can borrow one, try it. It should be set for high impedance. Note that some of the MC-60 mikes had a wiring error inside of the mike itself. This results in weird sounds, RF problems, and bad audio, particularly with the pre amp on. It can be fixed, contact me if you run into this. The schematic on the MC-60 instruction sheet was also in error. Not all MC-60 mikes had this problem and it was more frequent in the MC-60 A. The MC-50 did not have this problem.

Grab mikes that are laying around and try them. I knew a ham that had fantastic audio and he was always asked what mike he used. It was a early 1960 vintage curled cord PTT, Lafayette Radio Ceramic hand mike that sold for $12.50 US new and came on an olde Lafayette HE-20C CB radio.

Vy 73, Walt N9WB

----- Original Message -----
From: f5bcz
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 04, 2011 6:41 AM
Subject: [TS-520_820_530_830] Audio Improvement in TS830S

Hi all,

I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
Someone he made the change and is it effective ?

Many thanks

[Non-text portions of this message have been removed]

31139. Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 21:49:33 UTC
From: ktwhy2003
Topic: 31139 Message: 31139

Last night, about 3AM ET I make my first ever Australian contact, but I seem to have gotten his cal sign wrong and doesn't show up on QRZ.

I'm wondering if there's a good way to record contacts (probably to my PC since it's on the same desk) so when something like this happens again, I have a better chance of getting the callsign from a recording later.

any suggestions are welcome..

Kent
VE3KNT

31140. Re: [TS-520_820_530_830] Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-04 21:56:25 UTC
From: n6wk@n6wk.com
Topic: 31139 Message: 31140

Kent,
what was his call (as you copied) and what time UTC?

Gordon
N6WK

On 5/4/2011 2:49 PM, ktwhy2003 wrote:
>
> Last night, about 3AM ET I make my first ever Australian contact, but
> I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
>
> I'm wondering if there's a good way to record contacts (probably to my
> PC since it's on the same desk) so when something like this happens
> again, I have a better chance of getting the callsign from a recording
> later.
>
> any suggestions are welcome..
>
> Kent
> VE3KNT
>
>

--
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31141. Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:02:43 UTC
From: ktwhy2003
Topic: 31139 Message: 31141

I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent threw me off. I asked him to say his call again, but I guess he didn't hear me and went qtr shortly afterwords. I heard him say something about my audio (keep i mind I just got the TS830 on the air, so I'm not use to setting it all up) but he did read my call back ok.

At the very least, I know I made the contact, and that's what matters most. It sounded like it was a regular meeting time for a groups, so I'll try to listen in again around the same time tonight and might get lucky..

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Kent,
> what was his call (as you copied) and what time UTC?
>
> Gordon
> N6WK
>
>
> On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> >
> > Last night, about 3AM ET I make my first ever Australian contact, but
> > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> >
> > I'm wondering if there's a good way to record contacts (probably to my
> > PC since it's on the same desk) so when something like this happens
> > again, I have a better chance of getting the callsign from a recording
> > later.
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> > any suggestions are welcome..
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> > Kent
> > VE3KNT
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> >
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31142. Re: [TS-520_820_530_830] Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:15:14 UTC
From: W2FID
Topic: 31127 Message: 31142

HI WALT :
DO YOU HAVE THE CORRECT WIREING PINOUT FOR THE MC 60A? IF SO, MAYBE IT WOULD BE A GOOD IDEA TO POST IT FOR THE MEMBERS OF THE GROUP. IT SEEMS FROM PRIOR POSTINGS THAT MANY MEMBERS OF THIS GROUP HAVE HAD PROBLEMS WITH THIS MICROPHONE BECAUSE OF THE INCORRECT WIREING.
MARSHALL W2FID

--- On Wed, 5/4/11, Walter Breining <n9wb@...> wrote:

From: Walter Breining <n9wb@...>
Subject: Re: [TS-520_820_530_830] Audio Improvement in TS830S
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 4, 2011, 3:11 PM

This change slightly raises the high frequency audio limit and makes the radio be slightly more full and less pinched. I think that this change would slightly benefit almost any voice. It will help some but I do not think that it will totally solve your problem.

If your mike is not an MC35-S it is the wrong impedance for a TS 830.
The MC 35-S is high impedance and is the correct match for your radio but the MC-35 that is not the S model is 500 ohms and will be a bit weak on your radio.

Even the MC 35-S is probably not the best choice for your radio. Heil sound can provide you with a good sounding mike for your voice. Be sure to tell them what radio you have and your problem with a bassy or muffled sound.

There are other solutions. A Astatic D-104 will be higher pitched. A non amplified one will be extremely higher pitched on your radio. It may sound too high or thin. A D-104 on a amplified stand will still be higher pitched but not as much. A D-104 with the FET mod that is in the files section of this group will be flatter yet but still have lots of articulation. If you do go with an amplified D-104, use the TUG-8 stand and not the TUG-9 stand. The TUG-9 stand does not work as well although it can be modified to act like the TUG-8. It is a bit of work to do.

A Shure 444 or a Shure 444D will have a higher response than the MC-35 and may be a good choice. The best choice of the two probably would be the 444 that is not the D model. It is high impedance only. The 444D is dual impedance and seems a bit flatter. The D model should be run on high impedance with your Kenwood.

Some of the very old Shure mikes, both desk and hand mikes from the 60s were ceramic and were high impedance. Ceramic mikes have a great deal of high frequency rise. Not all ceramic mikes were high impedance but most were. These were used on very olde CB rigs especially tube type, and commercial two way radios. Some very early PA paging mikes were also of this type.

Last but not least, if your MC-35 is the S model, try placing a .02 microfarad capacitor in series with the live mike audio lead. As a temporary test that can be done at the plug.

This will drop the level a bit so you will need to increase the mike gain.

I doubt if the MC-50 or MC-60 will help much but if you can borrow one, try it. It should be set for high impedance. Note that some of the MC-60 mikes had a wiring error inside of the mike itself. This results in weird sounds, RF problems, and bad audio, particularly with the pre amp on. It can be fixed, contact me if you run into this. The schematic on the MC-60 instruction sheet was also in error. Not all MC-60 mikes had this problem and it was more frequent in the MC-60 A. The MC-50 did not have this problem.

Grab mikes that are laying around and try them. I knew a ham that had fantastic audio and he was always asked what mike he used. It was a early 1960 vintage curled cord PTT, Lafayette Radio Ceramic hand mike that sold for $12.50 US new and came on an olde Lafayette HE-20C CB radio.

Vy 73, Walt N9WB

----- Original Message -----
From: f5bcz
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 04, 2011 6:41 AM
Subject: [TS-520_820_530_830] Audio Improvement in TS830S

Hi all,

I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
Someone he made the change and is it effective ?

Many thanks

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31143. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:22:02 UTC
From: Sandy
Topic: 31139 Message: 31143

Kent...

QRZ shows:

VK5BZ

CB ZERBE

5 CHELMSFORD GROVE

ANDREWS FARM, SA 5114,

Australia

73,

n9pgo - Sandy

On 5/4/2011 7:02 PM, ktwhy2003 wrote:
>
> I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent
> threw me off. I asked him to say his call again, but I guess he didn't
> hear me and went qtr shortly afterwords. I heard him say something
> about my audio (keep i mind I just got the TS830 on the air, so I'm
> not use to setting it all up) but he did read my call back ok.
>
> At the very least, I know I made the contact, and that's what matters
> most. It sounded like it was a regular meeting time for a groups, so
> I'll try to listen in again around the same time tonight and might get
> lucky..
>
> Kent
> VE3KNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Kent,
> > what was his call (as you copied) and what time UTC?
> >
> > Gordon
> > N6WK
> >
> >
> > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > >
> > > Last night, about 3AM ET I make my first ever Australian contact, but

> > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > >
> > > I'm wondering if there's a good way to record contacts (probably
> to my
> > > PC since it's on the same desk) so when something like this happens
> > > again, I have a better chance of getting the callsign from a
> recording
> > > later.
> > >
> > > any suggestions are welcome..
> > >
> > > Kent
> > > VE3KNT
> > >
> > >
> >
> > --
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>

[Non-text portions of this message have been removed]

31144. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:22:01 UTC
From: n6wk@n6wk.com
Topic: 31139 Message: 31144

OK, On checking the Cluster record for May 4th, I see onlyVK6WC on
14.145 at 07:06

Don't know if it was him

Gordon
N6WK

On 5/4/2011 5:02 PM, ktwhy2003 wrote:
>
> I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent
> threw me off. I asked him to say his call again, but I guess he didn't
> hear me and went qtr shortly afterwords. I heard him say something
> about my audio (keep i mind I just got the TS830 on the air, so I'm
> not use to setting it all up) but he did read my call back ok.
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> At the very least, I know I made the contact, and that's what matters
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> I'll try to listen in again around the same time tonight and might get
> lucky..
>
> Kent
> VE3KNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Kent,
> > what was his call (as you copied) and what time UTC?
> >
> > Gordon
> > N6WK
> >
> >
> > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > >
> > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > >
> > > I'm wondering if there's a good way to record contacts (probably
> to my
> > > PC since it's on the same desk) so when something like this happens
> > > again, I have a better chance of getting the callsign from a
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> > > later.
> > >

> > > any suggestions are welcome..
> > >
> > > Kent
> > > VE3KNT
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31145. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:30:40 UTC
From: Sandy
Topic: 31139 Message: 31145

Kent...

I use the SignaLink USB to record and playback - but on my TS-940 using
Audacity. I would imagine it would work
with any radio including the TS-830. Also should work with any sound
card. I would use isolation xformers with just the soundcard though.

n9pg0 - Sandy

On 5/4/2011 7:02 PM, ktwhy2003 wrote:
>
> I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent
> threw me off. I asked him to say his call again, but I guess he didn't
> hear me and went qtr shortly afterwords. I heard him say something
> about my audio (keep i mind I just got the TS830 on the air, so I'm
> not use to setting it all up) but he did read my call back ok.
>
> At the very least, I know I made the contact, and that's what matters
> most. It sounded like it was a regular meeting time for a groups, so
> I'll try to listen in again around the same time tonight and might get
> lucky..
>
> Kent
> VE3KNT
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Kent,
> > what was his call (as you copied) and what time UTC?
> >
> > Gordon
> > N6WK
> >
> >
> > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > >
> > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > >
> > > I'm wondering if there's a good way to record contacts (probably
> to my
> > > PC since it's on the same desk) so when something like this happens
> > > again, I have a better chance of getting the callsign from a
> recording
> > > later.

> > >
> > > any suggestions are welcome..
> > >
> > > Kent
> > > VE3KNT
> > >
> > >
> >
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>
>

[Non-text portions of this message have been removed]

31146. Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:44:55 UTC
From: ktwhy2003
Topic: 31139 Message: 31146

Yes, that what came up when I ran the call just afterward, but that wasn't the name I heard and for some dumb reason I didn't write down the name..

--- In TS-520_820_530_830@yahoogroups.com, Sandy <n9pgo@...> wrote:
>
> Kent...
>
> QRZ shows:
>
>
> *VK5BZ*
>
> CB ZERBE
>
> 5 CHELMSFORD GROVE
>
> ANDREWS FARM, SA 5114,
>
> Australia
>
>
> 73,
>
> n9pgo - Sandy
>
>
>
>
>
>
>
> On 5/4/2011 7:02 PM, ktwhy2003 wrote:
> >
> > I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent
> > threw me off. I asked him to say his call again, but I guess he didn't
> > hear me and went qtr shortly afterwords. I heard him say something
> > about my audio (keep i mind I just got the TS830 on the air, so I'm
> > not use to setting it all up) but he did read my call back ok.
> >
> > At the very least, I know I made the contact, and that's what matters
> > most. It sounded like it was a regular meeting time for a groups, so
> > I'll try to listen in again around the same time tonight and might get
> > lucky..
> >
> > Kent
> > VE3KNT

> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Kent,
> > > what was his call (as you copied) and what time UTC?
> > >
> > > Gordon
> > > N6WK
> > >
> > >
> > > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > > >
> > > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > > >
> > > > I'm wondering if there's a good way to record contacts (probably
> > to my
> > > > PC since it's on the same desk) so when something like this happens
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> > > > later.
> > > >
> > > > any suggestions are welcome..
> > > >
> > > > Kent
> > > > VE3KNT
> > > >
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>
> [Non-text portions of this message have been removed]
>

31147. Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:49:52 UTC
From: ktwhy2003
Topic: 31139 Message: 31147

I made my own interface for PSK31 to use with the TS-50 I have been using (on loan to me). I'm waiting on a couple 4 pin connectors in the mail to rewire it to the TS0830s, but it doesn't use transformers, just a couple resistors to control signal levels. but with the voltages in the hybrid, I think I would be safer adding a couple isolation transformers now. Just have to see what I can find in the surplus store or my old parts box of stuff..

I figure I can either tie it in to the external speaker I use now, or see if there is a line level output available in the manual.

thanks

--- In TS-520_820_530_830@yahoogroups.com, Sandy <n9pgo@...> wrote:
>
> Kent...
>
> I use the SignaLink USB to record and playback - but on my TS-940 using
> Audacity. I would imagine it would work
> with any radio including the TS-830. Also should work with any sound
> card. I would use isolation xformers with just the soundcard though.
>
> n9pg0 - Sandy
>
>
>

31148. Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 00:54:34 UTC
From: ktwhy2003
Topic: 31139 Message: 31148

Thanks, but I don't think it was him, I'm sure it was a VK5...
I'll be on the air and tuned up around the same time tonight and maybe I'll get lucky..

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> OK, On checking the Cluster record for May 4th, I see onlyVK6WC on
> 14.145 at 07:06
>
> Don't know if it was him
>
> Gordon
> N6WK
>
>

31149. Re: [TS-520_820_530_830] Re: Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 02:03:49 UTC
From: Walter Breining
Topic: 31127 Message: 31149

This is a shunt capacitor that I recommend changing. The original causes too much high frequency roll off even below 2600 Hz. Decreasing it's value as I recommend allows more highs in the higher end of the 400 Hz to 2.6 Khz bandpass.
This is not a wide ESSB thing.

Vy 73, Walt N9WB

----- Original Message -----
From: w5rkl
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 04, 2011 11:19 AM
Subject: [TS-520_820_530_830] Re: Audio Improvement in TS830S

The 830 has an audio response between 400Hz to 2.6Khz. Since your voice tone is primary bass frequencies, changing capacitors will only cause the low end frequencies to drop off sooner than 400Hz. I wouldn't change anything in the 830, leave it alone.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "f5bcz" <f5bcz@...> wrote:
>
> Hi all,
>
> I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
> Someone he made the change and is it effective ?
>
> Many thanks
>

[Non-text portions of this message have been removed]

31150. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 01:26:53 UTC
From: jeffrey lord
Topic: 31139 Message: 31150

try vk4bz he is a club memmer from REDCLIFFE & DISTRICTS RADIO CLUB , I BELIEVE HE IS CURRENTLY IN TOWNSVILLE QUEENSLAND.

Cheers,

Jeff
VK4FNRS

From: ktwhy2003 <ktwhy2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 4 May 2011 4:02 PM
Subject: Re: [TS-520_820_530_830] Re: Recording from TS830S

I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his accent threw me off. I asked him to say his call again, but I guess he didn't hear me and went qtr shortly afterwords. I heard him say something about my audio (keep i mind I just got the TS830 on the air, so I'm not use to setting it all up) but he did read my call back ok.

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Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Kent,
> what was his call (as you copied) and what time UTC?
>
> Gordon
> N6WK
>
>
> On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> >
> > Last night, about 3AM ET I make my first ever Australian contact, but
> > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> >
> > I'm wondering if there's a good way to record contacts (probably to my
> > PC since it's on the same desk) so when something like this happens
> > again, I have a better chance of getting the callsign from a recording
> > later.
> >
> > any suggestions are welcome..
> >
> > Kent

> > VE3KNT
> >
> >
>
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

31151. Re: [TS-520_820_530_830] TS 820s power cord

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 03:08:34 UTC
From: John Levo
Topic: 31114 Message: 31151

thanks for the schematic and suggestion. forwarded it to the Kenwood
commercial tech who used it to trace the circuit. He says the pin numbers
molded into the Jones plug were wrong! Once he made the appropriate lead
and pin changes he has the radio playing.
----- Original Message -----
From: <n6wk@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Tuesday, May 03, 2011 5:42 PM
Subject: Re: [TS-520_820_530_830] TS 820s power cord

> There is NO wiring difference between the TS-820 and the TS-820S
> Be sure to look at the Cinch Jones connector carefully and wire by the
> terminal number, not by looking as some of the views shown in the manual
> are actually the reverse side.
> The terminal numbers would be correct though.
> here is the wiring
> http://www.n6wk.com/kenwood/TS-820S-%20High%20Res%20Schematic.pdf
> Bottom of page 1 towards the Left side shows the PLUG wiring. The rig
> wiring for the plug is over on the bottom right of page 2.
> Be sure to check S-16 Power switch, to be sure it works.
>
> Gordon
>
> On 5/3/2011 2:31 PM, John wrote:
>>
>> Thanks to those who responded to my recent request for the wiring for
>> the TS820s power cord. A new cord was wired but the rig still does not
>> power up. No 120 power is getting to the transformer. The switch and
>> fuse check OK. A Kenwood commercial radio tech is currently looking at
>> the rig and believes there may be a wiring difference between the TS
>> 820 and the TS820s. Any tips or suggestions? Thanks in advance.
>>
>> WA8KIW
>>
>>
>
> --
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31152. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 04:06:01 UTC
From: w9glc
Topic: 31129 Message: 31152

This is on SSB. I have never tried CW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Is this on SSB or CW/??
> CW key down, loaded and dipped Plate current 200 MA on any band below 15 M
> should yeild 100 W output on as known good wattmeter,
> SSB on voice peaks on most watt meters about 20-30 watts is normal, much more
> will be distorted..
>
>
>
>
> _____
> From: w9glc <gcooper76@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 4, 2011 12:51:27 PM
> Subject: [TS-520_820_530_830] Re: 820s Tune Up
>
>
> To be honest I don't know. I am getting about 50-60 watts out so my thought was
> the tubes. Remember, I am a bigger hammer technician only
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > How do you know the tubes need to be replaced? What is telling you the tubes
> >need to be replaced?
> >
> > 73s
> > Mike
> > W5RKL
> >
>
> [Non-text portions of this message have been removed]
>

31153. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 11:24:46 UTC
From: roberteleazer@rocketmail.com
Topic: 31129 Message: 31153

On SSB you do not get a true power output indication because the output power varies with the mike input. The only way to get an SSB power output indication is to feed the mike input a tone, like 1000 cycles, adjust the mike gain, and read it that way.

Also, even on CW if you are not running the output into a good dummy load but into an antenna you will have difficulty getting an accurate power indication because higher SWR affects the RF power indication.

If you have RF power indicated on SSB without any mike input then you have a carrier balance problem that we can tell you how to adjust that out.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "w9glc" <gcooper76@...> wrote:
>
> This is on SSB. I have never tried CW
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > Is this on SSB or CW/??
> > CW key down, loaded and dipped Plate current 200 MA on any band below 15 M
> > should yeild 100 W output on as known good wattmeter,
> > SSB on voice peaks on most watt meters about 20-30 watts is normal, much more
> > will be distorted..
> >
> >
> >
> >
> > _____
> > From: w9glc <gcooper76@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 4, 2011 12:51:27 PM
> > Subject: [TS-520_820_530_830] Re: 820s Tune Up
> >
> >
> > To be honest I don't know. I am getting about 50-60 watts out so my thought was
> > the tubes. Remember, I am a bigger hammer technician only
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > How do you know the tubes need to be replaced? What is telling you the tubes
> > >need to be replaced?
> > >

> > > 73s
> > > Mike
> > > W5RKL
> > >
> >
> > [Non-text portions of this message have been removed]
> >
>

31154. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 11:56:44 UTC
From: w5rkl
Topic: 31129 Message: 31154

George,

You didn't say what make and model of watt meter you are using. Most, not all, watt meters used by hams are not peak reading watt meters but rather are average type watt meters.

An average watt meter will only display about 20 to 30 watts from the transmitter on voice peaks. This is normal and should not be considered a reason for replacing the tubes.

If you are not using a peak reading watt meter and your watt meter shows 50 to 60 watts then you most likely have the MIC gain turned up too high and with the front panel meter switch set to ALC, the meter pointer is most likely displaying a significantly higher than the max ALC scale indication.

You also didn't say what make and model of microphone you are using. Does your microphone have an amplifier adjustment or is it a Kenwood microphone such as the MC-50 which is a very good microphone for the 820?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w9glc" <gcooper76@...> wrote:
>
> This is on SSB. I have never tried CW

31155. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 12:01:19 UTC
From: Bill
Topic: 31106 Message: 31155

Hi Chris,

I think I have your typos sorted out and you are asking about test/measurement gear for working on tube radios. Most hams have or can get a Digital Multi-Meter (DMM) almost anywhere for cheaps. Those usually have reasonably high input resistances on the voltage ranges but be careful about the maximum voltages. Our hybrids and many other transmitters have DC voltages approaching 1000 (one thousand) volts and more than a few transmitter tubes exceed 1000 volts. Your DMM won't be happy. The DMM is convenient for reading DC voltage levels in solid state circuits. The resistance ranges are also convenient.

A vacuum tube voltmeter (VTVM) or it's FET equivalent will have a high input resistance (~10 MOhms) and you should get one with the old style analog meter movement. Most VTVMs and some FET VMs have voltage ranges up to 1000 or 1500 volts. That needle swinging upscale and then back down as you are tuning a stage for a peak (or dip) is much easier to use than any winking, blinking DMM. Used VTVMs in working condition are not expensive. The V-O-Ms with analog meter movements are *NOT* in the same class.

For transmitters you really can't get around having some kind of RF wattmeter with decent calibration. One that will handle the power levels you expect from your radios. We are amateurs and we don't really need lab grade gear but the better accuracy you can get the better your results. Don't obsess over decimal points at the 100 watt level. I have some Bird wattmeters here and a military unit as well. Most of the time I use a small wattmeter/swr bridge that was intended for CB use. It has a 10 watt range and a 100 watt range (even though CBs are not supposed to put out more than 4 watts). There are internal pots for "calibration". The scales are not linear but logrithmic to read directly in watts. I used a HP scope to set the two scales. Such wattmeters can be home built or found at flea markets..holding down the expense.

My HP scope runs flat up to 75 MHz and there are others in the HP and Tektronix lineup that are inexpensive and will run flat up to 150 MHz or higher. If you want to look at digital and HF signals you want one that will go into the VHF spectrum like that. Older publications suggest you can get by without a scope but those were written when any useable scope would cost you a years wages (or maybe 10 years). A picture is worth a thousand words!

You can make sweep signal generators and wobbulators. There is a lot of info on the internet about those. For filter alignment you'll want one that is solidly built and reasonably stable. That 500 kHz wide I.F. "bandpass" filter in the hybrids demands a sweeper. Lucky for us that circuit doesn't need tweaking very much. The Heathkit type signal generators are maybe okay. In my experience the tuning rate is way to fast, they drift muchly, and output levels are not very well calibrated. Some of the mil surplus signal generators might be a better choice (I do have some Heath units). You can build your own signal generators, too, maybe based on a Heathkit.

There are lots of other toys but the meters and a scope will get you off to a good start AND they will help you build other tools. Homebrew spectrum analyzers are not unreasonable. If you acquire a spectrum analyzer and get to understand it you will wonder how you ever got along without one.

I'm about encouraging anybody with an interest to make as much of their own gear as they can. Start with easy and work your way up. I hope this gives you some ideas. Maybe brings up some more questions.

Don't forget a screwdriver and good selection of hammers <evil grin>.

73,

Bill KU8H

31156. Re: Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 13:39:38 UTC
From: na7i_dick
Topic: 31127 Message: 31156

--- In TS-520_820_530_830@yahoogroups.com, Walter Breining <n9wb@...> wrote:

> If your mike is not an MC35-S it is the wrong impedance for a TS 830.

...and...

> I doubt if the MC-50 or MC-60 will help much...

Gee Walt, I've ALWAYS used an MC-50 with my TS-830s Gold, from new in early 1980's. Always gotten fine audio reports. Still have mine, still works just fine.

Suggest an MC-50, if he can find one. High impedance, as you say.

Dick
NA7I

31157. Re: ANY IDEAS ON VALUE(S) FOR WIFE OF SILENT KEY

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 14:11:52 UTC
From: pigletism
Topic: 31082 Message: 31157

I don't know about the 520S as I have a 530S, but I have a long-term-loan Trio TS-780 which is a 2m/70cms rig. It's ace (albeit a QRP rig - there is a matching linear).
It matches the look perfectly.

http://www.rigpix.com/kenwood/ts780.htm

Stu

--- In TS-520_820_530_830@yahoogroups.com, "Alan Nicholson (ADHB)" <anicholson@...> wrote:

>
> Hmmm....I only really wanted the 520S when I started getting interested but somehow I now seem to have an almost full set with a 520S,530S &820S...and I still do not have my Certificate or a VHF/UHF rig. What goes nicely with the sets I have? Decisions, decisions.
>
>

31158. Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 15:03:47 UTC
From: w9glc
Topic: 31129 Message: 31158

I am judging the SSB watts based on the radio's meter during tuning and my mfj versa tuner II while transmitting. I am using MC-50 mic. To be honest I am still learning this rig. Thanks for the help

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> George,
>
> You didn't say what make and model of watt meter you are using. Most, not all, watt meters used by hams are not peak reading watt meters but rather are average type watt meters.
>
> An average watt meter will only display about 20 to 30 watts from the transmitter on voice peaks. This is normal and should not be considered a reason for replacing the tubes.
>
> If you are not using a peak reading watt meter and your watt meter shows 50 to 60 watts then you most likely have the MIC gain turned up too high and with the front panel meter switch set to ALC, the meter pointer is most likely displaying a significantly higher than the max ALC scale indication.
>
> You also didn't say what make and model of microphone you are using. Does your microphone have an amplifier adjustment or is it a Kenwood microphone such as the MC-50 which is a very good microphone for the 820?
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w9glc" <gcooper76@> wrote:
> >
> > This is on SSB. I have never tried CW
>

31159. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 16:27:21 UTC
From: kd8hmo_us
Topic: 31106 Message: 31159

Can anyone comment on tasks that the hybrids are much better at doing than the new fish-finder rigs?

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo_us" <burwell.rick@...> wrote:
>
> I would love to hear the reasons why we should restore and keep these radios in action. When I was a kid in the late 70's and early 80's I remember drooling over the ads for them. I know their on-air sound is still unbeatable yet today. Im sure there are other advantages from the old-school circuitry and designs. Anyone care to add to the list?
>

31160. Re: [TS-520_820_530_830] Re: 820s Tune Up

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 20:11:08 UTC
From: John Davidson
Topic: 31129 Message: 31160

CW is the only reliable means of measuring power output without a special peak holding meter.
The voice is a variable that makes it hard to see peak output readings without specialized meters and techniques.

From: w9glc <gcooper76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 5, 2011 12:06:01 AM
Subject: [TS-520_820_530_830] Re: 820s Tune Up

This is on SSB. I have never tried CW

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> Is this on SSB or CW/??
> CW key down, loaded and dipped Plate current 200 MA on any band below 15 M
> should yeild 100 W output on as known good wattmeter,
> SSB on voice peaks on most watt meters about 20-30 watts is normal, much more
> will be distorted..
>
>
>
>
> ---
> From: w9glc <gcooper76@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 4, 2011 12:51:27 PM
> Subject: [TS-520_820_530_830] Re: 820s Tune Up
>
>
> To be honest I don't know. I am getting about 50-60 watts out so my thought was
>
> the tubes. Remember, I am a bigger hammer technician only
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > How do you know the tubes need to be replaced? What is telling you the tubes

> >need to be replaced?
> >
> > 73s
> > Mike
> > W5RKL
> >
>

> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31161. TS-520 Plate Current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 20:31:22 UTC
From: ki4ax
Topic: 31161 Message: 31161

On K4EAA's web page, Ken recommends to operate at 225ma plate current. There are others that recommend anything 200ma to 250ma is normal. Can anyone comment on what you think is a "safe" plate current for normal operation? My TS-520, when tuned up and operating in CW mode, is running 250ma according to the Ip meter setting on the rig. And can anyone suggest a way to reduce the plate current so that if it is too high or if I want to run a lower Ip current I know how to lower it.

Thanks

Dan KI4AX

31162. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 21:54:16 UTC
From: Lou Blasco
Topic: 31139 Message: 31162

Does the name Brian ring a bell?

At 10:02 05/05/2011, you wrote:
>I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his
>accent threw me off. I asked him to say his call again, but I
>guess he didn't hear me and went qtr shortly afterwords. I heard
>him say something about my audio (keep i mind I just got the TS830
>on the air, so I'm not use to setting it all up) but he did read my
>call back ok.
>
>At the very least, I know I made the contact, and that's what
>matters most. It sounded like it was a regular meeting time for a
>groups, so I'll try to listen in again around the same time tonight
>and might get lucky..
>
>Kent
>VE3KNT
>
>
>--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
> >
> > Kent,
> > what was his call (as you copied) and what time UTC?
> >
> > Gordon
> > N6WK
> >
> >
> > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > >
> > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > >
> > > I'm wondering if there's a good way to record contacts (probably to my
> > > PC since it's on the same desk) so when something like this happens
> > > again, I have a better chance of getting the callsign from a recording
> > > later.
> > >
> > > any suggestions are welcome..
> > >
> > > Kent
> > > VE3KNT
> > >
> > >
> > >

> > --
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31163. Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 22:20:54 UTC
From: andy_westcott2004
Topic: 31106 Message: 31163

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo_us" <burwell.rick@...> wrote:
>
> Can anyone comment on tasks that the hybrids are much better at doing than the new fish-finder rigs?

They look nicer for a start!
They are easier to repair.
There are no menus to dig through.
They are every bit as sensitive as any radio needs to be on HF.
The PA section is almost bullet-proof. (Unless you are a complete fool.)

OK, mine has no IF shift - one would be useful.
I have to re-tune the PA and re-peak the drive after any substantial shift which can be a bit of a pain.

But I would never sell my 520 - it is my main digimode radio.
I'm sure it has a soul somewhere. (possibly in the VFO bit)

31164. Re: [TS-520_820_530_830] Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 22:38:03 UTC
From: Chris Meyer
Topic: 31106 Message: 31164

Thanks for your response. I think I've got most of the stuff you mentioned. So far I've collected a Simpson 260, an HP VTVM, a Heathkit IG-42 RF generator, and RLC bridge, a Tektronix's 475A "o" scope, a Heathkit TT-1 tube checker, a variac, and a Bird 43 wattmeter with the PEP mod. I've been wondering about a spectrum analyzer. They seem really expensive. Are there some older models that can be calibrated, and not cost a bar of gold?

Chris
KI6EQW
On May 5, 2011, at 5:01 AM, Bill wrote:

> Hi Chris,
>
> I think I have your typos sorted out and you are asking about test/measurement gear for working on tube radios. Most hams have or can get a Digital Multi-Meter (DMM) almost anywhere for cheaps. Those usually have reasonably high input resistances on the voltage ranges but be careful about the maximum voltages. Our hybrids and many other transmitters have DC voltages approaching 1000 (one thousand) volts and more than a few transmitter tubes exceed 1000 volts. Your DMM won't be happy. The DMM is convenient for reading DC voltage levels in solid state circuits. The resistance ranges are also convenient.
>
> A vacuum tube voltmeter (VTVM) or it's FET equivalent will have a high input resistance (~10 MOhms) and you should get one with the old style analog meter movement. Most VTVMs and some FET VMs have voltage ranges up to 1000 or 1500 volts. That needle swinging upscale and then back down as you are tuning a stage for a peak (or dip) is much easier to use than any winking, blinking DMM. Used VTVMs in working condition are not expensive. The V-O-Ms with analog meter movements are *NOT* in the same class.
>
> For transmitters you really can't get around having some kind of RF wattmeter with decent calibration. One that will handle the power levels you expect from your radios. We are amateurs and we don't really need lab grade gear but the better accuracy you can get the better your results. Don't obsess over decimal points at the 100 watt level. I have some Bird wattmeters here and a military unit as well. Most of the time I use a small wattmeter/swr bridge that was intended for CB use. It has a 10 watt range and a 100 watt range (even though CBs are not supposed to put out more than 4 watts). There are internal pots for "calibration". The scales are not linear but logrithmic to read directly in watts. I used a HP scope to set the two scales. Such wattmeters can be home built or found at flea markets..holding down the expense.
>
> My HP scope runs flat up to 75 MHz and there are others in the HP and Tektronix lineup that are inexpensive and will run flat up to 150 MHz or higher. If you want to look at digital and HF signals you want one that will go into the VHF spectrum like that. Older publications suggest you can get by without a scope but those were written when any useable scope would cost you a years wages (or maybe 10 years). A picture is worth a thousand words!

>
> You can make sweep signal generators and wobbulators. There is a lot of info on the internet about those. For filter alignment you'll want one that is solidly built and reasonably stable. That 500 kHz wide I.F. "bandpass" filter in the hybrids demands a sweeper. Lucky for us that circuit doesn't need tweaking very much. The Heathkit type signal generators are maybe okay. In my experience the tuning rate is way to fast, they drift muchly, and output levels are not very well calibrated. Some of the mil surplus signal generators might be a better choice (I do have some Heath units). You can build your own signal generators, too, maybe based on a Heathkit.
>
> There are lots of other toys but the meters and a scope will get you off to a good start AND they will help you build other tools. Homebrew spectrum analyzers are not unreasonable. If you acquire a spectrum analyzer and get to understand it you will wonder how you ever got along without one.
>
> I'm about encouraging anybody with an interest to make as much of their own gear as they can. Start with easy and work your way up. I hope this gives you some ideas. Maybe brings up some more questions.
>
> Don't forget a screwdriver and good selection of hammers <evil grin>.
>
> 73,
>
> Bill KU8H
>
>

[Non-text portions of this message have been removed]

31165. Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 22:39:40 UTC
From: ktwhy2003
Topic: 31139 Message: 31165

I don't recall the name now at all. I did heard the call of the other station (vk4abz) that he was talking to, and there was a ve7 that I couldn't hear at all.. I guess this is what happens when you ham while still getting over the flu..

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Does the name Brian ring a bell?
>
> At 10:02 05/05/2011, you wrote:
> >I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his
> >accent threw me off. I asked him to say his call again, but I
> >guess he didn't hear me and went qtr shortly afterwords. I heard
> >him say something about my audio (keep i mind I just got the TS830
> >on the air, so I'm not use to setting it all up) but he did read my
> >call back ok.
> >
> >At the very least, I know I made the contact, and that's what
> >matters most. It sounded like it was a regular meeting time for a
> >groups, so I'll try to listen in again around the same time tonight
> >and might get lucky..
> >
> >Kent
> >VE3KNT
> >
> >
> >--- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >
> > > Kent,
> > > what was his call (as you copied) and what time UTC?
> > >
> > > Gordon
> > > N6WK
> > >
> > >
> > > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > > >
> > > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > > >
> > > > I'm wondering if there's a good way to record contacts (probably to my
> > > > PC since it's on the same desk) so when something like this happens
> > > > again, I have a better chance of getting the callsign from a recording

> > > > later.
> > > >
> > > > any suggestions are welcome..
> > > >
> > > > Kent
> > > > VE3KNT
> > > >
> > > >
> > >
> > > --
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31166. Re: [TS-520_820_530_830] TS-520 Plate Current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-05 23:59:06 UTC
From: John Davidson
Topic: 31161 Message: 31166

I have been running my TS520 for almost 40 years without damaging anything in it. turned down the carrier control
I always tune for 200 MA of plate current. I get 100 W output.
For less power I detune the loading capacitor counterclockwise and re dip the plate until I get the power I want.
For lower power I also have also reduced the carrier control and minimum is about 3/4 Watt. (this only applied to CW operation)./..

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 5, 2011 4:31:22 PM
Subject: [TS-520_820_530_830] TS-520 Plate Current

On K4EAA's web page, Ken recommends to operate at 225ma plate current. There are others that recommend anything 200ma to 250ma is normal. Can anyone comment on what you think is a "safe" plate current for normal operation? My TS-520, when tuned up and operating in CW mode, is running 250ma according to the Ip meter setting on the rig. And can anyone suggest a way to reduce the plate current so that if it is too high or if I want to run a lower Ip current I know how to lower it.

Thanks

Dan KI4AX

[Non-text portions of this message have been removed]

31167. Re: TS-520 Plate Current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 00:23:49 UTC
From: roberteleazer@rocketmail.com
Topic: 31161 Message: 31167

Dan:

First, I assume that by Plate Current you mean the measurement after you have peaked the Drive and Antenna Load controls and dipped the Plate current to maximize output.

My TS-520, operating in CW mode into a dummy load through an antenna tuner, puts out a max of about 95W with an SWR of 1:1.5 on 10 meters. At that point plate current is about 240 ma.

As for what plate current to use, employ you own judgement. It is a simple matter to reduce CW power output by turning the "CAR" control to the left to get whatever level below 100W you wish.

Note that the CAR control does not affect SSB output. To reduce SSB output you turn the "MIC" control , the Mike Gain Control, to the left. Now, the only way to read RF power output in SSB mode is to inject an audio signal at a constant level into the mike input, such as a 1000 hZ tone from an sudio signal generator, and read the output then.
If you cannot get below a certain power level by adjusting the MIC control that means your transmitter needs adjustment, as my TS-820S required.

73's

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> On K4EAA's web page, Ken recommends to operate at 225ma plate current. There are others that recommend anything 200ma to 250ma is normal. Can anyone comment on what you think is a "safe" plate current for normal operation? My TS-520, when tuned up and operating in CW mode, is running 250ma according to the Ip meter setting on the rig. And can anyone suggest a way to reduce the plate current so that if it is too high or if I want to run a lower Ip current I know how to lower it.
>
> Thanks
>
> Dan KI4AX
>

31168. Re: [TS-520_820_530_830] Re: Reasons Why The Kenwood Hybrids Should be Restored And Collected?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 00:38:05 UTC
From: pmarkavage@juno.com
Topic: 31106 Message: 31168

Poor Man's Spectrum Analyzer:
http://www.science-workshop.com/

Pete, wa2cwa

On Thu, 5 May 2011 15:38:03 -0700 Chris Meyer
<chrismeyer100@...> writes:
> Thanks for your response. I think I've got most of the stuff you
> mentioned. So far I've collected a Simpson 260, an HP VTVM, a
> Heathkit IG-42 RF generator, and RLC bridge, a Tektronix's 475A "o"
> scope, a Heathkit TT-1 tube checker, a variac, and a Bird 43
> wattmeter with the PEP mod. I've been wondering about a spectrum
> analyzer. They seem really expensive. Are there some older models
> that can be calibrated, and not cost a bar of gold?
>
> Chris
> KI6EQW
> On May 5, 2011, at 5:01 AM, Bill wrote:

31169. Re: [TS-520_820_530_830] Re: Recording from TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 01:08:51 UTC
From: Lou Blasco
Topic: 31139 Message: 31169

Hi Kent,

Brian VK5BC was active on HF yesterday but I can't find any record of
him being on 20m. Maybe you got BZ (Bee Zee) and BC (Bee Cee) mixed
up? In any case hang in there because it look like the solar cycle is
heading up hill again and conditions will improve and I'm sure he
won't be the last Aussie you work.

Lou
VK3ALB

At 08:39 06/05/2011, you wrote:
>I don't recall the name now at all. I did heard the call of the
>other station (vk4abz) that he was talking to, and there was a ve7
>that I couldn't hear at all.. I guess this is what happens when you
>ham while still getting over the flu..
>
>Kent
>VE3KNT
>
>
>--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
> >
> > Does the name Brian ring a bell?
> >
> > At 10:02 05/05/2011, you wrote:
> > >I wrote it down as vk5bz, 06:54 utc on 14.140MHz. I guess his
> > >accent threw me off. I asked him to say his call again, but I
> > >guess he didn't hear me and went qtr shortly afterwords. I heard
> > >him say something about my audio (keep i mind I just got the TS830
> > >on the air, so I'm not use to setting it all up) but he did read my
> > >call back ok.
> > >
> > >At the very least, I know I made the contact, and that's what
> > >matters most. It sounded like it was a regular meeting time for a
> > >groups, so I'll try to listen in again around the same time tonight
> > >and might get lucky..
> > >
> > >Kent
> > >VE3KNT
> > >
> > >
> > >--- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > >
> > > > Kent,
> > > > what was his call (as you copied) and what time UTC?

> > > >
> > > > Gordon
> > > > N6WK
> > > >
> > > >
> > > > On 5/4/2011 2:49 PM, ktwhy2003 wrote:
> > > > >
> > > > > Last night, about 3AM ET I make my first ever Australian contact, but
> > > > > I seem to have gotten his cal sign wrong and doesn't show up on QRZ.
> > > > >
> > > > > I'm wondering if there's a good way to record contacts
> (probably to my
> > > > > PC since it's on the same desk) so when something like this happens
> > > > > again, I have a better chance of getting the callsign from
> a recording
> > > > > later.
> > > > >
> > > > > any suggestions are welcome..
> > > > >
> > > > > Kent
> > > > > VE3KNT
> > > > >
> > > > >
> > > > >
> > > > > --
> > > > > E-Mail Disclaimer This communication and any documents, files, or
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31170. Re: I have asked every day or so to be unsubscibe form this site Its great but I don't jhave time for it would someone please communicate with the powers to be

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 01:21:56 UTC
From: O. W. SMITH
Topic: 31170 Message: 31170

PLESASE UNSUBSCRIPE ME ! KF6GC

[Non-text portions of this message have been removed]

31171. Re: [TS-520_820_530_830] Re: I have asked every day or so to be unsubscibe form this site Its great but I don't jhave time for it would someone please communicate with the powers to be

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 01:41:03 UTC
From: n6wk@n6wk.com
Topic: 31170 Message: 31171

You can Unsubscribe yourself. At the bottom of each message is a link to
do so on the right!

Gordon
N6WK

On 5/5/2011 6:21 PM, O. W. SMITH wrote:
>
> PLESASE UNSUBSCRIPE ME ! KF6GC
>
> [Non-text portions of this message have been removed]
>
>

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31172. Re: [TS-520_820_530_830] Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 04:50:19 UTC
From: basketoak@cox.net
Topic: 31127 Message: 31172

Another audio improvement has to do with the speaker.

I stumbled onto a great improvement (At least to my aging ears). Both my 830 and 530SP are a bit bassy, but when I plug in a set of amplified speakers made by Harmon Kardon (HK 206) for personal computer use , I find a much crisper, less bassy, easier to copy audio.

As Walt says, try out what's laying around the shack.

73's
Dave
KG4MGB

---- Walter Breining <n9wb@...> wrote:

==========
This change slightly raises the high frequency audio limit and makes the radio be slightly more full and less pinched. I think that this change would slightly benefit almost any voice. It will help some but I do not think that it will totally solve your problem.

If your mike is not an MC35-S it is the wrong impedance for a TS 830.
The MC 35-S is high impedance and is the correct match for your radio but the MC-35 that is not the S model is 500 ohms and will be a bit weak on your radio.

Even the MC 35-S is probably not the best choice for your radio. Heil sound can provide you with a good sounding mike for your voice. Be sure to tell them what radio you have and your problem with a bassy or muffled sound.

There are other solutions. A Astatic D-104 will be higher pitched. A non amplified one will be extremely higher pitched on your radio. It may sound too high or thin. A D-104 on a amplified stand will still be higher pitched but not as much. A D-104 with the FET mod that is in the files section of this group will be flatter yet but still have lots of articulation. If you do go with an amplified D-104, use the TUG-8 stand and not the TUG-9 stand. The TUG-9 stand does not work as well although it can be modified to act like the TUG-8. It is a bit of work to do.

A Shure 444 or a Shure 444D will have a higher response than the MC-35 and may be a good choice. The best choice of the two probably would be the 444 that is not the D model. It is high impedance only. The 444D is dual impedance and seems a bit flatter. The D model should be run on high impedance with your Kenwood.

Some of the very old Shure mikes, both desk and hand mikes from the 60s were ceramic and were high impedance. Ceramic mikes have a great deal of high frequency rise. Not all ceramic mikes were high impedance but most were. These were used on very olde CB rigs especially tube type, and commercial two way radios. Some very early PA paging mikes were also of this type.

Last but not least, if your MC-35 is the S model, try placing a .02 microfarad capacitor in series with the live mike audio lead. As a temporary test that can be done at the plug.

This will drop the level a bit so you will need to increase the mike gain.

I doubt if the MC-50 or MC-60 will help much but if you can borrow one, try it. It should be set for high impedance. Note that some of the MC-60 mikes had a wiring error inside of the mike itself. This results in weird sounds, RF problems, and bad audio, particularly with the pre amp on. It can be fixed, contact me if you run into this. The schematic on the MC-60 instruction sheet was also in error. Not all MC-60 mikes had this problem and it was more frequent in the MC-60 A. The MC-50 did not have this problem.

Grab mikes that are laying around and try them. I knew a ham that had fantastic audio and he was always asked what mike he used. It was a early 1960 vintage curled cord PTT, Lafayette Radio Ceramic hand mike that sold for $12.50 US new and came on an olde Lafayette HE-20C CB radio.

Vy 73, Walt N9WB

----- Original Message -----
From: f5bcz
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 04, 2011 6:41 AM
Subject: [TS-520_820_530_830] Audio Improvement in TS830S

Hi all,

I am a new TS830 owner , I have a bassy voice and audio with the microphone MC35 is muffled, I saw that there was a change in the files of this group to improve the audio by changing C106 (.015-microfarad) IF unit with a new .001-microfarad capacitor.
Someone he made the change and is it effective ?

Many thanks

[Non-text portions of this message have been removed]

--
Dave Beadner

31173. Re: [TS-520_820_530_830] Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 05:08:47 UTC
From: Bob
Topic: 31127 Message: 31173

Ah Yes, using the ol' stereo system on the HF rig trick! It's always worked for me, even when using it on my CB radio back in the day (and we've all used CB at 1 time or another). I've always agreed with Walt too.

73,

Bob, KD5MHQ

--- On Thu, 5/5/11, basketoak@... <basketoak@...> wrote:

Another audio improvement has to do with the speaker.

I stumbled onto a great improvement (At least to my aging ears). Both my 830 and 530SP are a bit bassy, but when I plug in a set of amplified speakers made by Harmon Kardon (HK 206) for personal computer use , I find a much crisper, less bassy, easier to copy audio.

As Walt says, try out what's laying around the shack.

73's

Dave

KG4MGB

---- Walter Breining <n9wb@...> wrote:

==========

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Vy 73, Walt N9WB

----- Original Message -----

From: f5bcz

To: TS-520_820_530_830@yahoogroups.com

Sent: Wednesday, May 04, 2011 6:41 AM

Subject: [TS-520_820_530_830] Audio Improvement in TS830S

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Many thanks

[Non-text portions of this message have been removed]

--

Dave Beadner

31174. Re: [TS-520_820_530_830] Audio Improvement in TS830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 09:45:32 UTC
From: tnnyswy@yahoo.com
Topic: 31127 Message: 31174

>> I stumbled onto a great improvement (At least to my aging ears). Both my 830 and 530SP are a bit bassy, but when I plug in a set of amplified speakers made by Harmon Kardon (HK 206) for personal computer use , I find a much crisper, less bassy, easier to copy audio <<

As we grow older our hearing ability change as well. Too often, we ignore our loss of being able hear the higher frequency as normal.
For those of us who grew up in the country, do you still hear the buzz of a Mosquito any more?
In most cases it is not our equipment, but rather our ability to hear the higher frequency as we grow older.

(((73))) Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: <basketoak@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Fri, 6 May 2011 0:50:19
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Cc: Walter Breining<n9wb@...>
Subject: Re: [TS-520_820_530_830] Audio Improvement in TS830S

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73's
Dave
KG4MGB

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Vy 73, Walt N9WB

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Someone he made the change and is it effective ?

Many thanks

[Non-text portions of this message have been removed]

--
Dave Beadner

[Non-text portions of this message have been removed]

31175. Re: I have asked every day or so to be unsubscibe form this site Its great but I don't jhave time for it would someone please communicate with the powers to be

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 11:46:05 UTC
From: Jim
Topic: 31170 Message: 31175

Just click Edit Membership above and then click Leave Group...

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> You can Unsubscribe yourself. At the bottom of each message is a link to
> do so on the right!
>
> Gordon
> N6WK
>
> On 5/5/2011 6:21 PM, O. W. SMITH wrote:
> >
> > PLESASE UNSUBSCRIPE ME ! KF6GC
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
> --
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>

31176. Re: TS-520 Plate Current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-06 16:52:04 UTC
From: andy_westcott2004
Topic: 31161 Message: 31176

Don't use the LOAD control to reduce power on CW - that is simply putting the PA out of tune.

Tune up properly and use the CAR control to reduce power to the desired level. That's what it's there for.

My own ideas on CW use are to set the bias to about 10mA (just enough to bias the PA into conduction so as to eliminate key-clicks, which it does) then after correctly tuning the PA, set the operating plate current to 100mA. This should be more than ample for CW contacts, plus the PA will 'last forever' operating at this level of bias and drive - minimal heat being generated.

I have actually set the bias control on mine to minimum, reading zero on the meter (class C??) and still not detected key-clicks on a monitoring receiver, but I'm suggesting 10mA just to be on the safe side as other rigs may differ slightly from mine. Pesonally, I delight in knowing those old valves are getting an easy ride when operated that way.

31177. 530-s and 820-s key circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 03:40:44 UTC
From: km5wx@bellsouth.net
Topic: 31177 Message: 31177

Thanks in advance!! Will someone please inform me as to which should an electronic keyer be set to for these rigs? Direct Keying or grid block? I'm going to use an MFJ 8043 IC keyer that I came up with brand new although as I understand it hasn't been in production for quite a few years? Thanks again es 73 KM5WX

31178. Re: 530-s and 820-s key circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 11:19:13 UTC
From: w5rkl
Topic: 31177 Message: 31178

CW keying in the 530 and 820 is "grid block".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "km5wx@..." <km5wx@...> wrote:
>
> Thanks in advance!! Will someone please inform me as to which should an electronic keyer be set to for these rigs? Direct Keying or grid block? I'm going to use an MFJ 8043 IC keyer that I came up with brand new although as I understand it hasn't been in production for quite a few years? Thanks again es 73 KM5WX
>

31179. Re: [TS-520_820_530_830] 530-s and 820-s key circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 14:38:03 UTC
From: John Davidson
Topic: 31177 Message: 31179

If you hook up for a "direct" or + keying it will produce a steady key-down condition. "Grid block" or - keying is how all the Kenwood hybrids work.

I have my MFJ Grandmaster keyer outputs connected to A TS440s with the + connection and to my TS520 with the grid block connection. I just turn on the VOX on the rig I want to transmit on.

From: "km5wx@..." <km5wx@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, May 6, 2011 11:40:44 PM
Subject: [TS-520_820_530_830] 530-s and 820-s key circuit

Thanks in advance!! Will someone please inform me as to which should an electronic keyer be set to for these rigs? Direct Keying or grid block? I'm going to use an MFJ 8043 IC keyer that I came up with brand new although as I understand it hasn't been in production for quite a few years? Thanks again es 73 KM5WX

[Non-text portions of this message have been removed]

31180. Re: 530-s and 820-s key circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 15:20:52 UTC
From: w5rkl
Topic: 31177 Message: 31180

CW keying in ALL of the hybrids including the T599, TS-510, is "grid block".

Grid block keying is just what the term means. A "negative" bias voltage is applied to the stage being keying, typically the grid of the tube being keyed, to "cut off" that stage when the key is not pressed. This prevents the keyed stage from conducting, essentially "opening" the signal path. When the key is pressed, the grid block bias voltage drops to a level that turns the keyed stage "ON", restoring the signal path, allowing RF to pass/be amplified by the following stage(s).

Most, not all, vintage transmitters use Grid block keying, as do most modern day transceiver. Solid state grid block keying does the same keying process as older tube based grid block keying does except with lower voltages.

Direct, or cathode keying, is a method of keying that, when the CW key is not pressed, the cathode of the stage(s) being keyed is held "above" ground, turning the keyed stage "OFF", opening the signal path which stops the flow of electrons in the tube. When the key is pressed, the cathode is at ground potential, allowing electrons to flow in the tube which restores the signal path, allowing the RF signal to be amplified and sent to the antenna.

A couple of example of "direct" or "cathode" keying are the Heathkit DX-20, DX-35, DX-40, DX-60 transmitters along with the Knightkit T-60, and T-150 transmitters.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> If you hook up for a "direct" or + keying it will produce a steady key-down
> condition. "Grid block" or - keying is how all the Kenwood Â hybrids work.
>
> I have my MFJ Grandmaster keyer outputs connected to A TS440s with the +
> connection and to my TS520 with the grid block connection. I just turn on the
> VOX on the rig I want to transmit on.
>
>
>
> _____
> From: "km5wx@..." <km5wx@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, May 6, 2011 11:40:44 PM
> Subject: [TS-520_820_530_830] 530-s and 820-s key circuit
>
> Â
> Thanks in advance!! Will someone please inform me as to which should an
> electronic keyer be set to for these rigs? Direct Keying or grid block? I'm

> going to use an MFJ 8043 IC keyer that I came up with brand new although as I
> understand it hasn't been in production for quite a few years? Thanks again es
> 73 KM5WX
>
>
>
>
> [Non-text portions of this message have been removed]
>

31181. Replacing CB crystals - easily

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 23:08:15 UTC
From: Lou Blasco
Topic: 31181 Message: 31181

Hi All,

I had to replace the 29MHz band crystal (X8) in my TS520S. A previous owner had replaced the original crystal with one to suit the 27MHz band. As luck would have it the crystal is right underneath the band switch and probably the most difficult one of the lot to access. Looking at the board layout and the service manual it seemed to me that it's quite a job to remove the OSC COIL board just to replace the crystal.

I decided to try and replace the crystal without removing the OSC COIL board and found a method that seems easier than the one suggested in the service manual.

I removed the metal shield next to the OSC COIL board and disconnected the shaft coupler for the band switch then pulled the shaft forward until I could get to the solder connections on the OSC COIL board. ** Make sure you don't rotate any of the switch wafers** I un-soldered the old crystal and pushed the pins through until the crystal was free of the board.

I cut a small piece of heatshrink to go around the new crystal. Under the heatshrink I stuck a few inches of tinned copper wire that I bent in an "L" shape to allow me to feed the crystal under the band switch and poke it's wires through the board. It took about three minutes to get the new crystal soldered in place. Once the crystal was soldered in place all I had to do was slide the wire out from under the heatshrink and the job was done. The heatshrink remained on the crystal but it's so small you can't even see it under the band switch. I pushed the band switch shaft back in and replaced the shield and the hard work was done.

After a coil pack adjustment the radio is as good as new and I'm really happy with the results.

Lou
VK3ALB

31182. Re: [TS-520_820_530_830] Replacing CB crystals - easily

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-07 23:24:31 UTC
From: Sandy
Topic: 31181 Message: 31182

Great Job, Lou !!!

And thanks for sharing!

This one goes in my archives.

Sandy - n9pgo

On 5/7/2011 6:08 PM, Lou Blasco wrote:
>
> Hi All,
>
> I had to replace the 29MHz band crystal (X8) in my TS520S. A previous
> owner had replaced the original crystal with one to suit the 27MHz
> band. As luck would have it the crystal is right underneath the band
> switch and probably the most difficult one of the lot to access.
> Looking at the board layout and the service manual it seemed to me
> that it's quite a job to remove the OSC COIL board just to replace the
> crystal.
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> I decided to try and replace the crystal without removing the OSC
> COIL board and found a method that seems easier than the one
> suggested in the service manual.
>
> I removed the metal shield next to the OSC COIL board and
> disconnected the shaft coupler for the band switch then pulled the
> shaft forward until I could get to the solder connections on the OSC
> COIL board. ** Make sure you don't rotate any of the switch wafers**
> I un-soldered the old crystal and pushed the pins through until the
> crystal was free of the board.
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> the heatshrink I stuck a few inches of tinned copper wire that I bent
> in an "L" shape to allow me to feed the crystal under the band switch
> and poke it's wires through the board. It took about three minutes to
> get the new crystal soldered in place. Once the crystal was soldered
> in place all I had to do was slide the wire out from under the
> heatshrink and the job was done. The heatshrink remained on the
> crystal but it's so small you can't even see it under the band
> switch. I pushed the band switch shaft back in and replaced the
> shield and the hard work was done.
>
> After a coil pack adjustment the radio is as good as new and I'm
> really happy with the results.
>
> Lou

> VK3ALB
>
>

[Non-text portions of this message have been removed]

31183. Re: 530-s and 820-s key circuit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 03:06:27 UTC
From: km5wx@bellsouth.net
Topic: 31177 Message: 31183

Thanks for the quick answer guys! Now all I have to do is hook up the cables and start back working cw! (as soon as I get up the guts to hit the key) And thanks for the explanation Mike. Now I understand how it works and the difference between the two.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> CW keying in ALL of the hybrids including the T599, TS-510, is "grid block".
>
> Grid block keying is just what the term means. A "negative" bias voltage is applied to the stage being keying, typically the grid of the tube being keyed, to "cut off" that stage when the key is not pressed. This prevents the keyed stage from conducting, essentially "opening" the signal path. When the key is pressed, the grid block bias voltage drops to a level that turns the keyed stage "ON", restoring the signal path, allowing RF to pass/be amplified by the following stage(s).
>
> Most, not all, vintage transmitters use Grid block keying, as do most modern day transceiver. Solid state grid block keying does the same keying process as older tube based grid block keying does except with lower voltages.
>
> Direct, or cathode keying, is a method of keying that, when the CW key is not pressed, the cathode of the stage(s) being keyed is held "above" ground, turning the keyed stage "OFF", opening the signal path which stops the flow of electrons in the tube. When the key is pressed, the cathode is at ground potential, allowing electrons to flow in the tube which restores the signal path, allowing the RF signal to be amplified and sent to the antenna.
>
> A couple of example of "direct" or "cathode" keying are the Heathkit DX-20, DX-35, DX-40, DX-60 transmitters along with the Knightkit T-60, and T-150 transmitters.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > If you hook up for a "direct" or + keying it will produce a steady key-down
> > condition. "Grid block" or - keying is how all the Kenwood Â hybrids work.
> >
> > I have my MFJ Grandmaster keyer outputs connected to A TS440s with the +
> > connection and to my TS520 with the grid block connection. I just turn on the
> > VOX on the rig I want to transmit on.
> >

> >
> >
> > _____
> > From: "km5wx@" <km5wx@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, May 6, 2011 11:40:44 PM
> > Subject: [TS-520_820_530_830] 530-s and 820-s key circuit
> >
> > Â
> > Thanks in advance!! Will someone please inform me as to which should an
> > electronic keyer be set to for these rigs? Direct Keying or grid block? I'm
> > going to use an MFJ 8043 IC keyer that I came up with brand new although as I
> > understand it hasn't been in production for quite a few years? Thanks again es
> > 73 KM5WX
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31184. Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 12:12:18 UTC
From: ki4ax
Topic: 31184 Message: 31184

According to the "Instruction Manual" for the TS-520SE under section 6.9 TRANSMITTER NEUTRALIZATION the procedure says to:

"Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation as described in Section 4. Set the SG switch to off (down) and place a sensitive RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust TC1 (reached through the adjustment hole in the top of the final section) for a minimum reading on the voltmeter. After the final section is neutralized, flip the stand-by switch to
REC and slide the SG switch on. "

"A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF voltmeter is not available. Instead of tuning for minimum voltage, tune for a minimum S-meter reading"

Which leads me to some questions about Transmitter Neutralization ? First, my Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the coax connector. From the schematic printed on the side of the can it appears that this RCA connector is to provide "rectified" RF since it is fed through a diode. Isn't this basically the same thing as an "RF probe" for my voltmeter? And can't I use this point to take voltage readings with my DMM (non-rf type) for neutralization?

Also, I would like to get some feed back on using "a good receiver tuned to 28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost sure it has something to do with the reactivity of the Pi network but I would like to know a little more.

Lastly, is it safe to assume that if this procedure is works for a 520SE that it would work for the earlier 520?

Thanks,

Dan KI4AX

31185. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 16:41:47 UTC
From: Terry Wagoner
Topic: 31184 Message: 31185

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> According to the "Instruction Manual" for the TS-520SE under section 6.9 TRANSMITTER NEUTRALIZATION the procedure says to:
>
> "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation as described in Section 4. Set the SG switch to off (down) and place a sensitive RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust TC1 (reached through the adjustment hole in the top of the final section) for a minimum reading on the voltmeter. After the final section is neutralized, flip the stand-by switch to
> REC and slide the SG switch on. "
>
> "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF voltmeter is not available. Instead of tuning for minimum voltage, tune for a minimum S-meter reading"
>
> Which leads me to some questions about Transmitter Neutralization ? First, my Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the coax connector. From the schematic printed on the side of the can it appears that this RCA connector is to provide "rectified" RF since it is fed through a diode. Isn't this basically the same thing as an "RF probe" for my voltmeter? And can't I use this point to take voltage readings with my DMM (non-rf type) for neutralization?
>
> Also, I would like to get some feed back on using "a good receiver tuned to 28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost sure it has something to do with the reactivity of the Pi network but I would like to know a little more.
>
> Lastly, is it safe to assume that if this procedure is works for a 520SE that it would work for the earlier 520?
>
> Thanks,
>
> Dan KI4AX

Hi Dan

1. Yes you are correct your Heath Cantenna circuit is a classical "RF Probe" circuit. You can use it as you describe but it wont let you ensure minimum reading. The problem with using it is the germanium diode wont allow you to get down to the millivolt range due to approx .4 volt turn on. There are some RF probe circuits that use an Op amp that get down to around 50mv and are used for qrp work that you could homebrew. Check K5NNA.

2. You really want to use an analog meter and not your DMM. Any time you are trying to peak or minimize a measured parameter an analog meter is better to allow you to see the peak or minimum.

3. Essentially your 6146s are high gain tubes and you are neutralizing them so they amplify and not oscillate. You typically neutralize on the highest operating frequency and neutralizing is really only good for one band and narrow frequency range. If you are not

going to operate on 10 meters there is no reason why you cant neutralize on 15 meters. When you get down to 40 and 80 not likely that you would need to neutralize.

4.For a good understanding of tube geometry and grid driven finals and why and how to neutralize them take a look at the "white paper" that Tom W8JI has on his website.

5.It is difficult for a ham who doesnt have test equipment or another receiver to perform neutralization as described in the manual. I am fortunate to have a 100 mhz O-scope(you can get by with 20mhz)and a Boonton RV millivolt meter on on my service bench. I enjoy helping local ham with this procedure.

6. Another method which is trial and error is to make small adjustment on the neutralizing capacitor and then see if peak RF output occurs at tank circuit plate current dip. I dont recommend this method unless you have no other way to do it. It requires a lot of key down time and I havent found it to be very easy or accurate. Lots of tweaks.

7. Maybe you can find an elmer or club member who will let you bring your 520 to his shack and use his test equipment? Short of that take a look at K5NNA accuprobe.

8. Last and most important use an insulated tuning tool that is substantial enough to adjust the neutralizing capacitor. You are coupling energy back from the Plate of the tube and there is full anode voltage present. High voltage and plate current can be a lethal combination. Not to scare you, but you must be aware of the hazard and apply sound, safe work practice to work with it.

Good luck
Terry K9TW

>

31186. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 16:47:55 UTC
From: andy_westcott2004
Topic: 31184 Message: 31186

Dan, I'd say the output on your Cantenna should work fine, as long as there is enough RF to register.

The problem being that the Cantenna output is for taking measurements of 'real' RF, whereas when neutralising the PA, the amount of RF is minute, even less when properly adjusted - just leakage.

You can use a remote receiver for this, as it responds to the tiny bit of RF that does escape, just make sure you adjust the cap with a fully plastic tool - not just for safety, but also if it contains any metal this may act as a {poor} antenna and cause the receiver to detect varying levels of RF - you would be looking for a minimum S-meter indication indicating you had cancelled RF leakage in the PA as best as can be done.

28.5MHz, the high end of the rig's frequency range, is where neutralisation is at its most critical, and therefore the easiest to adjust for a null, or near null - this is why it is recommended.

Finally, yes, all the Kenwood hybrids can be adjusted in a similar manner.

31187. Re: [TS-520_820_530_830] Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 16:51:54 UTC
From: John Becker
Topic: 31184 Message: 31187

Thank you Terry, K9TW.

I love reading you post as well as others.
You go into such detail that even Ray Charles
could see it !

As a retired 2 way radio tech it DOSE take a lot
for me to notice some things.

John, W0JAB

31188. Re: [TS-520_820_530_830] Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 17:01:05 UTC
From: Terry Wagoner
Topic: 31184 Message: 31188

John--Thanks. I really enjoy and appreciate this forum and I like to help if I can. I may have been ruined by 35 years in nuclear power. The one thing they drill into you in that culture is attention to detail. See I couldnt even say thanks without 50 words! 73s Terry

---

From: John Becker <jab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 8, 2011 12:51:54 PM
Subject: Re: [TS-520_820_530_830] Re: Transmitter Neutralization

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John, W0JAB

[Non-text portions of this message have been removed]

31189. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 17:09:25 UTC
From: Terry Wagoner
Topic: 31184 Message: 31189

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > According to the "Instruction Manual" for the TS-520SE under section 6.9 TRANSMITTER NEUTRALIZATION the procedure says to:
> >
> > "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation as described in Section 4. Set the SG switch to off (down) and place a sensitive RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust TC1 (reached through the adjustment hole in the top of the final section) for a minimum reading on the voltmeter. After the final section is neutralized, flip the stand-by switch to
> > REC and slide the SG switch on. "
> >
> > "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF voltmeter is not available. Instead of tuning for minimum voltage, tune for a minimum S-meter reading"
> >
> > Which leads me to some questions about Transmitter Neutralization ? First, my Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the coax connector. From the schematic printed on the side of the can it appears that this RCA connector is to provide "rectified" RF since it is fed through a diode. Isn't this basically the same thing as an "RF probe" for my voltmeter? And can't I use this point to take voltage readings with my DMM (non-rf type) for neutralization?
> >
> > Also, I would like to get some feed back on using "a good receiver tuned to 28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost sure it has something to do with the reactivity of the Pi network but I would like to know a little more.
> >
> > Lastly, is it safe to assume that if this procedure is works for a 520SE that it would work for the earlier 520?
> >
> > Thanks,
> >
> > Dan KI4AX
>
> Hi Dan
>
> 1. Yes you are correct your Heath Cantenna circuit is a classical "RF Probe" circuit. You can use it as you describe but it wont let you ensure minimum reading. The problem with using it is the germanium diode wont allow you to get down to the millivolt range due to approx .4 volt turn on. There are some RF probe circuits that use an Op amp that get down to around 50mv and are used for qrp work that you could homebrew. Check K5NNA.
>

> 2. You really want to use an analog meter and not your DMM. Any time you are trying to peak or minimize a measured parameter an analog meter is better to allow you to see the peak or minimum.
>
> 3. Essentially your 6146s are high gain tubes and you are neutralizing them so they amplify and not oscillate. You typically neutralize on the highest operating frequency and neutralizing is really only good for one band and narrow frequency range. If you are not going to operate on 10 meters there is no reason why you cant neutralize on 15 meters. When you get down to 40 and 80 not likely that you would need to neutralize.
>
> 4.For a good understanding of tube geometry and grid driven finals and why and how to neutralize them take a look at the "white paper" that Tom W8JI has on his website.
>
> 5.It is difficult for a ham who doesnt have test equipment or another receiver to perform neutralization as described in the manual. I am fortunate to have a 100 mhz O-scope(you can get by with 20mhz)and a Boonton RV millivolt meter on on my service bench. I enjoy helping local ham with this procedure.
>
> 6. Another method which is trial and error is to make small adjustment on the neutralizing capacitor and then see if peak RF output occurs at tank circuit plate current dip. I dont recommend this method unless you have no other way to do it. It requires a lot of key down time and I havent found it to be very easy or accurate. Lots of tweaks.
>
> 7. Maybe you can find an elmer or club member who will let you bring your 520 to his shack and use his test equipment? Short of that take a look at K5NNA accuprobe.
>
> 8. Last and most important use an insulated tuning tool that is substantial enough to adjust the neutralizing capacitor. You are coupling energy back from the Plate of the tube and there is full anode voltage present. High voltage and plate current can be a lethal combination. Not to scare you, but you must be aware of the hazard and apply sound, safe work practice to work with it.
>
> Good luck
> Terry K9TW

Dan--Sorry the RF accuprobe is KK5NA and not K5NNA! So much for attention to detail!
>
> >
>

31190. Re: [TS-520_820_530_830] Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 17:15:57 UTC
From: John Becker
Topic: 31184 Message: 31190

Terry
I well understand having served in the nuclear navy on the aircraft carrier Enterprise. Having 8 reactors on board. And loved the duty.

At 12:01 PM 5/8/2011, you wrote:
>John--Thanks. I really enjoy and appreciate this forum and I like to help if I
>can. I may have been ruined by 35 years in nuclear power. The one thing they
>drill into you in that culture is attention to detail. See I couldnt even say
>thanks without 50 words! 73s Terry
>
>_____
>From: John Becker <jab@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sun, May 8, 2011 12:51:54 PM
>Subject: Re: [TS-520_820_530_830] Re: Transmitter Neutralization
>
>
>Thank you Terry, K9TW.
>
>I love reading you post as well as others.
>You go into such detail that even Ray Charles
>could see it !
>
>As a retired 2 way radio tech it DOSE take a lot
>for me to notice some things.
>
>John, W0JAB
>
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>Yahoo! Groups Links
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31191. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 20:12:42 UTC
From: David
Topic: 31184 Message: 31191

I tried using 28.5 mhz on my 820S, and as soon as I used it on the lower bands it would just take off and blow the 115V line fuse. I ended up adjusting for a low reading balanced between 20 & 17 meters, which solved that problem. It now operates great on all HF bands. Also the plate current reads about 220 ma at 95 watts or better on my Bird.

28.5 is not cast in stone, every rig is different.

Good luck..David

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> Dan, I'd say the output on your Cantenna should work fine, as long as there is enough RF to register.
>
> The problem being that the Cantenna output is for taking measurements of 'real' RF, whereas when neutralising the PA, the amount of RF is minute, even less when properly adjusted - just leakage.
>
> You can use a remote receiver for this, as it responds to the tiny bit of RF that does escape, just make sure you adjust the cap with a fully plastic tool - not just for safety, but also if it contains any metal this may act as a {poor} antenna and cause the receiver to detect varying levels of RF - you would be looking for a minimum S-meter indication indicating you had cancelled RF leakage in the PA as best as can be done.
>
> 28.5MHz, the high end of the rig's frequency range, is where neutralisation is at its most critical, and therefore the easiest to adjust for a null, or near null - this is why it is recommended.
>
> Finally, yes, all the Kenwood hybrids can be adjusted in a similar manner.
>

31192. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-08 22:51:49 UTC
From: roberteleazer@rocketmail.com
Topic: 31184 Message: 31192

Dan:

Kenwood's revised procedure for neutralizing the finals on the TS-820 is to:

1. Tune the rig up for normal RF output in CW Mode on 21.3 MHZ.
2. Turn off SG switch.
3. Put the output into a dummy load with a "T" in the Coax going to a suitable oscilloscope and adjust the neutalization capacitor for minimum voltage.

This should work just as well on a TS-520. I have have done this on my TS-820S and really ought to do it on my TS-520 as well, even though I have not changed the finals.

You need to make yourself a suitable adjustment tool using a wooden dowel shaped properly and dipped in varnish.

I you want to bring your rig over here to the East coast of Florida I will do it for you.

73's
Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> According to the "Instruction Manual" for the TS-520SE under section 6.9 TRANSMITTER NEUTRALIZATION the procedure says to:
>
> "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation as described in Section 4. Set the SG switch to off (down) and place a sensitive RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust TC1 (reached through the adjustment hole in the top of the final section) for a minimum reading on the voltmeter. After the final section is neutralized, flip the stand-by switch to
> REC and slide the SG switch on. "
>
> "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF voltmeter is not available. Instead of tuning for minimum voltage, tune for a minimum S-meter reading"
>
> Which leads me to some questions about Transmitter Neutralization ? First, my Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the coax connector. From the schematic printed on the side of the can it appears that this RCA connector is to provide "rectified" RF since it is fed through a diode. Isn't this basically the same thing as an "RF probe" for my voltmeter? And can't I use this point to take voltage readings with my DMM (non-rf type) for neutralization?
>
> Also, I would like to get some feed back on using "a good receiver tuned to 28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost sure it has something to do with the reactivity of the Pi network but I would like to know a little more.
>
> Lastly, is it safe to assume that if this procedure is works for a 520SE that it would work for the earlier 520?

>
> Thanks,
>
> Dan KI4AX
>

31193. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 01:06:53 UTC
From: ki4ax
Topic: 31184 Message: 31193

Thanks everyone for your replies on my post about neutralization. Terry, I'd like to ask what model of Boonton RF voltmeter do you have? I have a Boonton also that I have been wanting to get working. It has a loose wire that I can not figure out where it goes back to and I can not find a schematic for it either. If I can get it going this would be a nice addition to my bench equipment. Perhaps if you have the same model you can help me figure it out.

Anyway, the posts are very informative and have answered my questions. I have a new set of final tubes that I have had since I bought the rig but I am not quite ready to change them yet. I just want to make sure that when I get ready to do the job I have as much information as possible. By the way the tubed are performing right now I think I will leave them be. I am still on the original set of tubes and I am getting about 95-100w out of them on 20 and 15 meters.

All comments are welcome.....

Thanks again....

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Dan:
>
> Kenwood's revised procedure for neutralizing the finals on the TS-820 is to:
>
> 1. Tune the rig up for normal RF output in CW Mode on 21.3 MHZ.
> 2. Turn off SG switch.
> 3. Put the output into a dummy load with a "T" in the Coax going to a suitable oscilloscope and adjust the neutalization capacitor for minimum voltage.
>
> This should work just as well on a TS-520. I have have done this on my TS-820S and really ought to do it on my TS-520 as well, even though I have not changed the finals.
>
> You need to make yourself a suitable adjustment tool using a wooden dowel shaped properly and dipped in varnish.
>
> I you want to bring your rig over here to the East coast of Florida I will do it for you.
>
> 73's
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > According to the "Instruction Manual" for the TS-520SE under section 6.9 TRANSMITTER NEUTRALIZATION the procedure says to:

> >
> > "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation as described in Section 4. Set the SG switch to off (down) and place a sensitive RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust TC1 (reached through the adjustment hole in the top of the final section) for a minimum reading on the voltmeter. After the final section is neutralized, flip the stand-by switch to
> > REC and slide the SG switch on. "
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> > "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF voltmeter is not available. Instead of tuning for minimum voltage, tune for a minimum S-meter reading"
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> > Which leads me to some questions about Transmitter Neutralization ? First, my Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the coax connector. From the schematic printed on the side of the can it appears that this RCA connector is to provide "rectified" RF since it is fed through a diode. Isn't this basically the same thing as an "RF probe" for my voltmeter? And can't I use this point to take voltage readings with my DMM (non-rf type) for neutralization?
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> > Also, I would like to get some feed back on using "a good receiver tuned to 28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost sure it has something to do with the reactivity of the Pi network but I would like to know a little more.
> >
> > Lastly, is it safe to assume that if this procedure is works for a 520SE that it would work for the earlier 520?
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31194. Re: [TS-520_820_530_830] Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 11:31:17 UTC
From: Terry Wagoner
Topic: 31184 Message: 31194

Dan--I have a very nice Model 92E. Boonton manuals and schematics are usually available on line. You will also need the RF probe for your Boonton. If you have problem finding a schematic let me know I can send you a copy of mine. Yes-would be good to get yours working as it is a very useful piece of test equipment for troubleshooting and alignment of your rig. If you are getting 95 to 100 watts out on 20 & 15 mtrs I wouldnt worry about changing your finals. If you do install the new ones make sure to set the resting plate current (50 to 60 ma). I normally place my scope or boonton across my Cantenna . If you dont have a uhf tee adapter to place on your Cantenna you can solder a 47 ohm resistor or a couple 100 ohm resistors in parallel to a PL-259 connector and screw it on your SO-239 on rear of rig and place your Boonton across this "dummy load" resistor to see your null reading. Make sure you have Screen Grid switch off. 73s Terry

---
From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 8, 2011 9:06:53 PM
Subject: [TS-520_820_530_830] Re: Transmitter Neutralization

Thanks everyone for your replies on my post about neutralization. Terry, I'd like to ask what model of Boonton RF voltmeter do you have? I have a Boonton also that I have been wanting to get working. It has a loose wire that I can not figure out where it goes back to and I can not find a schematic for it either. If I can get it going this would be a nice addition to my bench equipment. Perhaps if you have the same model you can help me figure it out.

Anyway, the posts are very informative and have answered my questions. I have a new set of final tubes that I have had since I bought the rig but I am not quite ready to change them yet. I just want to make sure that when I get ready to do the job I have as much information as possible. By the way the tubed are performing right now I think I will leave them be. I am still on the original set of tubes and I am getting about 95-100w out of them on 20 and 15 meters.

All comments are welcome.....

Thanks again....

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..."
<roberteleazer@...> wrote:
>
> Dan:
>
> Kenwood's revised procedure for neutralizing the finals on the TS-820 is to:
>
> 1. Tune the rig up for normal RF output in CW Mode on 21.3 MHZ.

> 2. Turn off SG switch.
> 3. Put the output into a dummy load with a "T" in the Coax going to a suitable
>oscilloscope and adjust the neutalization capacitor for minimum voltage.
>
> This should work just as well on a TS-520. I have have done this on my TS-820S
>and really ought to do it on my TS-520 as well, even though I have not changed
>the finals.
>
> You need to make yourself a suitable adjustment tool using a wooden dowel
>shaped properly and dipped in varnish.
>
> I you want to bring your rig over here to the East coast of Florida I will do
>it for you.
>
> 73's
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > According to the "Instruction Manual" for the TS-520SE under section 6.9
>TRANSMITTER NEUTRALIZATION the procedure says to:
> >
> > "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation
>as described in Section 4. Set the SG switch to off (down) and place a sensitive
>RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust
>TC1 (reached through the adjustment hole in the top of the final section) for a
>minimum reading on the voltmeter. After the final section is neutralized, flip
>the stand-by switch to
>
> > REC and slide the SG switch on. "
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> > "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF
>voltmeter is not available. Instead of tuning for minimum voltage, tune for a
>minimum S-meter reading"
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> > Which leads me to some questions about Transmitter Neutralization…? First, my
>Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the
>coax connector. From the schematic printed on the side of the can it appears
>that this RCA connector is to provide "rectified" RF since it is fed through a
>diode. Isn't this basically the same thing as an "RF probe" for my voltmeter?
>And can't I use this point to take voltage readings with my DMM (non-rf type)
>for neutralization?
> >
> > Also, I would like to get some feed back on using "a good receiver tuned to
>28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost
>sure it has something to do with the reactivity of the Pi network… but I would
>like to know a little more.
> >
> > Lastly, is it safe to assume that if this procedure is works for a 520SE that

>it would work for the earlier 520?
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

[Non-text portions of this message have been removed]

31195. Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 16:37:00 UTC
From: Jes
Topic: 31195 Message: 31195

Hi all.Can anyone tell me if its possible and if so how to reduce the power out on my 520SE.I would like to use it for data modes at 20-30 watts.Thanks for looking.73..Jes - m0jsw

31196. Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 18:02:10 UTC
From: ki4ax
Topic: 31184 Message: 31196

Terry, I have a "Boonton Model 91H Sensitive RF Voltmeter." I was hoping it was the same model as you have. Any way if you can direct me to a schematic I sure would appreciate it. The one I have needs some cosmetic work but looks pretty good on the inside. Looks like it might have been military surplus at one time.

Thanks

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Dan--I have a very nice Model 92E. Boonton manuals and schematics are usually
> available on line. You will also need the RF probe for your Boonton. If you have
> problem finding a schematic let me know I can send you a copy of mine. Yes-would
> be good to get yours working as it is a very useful piece of test equipment for
> troubleshooting and alignment of your rig. If you are getting 95 to 100 watts
> out on 20 & 15 mtrs I wouldnt worry about changing your finals. If you do
> install the new ones make sure to set the resting plate current (50 to 60 ma). I
> normally place my scope or boonton across my Cantenna . If you dont have a uhf
> tee adapter to place on your Cantenna you can solder a 47 ohm resistor or a
> couple 100 ohm resistors in parallel to a PL-259 connector and screw it on your
> SO-239 on rear of rig and place your Boonton across this "dummy load" resistor
> to see your null reading. Make sure you have Screen Grid switch off. 73s Terry
>
>
>
>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, May 8, 2011 9:06:53 PM
> Subject: [TS-520_820_530_830] Re: Transmitter Neutralization
>
>
> Thanks everyone for your replies on my post about neutralization. Terry, I'd
> like to ask what model of Boonton RF voltmeter do you have? I have a Boonton
> also that I have been wanting to get working. It has a loose wire that I can not
> figure out where it goes back to and I can not find a schematic for it either.
> If I can get it going this would be a nice addition to my bench equipment.
> Perhaps if you have the same model you can help me figure it out.
>
>
> Anyway, the posts are very informative and have answered my questions. I have a
> new set of final tubes that I have had since I bought the rig but I am not quite
> ready to change them yet. I just want to make sure that when I get ready to do

> the job I have as much information as possible. By the way the tubed are
> performing right now I think I will leave them be. I am still on the original
> set of tubes and I am getting about 95-100w out of them on 20 and 15 meters.
>
>
> All comments are welcome.....
>
> Thanks again....
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> <roberteleazer@> wrote:
> >
> > Dan:
> >
> > Kenwood's revised procedure for neutralizing the finals on the TS-820 is to:
> >
> > 1. Tune the rig up for normal RF output in CW Mode on 21.3 MHZ.
> > 2. Turn off SG switch.
> > 3. Put the output into a dummy load with a "T" in the Coax going to a suitable
> >oscilloscope and adjust the neutalization capacitor for minimum voltage.
> >
> > This should work just as well on a TS-520. I have have done this on my TS-820S
> >and really ought to do it on my TS-520 as well, even though I have not changed
> >the finals.
> >
> > You need to make yourself a suitable adjustment tool using a wooden dowel
> >shaped properly and dipped in varnish.
> >
> > I you want to bring your rig over here to the East coast of Florida I will do
> >it for you.
> >
> > 73's
> > Robert
> > WB5WSV
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > According to the "Instruction Manual" for the TS-520SE under section 6.9
> >TRANSMITTER NEUTRALIZATION the procedure says to:
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> > > "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW operation
> >as described in Section 4. Set the SG switch to off (down) and place a sensitive
> >RF voltmeter across the dummy load. Flip the stand-by switch to SEND and adjust
> >TC1 (reached through the adjustment hole in the top of the final section) for a
> >minimum reading on the voltmeter. After the final section is neutralized, flip
> >the stand-by switch to
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> > > REC and slide the SG switch on. "
> > >
> > > "A good receiver tuned to 28.5 Mhz works very well for neutralizing if an RF
> >voltmeter is not available. Instead of tuning for minimum voltage, tune for a
> >minimum S-meter reading"
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> > > Which leads me to some questions about Transmitter Neutralizationâ☐¦? First, my
> >Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the
> >coax connector. From the schematic printed on the side of the can it appears
> >that this RCA connector is to provide "rectified" RF since it is fed through a
> >diode. Isn't this basically the same thing as an "RF probe" for my voltmeter?
> >And can't I use this point to take voltage readings with my DMM (non-rf type)
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> > > Also, I would like to get some feed back on using "a good receiver tuned to
> >28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am almost
> >sure it has something to do with the reactivity of the Pi networkâ☐¦ but I would
> >like to know a little more.
> > >
> > > Lastly, is it safe to assume that if this procedure is works for a 520SE that
> >it would work for the earlier 520?
> > >
> > > Thanks,
> > >
> > > Dan KI4AX
> > >
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31197. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 18:58:24 UTC
From: andy_westcott2004
Topic: 31195 Message: 31197

--- In TS-520_820_530_830@yahoogroups.com, "Jes" <jes.woodland@...> wrote:
>
> Can anyone tell me how to reduce the power out on my 520SE.I would like to use it for data modes.

I use mine exclusively for digital: Simply use the mic gain control - ensure it is pushed in as you do not want the processor operating.

Carefully adjust the mic gain until you get the desired output, but be aware that if you change frequency on the waterfall, the output will probably change quite a bit (it does on mine) so after changing waterfall position have your hand on the mic control ready to back it off or up as the case may be. This variation in level is caused by variations in the filter responses, and may possibly be unique to my rig, but be prepared for it anyhow.

I'd say don't operate with more than about 100mA plate current either, as otherwise the tubes may averheat - remember that digital modes are continuous output, not intermittent as is voice or CW.

Have fun! :)

31198. Re: [TS-520_820_530_830] Re: Transmitter Neutralization

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 19:35:50 UTC
From: Terry Wagoner
Topic: 31184 Message: 31198

Dan--I believe the military version of your meter is the URM-145? I am not sure. You can Google on this Model number and find manuals and schematics. I did a quick search on Boonton 91H and didnt find any free manuals or schematics. A search on URM-145 yields more results. Try this site..... www.tpub.com/content/electronicmeters/TM-11-6625-524-15-1/ There is a guy over on QRZ K2ERG who is also looking for service information for his 91H. You might want to email him and share info. 73s Terry

---

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 9, 2011 2:02:10 PM
Subject: [TS-520_820_530_830] Re: Transmitter Neutralization

Terry, I have a "Boonton Model 91H Sensitive RF Voltmeter." I was hoping it was the same model as you have. Any way if you can direct me to a schematic I sure would appreciate it. The one I have needs some cosmetic work but looks pretty good on the inside. Looks like it might have been military surplus at one time.

Thanks

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Dan--I have a very nice Model 92E. Boonton manuals and schematics are usually
> available on line. You will also need the RF probe for your Boonton. If you
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> problem finding a schematic let me know I can send you a copy of mine.
>Yes-would
>
> be good to get yours working as it is a very useful piece of test equipment for
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> troubleshooting and alignment of your rig. If you are getting 95 to 100 watts
> out on 20 & 15 mtrs I wouldnt worry about changing your finals. If you do
> install the new ones make sure to set the resting plate current (50 to 60 ma).
>I
>
> normally place my scope or boonton across my Cantenna . If you dont have a uhf

> tee adapter to place on your Cantenna you can solder a 47 ohm resistor or a
> couple 100 ohm resistors in parallel to a PL-259 connector and screw it on your
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> SO-239 on rear of rig and place your Boonton across this "dummy load" resistor

> to see your null reading. Make sure you have Screen Grid switch off. 73s Terry
>
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>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, May 8, 2011 9:06:53 PM
> Subject: [TS-520_820_530_830] Re: Transmitter Neutralization
>
>
> Thanks everyone for your replies on my post about neutralization. Terry, I'd
> like to ask what model of Boonton RF voltmeter do you have? I have a Boonton
> also that I have been wanting to get working. It has a loose wire that I can
>not
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> figure out where it goes back to and I can not find a schematic for it either.

> If I can get it going this would be a nice addition to my bench equipment.
> Perhaps if you have the same model you can help me figure it out.
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> Anyway, the posts are very informative and have answered my questions. I have a
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> new set of final tubes that I have had since I bought the rig but I am not
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> ready to change them yet. I just want to make sure that when I get ready to do

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> set of tubes and I am getting about 95-100w out of them on 20 and 15 meters.
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> All comments are welcome.....
>
> Thanks again....
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> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@"
> <roberteleazer@> wrote:
> >
> > Dan:
> >
> > Kenwood's revised procedure for neutralizing the finals on the TS-820 is to:
> >
> > 1. Tune the rig up for normal RF output in CW Mode on 21.3 MHZ.
> > 2. Turn off SG switch.
> > 3. Put the output into a dummy load with a "T" in the Coax going to a

>suitable
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> >oscilloscope and adjust the neutalization capacitor for minimum voltage.
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> > This should work just as well on a TS-520. I have have done this on my
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> >and really ought to do it on my TS-520 as well, even though I have not changed
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> > You need to make yourself a suitable adjustment tool using a wooden dowel
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> >it for you.
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> > 73's
> > Robert
> > WB5WSV
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > According to the "Instruction Manual" for the TS-520SE under section 6.9
> >TRANSMITTER NEUTRALIZATION the procedure says to:
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> > > "Tune up the TS-520SE into a 50 ohm dummy load at 28.5 Mhz for CW
>operation
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> >as described in Section 4. Set the SG switch to off (down) and place a
>sensitive
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> >RF voltmeter across the dummy load. Flip the stand-by switch to SEND and
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> >the stand-by switch to
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> >minimum S-meter reading"
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> > > Which leads me to some questions about Transmitter Neutralizationâ€¦?
>First, my
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> >Heath Kit "Cantenna" dummy load has a female RCA connector on the top near the
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> >coax connector. From the schematic printed on the side of the can it appears
> >that this RCA connector is to provide "rectified" RF since it is fed through a
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> >diode. Isn't this basically the same thing as an "RF probe" for my voltmeter?

> >And can't I use this point to take voltage readings with my DMM (non-rf type)

> >for neutralization?
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> > > Also, I would like to get some feed back on using "a good receiver tuned to
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> >28.5 Mhz" for neutralization? And can any one tell me why 28.5 Mhz? I am
>almost
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> >sure it has something to do with the reactivity of the Pi networkâ€¦ but I
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> >like to know a little more.
> > >
> > > Lastly, is it safe to assume that if this procedure is works for a 520SE
>that
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> >it would work for the earlier 520?
> > >
> > > Thanks,
> > >
> > > Dan KI4AX
> > >
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31199. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 20:32:39 UTC
From: Jes
Topic: 31195 Message: 31199

Thanks for that.I thought it would be either that or the carrier that had to be adjusted.73

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Jes" <jes.woodland@> wrote:
> >
> > Can anyone tell me how to reduce the power out on my 520SE.I would like to use it for data modes.
>
> I use mine exclusively for digital: Simply use the mic gain control - ensure it is pushed in as you do not want the processor operating.
>
> Carefully adjust the mic gain until you get the desired output, but be aware that if you change frequency on the waterfall, the output will probably change quite a bit (it does on mine) so after changing waterfall position have your hand on the mic control ready to back it off or up as the case may be. This variation in level is caused by variations in the filter responses, and may possibly be unique to my rig, but be prepared for it anyhow.
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> I'd say don't operate with more than about 100mA plate current either, as otherwise the tubes may averheat - remember that digital modes are continuous output, not intermittent as is voice or CW.
>
> Have fun! :)
>

31200. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 21:36:50 UTC
From: jeffrey lord
Topic: 31195 Message: 31200

I have a TS520S , I use a circuit from MODS DK.
It applies a negitive voltage acress the ALC circuit (via a 9volt battery &
250K ohm variable pot) ,This allows me to adjust output from 100watts to a
milliwatt.
T
the circuit and another similiar is in the FILES section of the group.

I do not know if it will suit the 520SE but I believe that for the low cost it
would be worth a test, YES IF YOU CHANGE FREQUENCY YOU WILL NEED TO ADJUST THE
SETTING ON THE VARIABLE CAP.

JEFF
VK4FNRS

_____
From: Jes <jes.woodland@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, 9 May, 2011 12:32:39 PM
Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Thanks for that.I thought it would be either that or the carrier that had to be
adjusted.73

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
<andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Jes" <jes.woodland@> wrote:
> >
> > Can anyone tell me how to reduce the power out on my 520SE.I would like to
>use it for data modes.
>
> I use mine exclusively for digital: Simply use the mic gain control - ensure it
>is pushed in as you do not want the processor operating.
>
> Carefully adjust the mic gain until you get the desired output, but be aware
>that if you change frequency on the waterfall, the output will probably change
>quite a bit (it does on mine) so after changing waterfall position have your
>hand on the mic control ready to back it off or up as the case may be. This
>variation in level is caused by variations in the filter responses, and may
>possibly be unique to my rig, but be prepared for it anyhow.
>
> I'd say don't operate with more than about 100mA plate current either, as
>otherwise the tubes may averheat - remember that digital modes are continuous
>output, not intermittent as is voice or CW.

>
> Have fun! :)
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31201. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 21:44:57 UTC
From: John Davidson
Topic: 31195 Message: 31201

Adjusting the "carrier" control only works for reducing power on CW.
That's how I run low power CW on my TS520.

From: Jes <jes.woodland@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 9, 2011 4:32:39 PM
Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Thanks for that.I thought it would be either that or the carrier that had to be
adjusted.73
* 8
Visit Your Group

Switch to: Text-Only, Daily Digest • Unsubscribe • Terms of Use
.

[Non-text portions of this message have been removed]

31202. RE: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-09 22:39:51 UTC
From: Rick Hicks
Topic: 31195 Message: 31202

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jeffrey lord
Sent: Monday, May 09, 2011 2:37 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

I have a TS520S , I use a circuit from MODS DK.
It applies a negitive voltage acress the ALC circuit (via a 9volt battery &

250K ohm variable pot) ,This allows me to adjust output from 100watts to a
milliwatt.
T
the circuit and another similiar is in the FILES section of the group.

I do not know if it will suit the 520SE but I believe that for the low cost
it
would be worth a test, YES IF YOU CHANGE FREQUENCY YOU WILL NEED TO ADJUST
THE
SETTING ON THE VARIABLE CAP.

JEFF
VK4FNRS

.....

I have a 530SP and it may be different. I won't opine on the suggestion
above, but I would just turn the CAR (carrier) down on mine.

Rick KF7JFU

From: Jes <jes.woodland@... <mailto:jes.woodland%40yahoo.co.uk> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Mon, 9 May, 2011 12:32:39 PM
Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Thanks for that.I thought it would be either that or the carrier that had to
be
adjusted.73

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "andy_westcott2004"
<andywestcottpublic@...> wrote:
>
>
>

> --- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Jes" <jes.woodland@> wrote:
> >
> > Can anyone tell me how to reduce the power out on my 520SE.I would like
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>use it for data modes.
>
> I use mine exclusively for digital: Simply use the mic gain control -
ensure it
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>
> Carefully adjust the mic gain until you get the desired output, but be
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>that if you change frequency on the waterfall, the output will probably
change
>quite a bit (it does on mine) so after changing waterfall position have
your
>hand on the mic control ready to back it off or up as the case may be. This

>variation in level is caused by variations in the filter responses, and may

>possibly be unique to my rig, but be prepared for it anyhow.
>
> I'd say don't operate with more than about 100mA plate current either, as
>otherwise the tubes may averheat - remember that digital modes are
continuous
>output, not intermittent as is voice or CW.
>
> Have fun! :)
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1325 / Virus Database: 1500/3626 - Release Date: 05/09/11

[Non-text portions of this message have been removed]

31203. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 13:23:16 UTC
From: w5rkl
Topic: 31195 Message: 31203

There isn't anything mysterious about the 2 battery powered circuits. Either one with work with all of the hybrids.

Whether one chooses to use the 2 component battery and pot circuit or the battery powered transistor circuit is entirely up to the individual. They both do the same thing, control the IF Unit's 8Mhz "TIF" signal level that is applied to the RF Unit!

The only operational difference between the 2 circuits is the transistor circuit is a bit more linear than the pot and battery circuit is.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
>
>
>
>
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of jeffrey lord
> Sent: Monday, May 09, 2011 2:37 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
>
>
>
>
>
> I have a TS520S , I use a circuit from MODS DK.
> It applies a negitive voltage acress the ALC circuit (via a 9volt battery &
>
> 250K ohm variable pot) ,This allows me to adjust output from 100watts to a
> milliwatt.
> T
> the circuit and another similiar is in the FILES section of the group.
>
> I do not know if it will suit the 520SE but I believe that for the low cost
> it
> would be worth a test, YES IF YOU CHANGE FREQUENCY YOU WILL NEED TO ADJUST
> THE
> SETTING ON THE VARIABLE CAP.
>
> JEFF
> VK4FNRS

>
> ......
>
> I have a 530SP and it may be different. I won't opine on the suggestion
> above, but I would just turn the CAR (carrier) down on mine.
>
> Rick KF7JFU
>
>
>
> _____
> From: Jes <jes.woodland@... <mailto:jes.woodland%40yahoo.co.uk> >
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, 9 May, 2011 12:32:39 PM
> Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
>
> Thanks for that.I thought it would be either that or the carrier that had to
> be
> adjusted.73
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "andy_westcott2004"
> <andywestcottpublic@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Jes" <jes.woodland@> wrote:
> > >
> > > Can anyone tell me how to reduce the power out on my 520SE.I would like
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> >use it for data modes.
> >
> > I use mine exclusively for digital: Simply use the mic gain control -
> ensure it
> >is pushed in as you do not want the processor operating.
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> > Carefully adjust the mic gain until you get the desired output, but be
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> >that if you change frequency on the waterfall, the output will probably
> change
> >quite a bit (it does on mine) so after changing waterfall position have
> your
> >hand on the mic control ready to back it off or up as the case may be. This
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> >variation in level is caused by variations in the filter responses, and may
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> > I'd say don't operate with more than about 100mA plate current either, as
> >otherwise the tubes may averheat - remember that digital modes are
> continuous
> >output, not intermittent as is voice or CW.
> >
> > Have fun! :)
> >
>
> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
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>
> _____
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> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1325 / Virus Database: 1500/3626 - Release Date: 05/09/11
>
>
>
> [Non-text portions of this message have been removed]
>

31204. Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 12:02:02 UTC
From: fpath fpath
Topic: 31184 Message: 31204

Greetings people,

Anyone know if Ken K4EAA is OK? Have sent him several emails over last month and have not received anything back

Regards,

Dave
VK5PDL

[Non-text portions of this message have been removed]

31205. Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 15:31:27 UTC
From: w5rkl
Topic: 31184 Message: 31205

Ken's doing fine but he's busier than a one armed wall paper hanger which is why you may not have gotten a response to your e-mails.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
>
> Greetings people,
>
> Anyone know if Ken K4EAA is OK? Have sent him several emails over last month and have not received anything back
>
> Regards,
>
> Dave
> VK5PDL
>
> [Non-text portions of this message have been removed]
>

31206. Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 17:35:19 UTC
From: roberteleazer@rocketmail.com
Topic: 31206 Message: 31206

Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?

If not, maybe we ought to start one.

Robert
WB5WSV

31207. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 18:45:30 UTC
From: Bob
Topic: 31206 Message: 31207

I don't know, but I'll 2nd the motion for one.
Bob, KD5MHQ

--- On Tue, 5/10/11, roberteleazer@... <roberteleazer@...> wrote:

From: roberteleazer@... <roberteleazer@...>
Subject: [TS-520_820_530_830] Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, May 10, 2011, 11:35 AM

Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?

If not, maybe we ought to start one.

Robert

WB5WSV

[Non-text portions of this message have been removed]

31208. Re: [TS-520_820_530_830] Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 20:17:11 UTC
From: Joseph Stiles
Topic: 31184 Message: 31208

Dave,

As per what Mike said...Ken is REAL busy...he accepted a rig of mine for a repair that I could not handle. He has had it since the first week of February 2011 and, has not been able to get to it yet. He...believe it or not...does other stuff...hihi.....

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 10, 2011 8:31:27 AM
Subject: [TS-520_820_530_830] Re: Information please

Ken's doing fine but he's busier than a one armed wall paper hanger which is why you may not have gotten a response to your e-mails.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
>
> Greetings people,
>
> Anyone know if Ken K4EAA is OK? Have sent him several emails over last month
>and have not received anything back
>
> Regards,
>
> Dave
> VK5PDL
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31209. Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 20:23:31 UTC
From: andy_westcott2004
Topic: 31184 Message: 31209

Yes, he's a busy guy apparently.
He does say on his site somewhere that he no longer has the time to reply to e-mails.

I've ordered some stuff off him and haven't heard anything yet but I'm not worried. I'm sure he'll get around to it when he has a moment.

31210. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 20:26:30 UTC
From: andy_westcott2004
Topic: 31206 Message: 31210

I like the idea of a Kenwood hybrid net - I bet it could become popular.

The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.

So - on balance I suggest 40m.

31211. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-10 21:39:24 UTC
From: Walter Milton
Topic: 31206 Message: 31211

What about 15M now that it is starting to open up.

Walt
KA2NJF
Sent via BlackBerry by AT&T

-----Original Message-----
From: "andy_westcott2004" <andywestcottpublic@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Tue, 10 May 2011 20:26:30
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net

I like the idea of a Kenwood hybrid net - I bet it could become popular.

The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.

So - on balance I suggest 40m.

[Non-text portions of this message have been removed]

31212. Tip of the week

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 02:05:20 UTC
From: kevin
Topic: 31212 Message: 31212

When your 820 has been operating perfectly and all of a sudden the frequency readout goes blank and you cannot transmit I have some advice. At first sit and look at it trying to figure out what you might have done wrong. Go through the book and make sure all of the knobs, buttons etc are set correctly. Check the SG switch in back (you've done that before). Thne think depressing thoughts about how much time you are going to have to spend diagnosing the problem with little equipment and less knowledge. Hope that Mike or Gordon will come up with something easy that you can understand.

When you start to question why you invested in this old sure to fail technology you might want to make sure that the cable to the remote VFO hasn't come loose. How happy you will be when you plug it back in and all is well!! So far every fault with my station has been self-induced.
Kevin
KD0ILM

31213. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 03:27:07 UTC
From: Bob
Topic: 31206 Message: 31213

15, 40, ...you guys probably know better than me about band propagation. Either's fine with me and my G5RV antenna...and my TS-520. (hi)
Bob, KD5MHQ

--- On Tue, 5/10/11, Walter Milton <wmilton@...> wrote:

From: Walter Milton <wmilton@...>
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, May 10, 2011, 3:39 PM

What about 15M now that it is starting to open up.

Walt

KA2NJF

Sent via BlackBerry by AT&T

-----Original Message-----

From: "andy_westcott2004" <andywestcottpublic@...>

Sender: TS-520_820_530_830@yahoogroups.com

Date: Tue, 10 May 2011 20:26:30

To: <TS-520_820_530_830@yahoogroups.com>

Reply-To: TS-520_820_530_830@yahoogroups.com

Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net

I like the idea of a Kenwood hybrid net - I bet it could become popular.

The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.

So - on balance I suggest 40m.

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31214. RE: [TS-520_820_530_830] Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 09:42:35 UTC
From: fpath fpath
Topic: 31184 Message: 31214

Thanks Mike, I think he should change his name to busy hi hi. As long as he is OK, it was just very unusual normally I get a response within 2 - 3 days. I know he suffers with migraines as well..

Regards,

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: w5rkl@...
Date: Tue, 10 May 2011 15:31:27 +0000
Subject: [TS-520_820_530_830] Re: Information please

Ken's doing fine but he's busier than a one armed wall paper hanger which is why you may not have gotten a response to your e-mails.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
>
> Greetings people,
>
> Anyone know if Ken K4EAA is OK? Have sent him several emails over last month and have not received anything back
>
> Regards,
>
> Dave
> VK5PDL
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31215. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 12:53:14 UTC
From: Ed
Topic: 31195 Message: 31215

Rick -

As John pointed out, reducing the carrier _only_ works on CW. Since digital modes use SSB, reducing the carrier level will not reduce output. The mic gain needs to be reduced or either of the suggested circuits can be used to reduce output via ALC.

Ed - KD0BKH

--- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
>

> ......
>
> I have a 530SP and it may be different. I won't opine on the suggestion
> above, but I would just turn the CAR (carrier) down on mine.
>
> Rick KF7JFU
>
>

31216. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 14:07:50 UTC
From: kd0fds
Topic: 31206 Message: 31216

I am interested in a Kenwood Hybrid net.

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I like the idea of a Kenwood hybrid net - I bet it could become popular.
>
> The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
>
> So - on balance I suggest 40m.
>

31217. RE: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 15:40:09 UTC
From: Rick Hicks
Topic: 31195 Message: 31217

Of course. Thank you.

Rick

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ed
Sent: Wednesday, May 11, 2011 5:53 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Rick -

As John pointed out, reducing the carrier _only_ works on CW. Since digital
modes use SSB, reducing the carrier level will not reduce output. The mic
gain needs to be reduced or either of the suggested circuits can be used to
reduce output via ALC.

Ed - KD0BKH

--- In TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com> , "Rick Hicks" <rick@...>
wrote:
>

> ......
>
> I have a 530SP and it may be different. I won't opine on the suggestion
> above, but I would just turn the CAR (carrier) down on mine.
>
> Rick KF7JFU
>
>

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1325 / Virus Database: 1500/3629 - Release Date: 05/10/11

[Non-text portions of this message have been removed]

31218. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 16:19:12 UTC
From: kd8hmo_us
Topic: 31206 Message: 31218

I would be interested in a Kenwood net too. Hopefully I will be able to hang another antenna out soon that my landlord will approve of...

--- In TS-520_820_530_830@yahoogroups.com, "kd0fds" <kd0fds@...> wrote:
>
> I am interested in a Kenwood Hybrid net.
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@> wrote:
> >
> > I like the idea of a Kenwood hybrid net - I bet it could become popular.
> >
> > The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
> >
> > So - on balance I suggest 40m.
> >
>

31219. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 17:02:58 UTC
From: W2FID
Topic: 31206 Message: 31219

COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
MARSHALL
W2FID

--- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:

From: kd0fds <kd0fds@yahoo.com>
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 7:07 AM

I am interested in a Kenwood Hybrid net.

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I like the idea of a Kenwood hybrid net - I bet it could become popular.
>
> The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
>
> So - on balance I suggest 40m.
>

[Non-text portions of this message have been removed]

31220. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 17:08:35 UTC
From: Bob
Topic: 31206 Message: 31220

Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on 40. 40's got my vote, but whatever's good. Get 'er done! ;-}

Bob, KD5MHQ

--- On Wed, 5/11/11, W2FID <w2fid@...> wrote:

From: W2FID <w2fid@...>
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 11:02 AM

COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
MARSHALL
W2FID

--- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:

From: kd0fds <kd0fds@...>
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 7:07 AM

I am interested in a Kenwood Hybrid net.

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I like the idea of a Kenwood hybrid net - I bet it could become popular.
>
> The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
>
> So - on balance I suggest 40m.
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31221. RE: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 17:16:33 UTC
From: Rick Hicks
Topic: 31206 Message: 31221

I’m in. KF7JFU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W2FID
Sent: Wednesday, May 11, 2011 10:03 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
MARSHALL
W2FID

--- On Wed, 5/11/11, kd0fds <kd0fds@... <mailto:kd0fds%40yahoo.com> > wrote:

From: kd0fds <kd0fds@... <mailto:kd0fds%40yahoo.com> >
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Wednesday, May 11, 2011, 7:07 AM

I am interested in a Kenwood Hybrid net.

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I like the idea of a Kenwood hybrid net - I bet it could become popular.
>
> The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
>
> So - on balance I suggest 40m.
>

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1500/3630 - Release Date: 05/11/11

[Non-text portions of this message have been removed]

31222. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 17:44:03 UTC
From: roberteleazer@rocketmail.com
Topic: 31206 Message: 31222

I find that 40M does not get you more than 500 miles at night running 100W and far less than that in the daytime.

20M seems much better and has been open at night quite a bit lately.

Of course I have talked from the east coast of Florida to Tucson, AZ on 10M but it is rather spotty.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
>
> Iâ□□m in. KF7JFU
>
>
>
> From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of W2FID
> Sent: Wednesday, May 11, 2011 10:03 AM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
>
>
>
>
> COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> MARSHALL
> W2FID
>
> --- On Wed, 5/11/11, kd0fds <kd0fds@... <mailto:kd0fds%40yahoo.com> > wrote:
>
> From: kd0fds <kd0fds@... <mailto:kd0fds%40yahoo.com> >
> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Wednesday, May 11, 2011, 7:07 AM
>
>
>
> I am interested in a Kenwood Hybrid net.
>
> --- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "andy_westcott2004" <andywestcottpublic@> wrote:

> >
> > I like the idea of a Kenwood hybrid net - I bet it could become popular.
> >
> > The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
> >
> > So - on balance I suggest 40m.
> >
>
> [Non-text portions of this message have been removed]
>
>
>
> _____
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1375 / Virus Database: 1500/3630 - Release Date: 05/11/11
>
>
>
> [Non-text portions of this message have been removed]
>

31223. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 18:11:27 UTC
From: Gene Henderson
Topic: 31206 Message: 31223

Count me in too. I have others around me that run the Kenwood Hybrids also and the will be interested also. Gene WB9HLA
----- Original Message -----
From: Bob
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 11, 2011 1:08 PM
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on 40. 40's got my vote, but whatever's good. Get 'er done! ;-}

Bob, KD5MHQ

--- On Wed, 5/11/11, W2FID <w2fid@...> wrote:

From: W2FID <w2fid@...>
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 11:02 AM

COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
MARSHALL
W2FID

--- On Wed, 5/11/11, kd0fds <kd0fds@yahoo.com> wrote:

From: kd0fds <kd0fds@...>
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 7:07 AM

I am interested in a Kenwood Hybrid net.

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I like the idea of a Kenwood hybrid net - I bet it could become popular.
>
> The only question is what band?? I know a lot of you are in the USA so even 40m seems a bit dodgy, although not impossible. 20m would be impractical if the net were during the evenings.
>
> So - on balance I suggest 40m.
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31224. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 18:56:18 UTC
From: Danilo I.A.
Topic: 31195 Message: 31224

*Just a question (for TS-820): reducing carrier would not affect the life of tubes?
Thanks.
73, Danilo (Daniel) IK1XHN

*
2011/5/11 Ed <edrinkc@yahoo.com>

>
>
> Rick -
>
> As John pointed out, reducing the carrier _only_ works on CW.
>
> Ed - KD0BKH
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
> >
>
> > ......
> >
> > I have a 530SP and it may be different. I won't opine on the suggestion
> > above, but I would just turn the CAR (carrier) down on mine.
> >
> > Rick KF7JFU
> >
> >
>
>
>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

Member of:
* INORC* *# 582 Italian Naval “Old Rhytmers” Club
* ARMI # 169 Associazione Radioamatori Marinai Italiani
* SKCC # 4876 Straight Key Century Club
* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

[Non-text portions of this message have been removed]

31225. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 20:11:50 UTC
From: Bob
Topic: 31195 Message: 31225

Nope! I've done it with mine and there's absolutely no problem with doing that. As in all modes, remember to always keep watch of the plate current...that's your key to know what the tubes are doing.

BTW, I don't know if it was mentioned on this thread, but you can always just use a 9v battery and a 10K pot connected to the ALC input to reduce the output power. Need a schematic of that?

Bob, KD5MHQ

--- On Wed, 5/11/11, Danilo I.A. <danilo.ik1xhn@...> wrote:

From: Danilo I.A. <danilo.ik1xhn@...>
Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 12:56 PM

*Just a question (for TS-820): reducing carrier would not affect the life of
tubes?
Thanks.
73, Danilo (Daniel) IK1XHN

*
2011/5/11 Ed <edrinkc@yahoo.com>

>
>
> Rick -
>
> As John pointed out, reducing the carrier _only_ works on CW.
>
> Ed - KD0BKH
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...> wrote:
> >
>
> > ......
> >
> > I have a 530SP and it may be different. I won't opine on the suggestion
> > above, but I would just turn the CAR (carrier) down on mine.
> >
> > Rick KF7JFU
> >
> >
>
>

>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

Member of:
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* SKCC # 4876 Straight Key Century Club
* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

[Non-text portions of this message have been removed]

31226. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 20:42:51 UTC
From: jpr3232819@aol.com
Topic: 31206 Message: 31226

I'm in to KK4BKV

[Non-text portions of this message have been removed]

31227. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 22:20:11 UTC
From: Jeramy Ross
Topic: 31206 Message: 31227

Count me in on the Hybrids net, too.

73,
Jeramy W5XTL

On Wed, May 11, 2011 at 3:42 PM, <jpr3232819@...> wrote:
> I'm in to KK4BKV
>
>
> [Non-text portions of this message have been removed]
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

31228. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 23:17:00 UTC
From: churchguy_12901
Topic: 31206 Message: 31228

COUNT ME IN, Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?
>
> If not, maybe we ought to start one.
>
> Robert
> WB5WSV
>

31229. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 23:12:49 UTC
From: Joe Loverti
Topic: 31206 Message: 31229

I would also be interested in a Kenwood Hybrids Net. I know one other person
who would be also. Count us in.

Joe WW8X

On Wed, May 11, 2011 at 2:11 PM, Gene Henderson <wb9hla@...> wrote:

>
>
> Count me in too. I have others around me that run the Kenwood Hybrids also
> and the will be interested also. Gene WB9HLA
>
> ----- Original Message -----
> From: Bob
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 1:08 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
> Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
> 40. 40's got my vote, but whatever's good. Get 'er done! ;-}
>
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
>
> From: W2FID <w2fid@yahoo.com>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 11:02 AM
>
> COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST
> PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> MARSHALL
> W2FID
>
> --- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:
>
> From: kd0fds <kd0fds@...>
> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 7:07 AM
>
> I am interested in a Kenwood Hybrid net.
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> <andywestcottpublic@...> wrote:

> >
> > I like the idea of a Kenwood hybrid net - I bet it could become popular.
> >
> > The only question is what band?? I know a lot of you are in the USA so
> even 40m seems a bit dodgy, although not impossible. 20m would be
> impractical if the net were during the evenings.
> >
> > So - on balance I suggest 40m.
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

31230. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 23:29:12 UTC
From: CX8AT
Topic: 31195 Message: 31230

Yes, also I would like to know if somebody has connected this ALC control in the ts-830 and How, as far as I know the back DIN connector in TS-520 an 830 have different pin connections.
I remember that the TS-830 remote connector (the one that has the ALC input) does not have ground pin, isn't it? so you have to get a ground or maybe use pin 7 which is not used to bring a ground to the external battery and pot just to use a male Din and not have cables around.

Al
CX8At
>
> Nope! I've done it with mine and there's absolutely no problem with
> doing that. As in all modes, remember to always keep watch of the
> plate current...that's your key to know what the tubes are doing.
>
> BTW, I don't know if it was mentioned on this thread, but you can
> always just use a 9v battery and a 10K pot connected to the ALC input
> to reduce the output power. Need a schematic of that?
>
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, Danilo I.A. <danilo.ik1xhn@...
> <mailto:danilo.ik1xhn%40gmail.com>> wrote:
>
> From: Danilo I.A. <danilo.ik1xhn@...
> <mailto:danilo.ik1xhn%40gmail.com>>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Wednesday, May 11, 2011, 12:56 PM
>
>
>
> *Just a question (for TS-820): reducing carrier would not affect the
> life of
> tubes?
> Thanks.
> 73, Danilo (Daniel) IK1XHN
>
> *
> 2011/5/11 Ed <edrinkc@... <mailto:edrinkc%40yahoo.com>>
>
> >
> >
> > Rick -

> >
> > As John pointed out, reducing the carrier _only_ works on CW.
> >
> > Ed - KD0BKH
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Rick Hicks" <rick@...>
> wrote:
> > >
> >
> > > .....
> > >
> > > I have a 530SP and it may be different. I won't opine on the
> suggestion
> > > above, but I would just turn the CAR (carrier) down on mine.
> > >
> > > Rick KF7JFU
> > >
> > >
> >
> >
> >
>
> --
> Danilo Imperatore-Antonucci IK1XHN
>
> http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>
>
> Member of:
> * INORC* *# 582 Italian Naval “Old Rhytmers” Club
> * ARMI # 169 Associazione Radioamatori Marinai Italiani
> * SKCC # 4876 Straight Key Century Club
> * NAQCC # 4878 North American Qrp Cw Club
> * VCA # 048 Vibroplex Collector's Association
>
> <http://www.qrz.com/db/ik1xhn%20%20%20>
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31231. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-11 23:57:47 UTC
From: jeffrey lord
Topic: 31206 Message: 31231

We have a BOAT ANCHOUR NET over here {australia} it is very well attended ,operates on 3.620Mhz 9amutc monday mornings! your time

Jeff
VK4FNRS

From: churchguy_12901 <churchguy_12901@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 11 May 2011 3:17 PM
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net

COUNT ME IN, Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?
>
> If not, maybe we ought to start one.
>
> Robert
> WB5WSV
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31232. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 00:09:38 UTC
From: W2FID
Topic: 31206 Message: 31232

OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET, AND IT SEEMS THAT MOST PEOPLE FEEL THAT 40 METERS IS THE BAND TO AT LEAST START ON, WHAT DAY OF THE WEEK AND TIME DO YOU GUYS THINK WOULD WORK FOR MOST MEMBERS OF THE GROUP WHO SHOWED INTEREST IN ORGANIZING AN ON AIR NET?
MARSHALL
W2FID
--- On Wed, 5/11/11, Joe Loverti <ww8x.joe@...> wrote:

From: Joe Loverti <ww8x.joe@...>
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 4:12 PM

I would also be interested in a Kenwood Hybrids Net. I know one other person
who would be also. Count us in.

Joe WW8X

On Wed, May 11, 2011 at 2:11 PM, Gene Henderson <wb9hla@...> wrote:

>
>
> Count me in too. I have others around me that run the Kenwood Hybrids also
> and the will be interested also. Gene WB9HLA
>
> ----- Original Message -----
> From: Bob
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 1:08 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
> Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
> 40. 40's got my vote, but whatever's good. Get 'er done! ;-}
>
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
>
> From: W2FID <w2fid@...>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 11:02 AM
>
> COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST
> PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> MARSHALL

> W2FID
>
> --- On Wed, 5/11/11, kd0fds <kd0fds@yahoo.com> wrote:
>
> From: kd0fds <kd0fds@...>
> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 7:07 AM
>
> I am interested in a Kenwood Hybrid net.
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> <andywestcottpublic@...> wrote:
> >
> > I like the idea of a Kenwood hybrid net - I bet it could become popular.
> >
> > The only question is what band?? I know a lot of you are in the USA so
> even 40m seems a bit dodgy, although not impossible. 20m would be
> impractical if the net were during the evenings.
> >
> > So - on balance I suggest 40m.
> >
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31233. Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 00:22:10 UTC
From: gregg.paynter
Topic: 31184 Message: 31233

Ken's still with us. Just received some parts from him today in the mail.

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
>
> Greetings people,
>
> Anyone know if Ken K4EAA is OK? Have sent him several emails over last month and have not received anything back
>
> Regards,
>
> Dave
> VK5PDL
>
> [Non-text portions of this message have been removed]
>

31234. Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 01:11:50 UTC
From: ki4ax
Topic: 31234 Message: 31234

I would also be interested in a Hybrid Net. I think the band that is used should be determined by the time of the net. 20 meters would be better suited for daytime and I would think 40 would be better for night time or early morning. There is almost always some propagation on 20 meters in the day time.

Dan KI4AX

31235. Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 01:51:58 UTC
From: kevin
Topic: 31234 Message: 31235

I sometimes participate in the 3905 Net on 40 in the late day/evening and on average it seems to work well. I am new enough to the hobby however to only know enough to be dangerous. I think this is a splendid idea.
Kevin
KD0ILM
>

31236. SM-220

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 01:54:08 UTC
From: kevin
Topic: 3727 Message: 31236

I just finished repairing a "It worked when I last used it" Ebay 220 station monitor. Is there a reason that I want to install it just after the exciter to monitor the exciter SSB signal versus installing it after my amp. to monitor both, the exciter when amp is not on and my final signal when the amp is on use?
Kevin
KD0ILM

31237. Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 03:53:58 UTC
From: Les Zwiebel WB6ORZ
Topic: 31206 Message: 31237

How about Saturdays, 2 PM Eastern (11 AM for us on the West Coast, in case the band is open and long)? What say 7.225 or 7.250? There is a ham swap net out here on 7.240 at 12:30 local Pacific Time (3:30 EST).
Thanks in advance.
(((((73)))))
Les
---===WB6ORZ===---

----- Original Message -----
From: W2FID
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 11, 2011 5:09 PM
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET, AND IT SEEMS THAT MOST PEOPLE FEEL THAT 40 METERS IS THE BAND TO AT LEAST START ON, WHAT DAY OF THE WEEK AND TIME DO YOU GUYS THINK WOULD WORK FOR MOST MEMBERS OF THE GROUP WHO SHOWED INTEREST IN ORGANIZING AN ON AIR NET?
MARSHALL
W2FID
--- On Wed, 5/11/11, Joe Loverti <ww8x.joe@...> wrote:

From: Joe Loverti <ww8x.joe@...>
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 4:12 PM

I would also be interested in a Kenwood Hybrids Net. I know one other person
who would be also. Count us in.

Joe WW8X

On Wed, May 11, 2011 at 2:11 PM, Gene Henderson <wb9hla@...> wrote:

>
>
> Count me in too. I have others around me that run the Kenwood Hybrids also
> and the will be interested also. Gene WB9HLA
>
> ----- Original Message -----
> From: Bob
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 1:08 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
> Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
> 40. 40's got my vote, but whatever's good. Get 'er done! ;-}

>
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
>
> From: W2FID <w2fid@...>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 11:02 AM
>
> COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST
> PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> MARSHALL
> W2FID
>
> --- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:
>
> From: kd0fds <kd0fds@...>
> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 7:07 AM
>
> I am interested in a Kenwood Hybrid net.
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> <andywestcottpublic@...> wrote:
> >
> > I like the idea of a Kenwood hybrid net - I bet it could become popular.
> >
> > The only question is what band?? I know a lot of you are in the USA so
> even 40m seems a bit dodgy, although not impossible. 20m would be
> impractical if the net were during the evenings.
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> > So - on balance I suggest 40m.
> >
>
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Yahoo! Groups Links

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31238. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 03:58:44 UTC
From: Bryan Sanders
Topic: 31206 Message: 31238

I think that it is a great idea. Good timing for a net also. I won't be
able to make them all, but will make all that I can.

Bryan
K8BEC

On Wed, May 11, 2011 at 10:53 PM, Les Zwiebel WB6ORZ <wb6orz@...>wrote:

>
>
> How about Saturdays, 2 PM Eastern (11 AM for us on the West Coast, in case
> the band is open and long)? What say 7.225 or 7.250? There is a ham swap net
> out here on 7.240 at 12:30 local Pacific Time (3:30 EST).
> Thanks in advance.
> (((((73)))))
> Les
> ---===WB6ORZ===---
>
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> From: W2FID
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 5:09 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
> OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET,
> AND IT SEEMS THAT MOST PEOPLE FEEL THAT 40 METERS IS THE BAND TO AT LEAST
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> --- On Wed, 5/11/11, Joe Loverti <ww8x.joe@...> wrote:
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> From: Joe Loverti <ww8x.joe@...>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
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>
> Joe WW8X
>
> On Wed, May 11, 2011 at 2:11 PM, Gene Henderson <wb9hla@...>
> wrote:

>
> >
> >
> > Count me in too. I have others around me that run the Kenwood Hybrids
> also
> > and the will be interested also. Gene WB9HLA
> >
> > ----- Original Message -----
> > From: Bob
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 11, 2011 1:08 PM
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
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> > Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
> > 40. 40's got my vote, but whatever's good. Get 'er done! ;-}
> >
> > Bob, KD5MHQ
> >
> > --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
> >
> > From: W2FID <w2fid@...>
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Wednesday, May 11, 2011, 11:02 AM
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> > COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST
> > PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> > MARSHALL
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> >
> > --- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:
> >
> > From: kd0fds <kd0fds@...>
> > Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
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> > Date: Wednesday, May 11, 2011, 7:07 AM
> >
> > I am interested in a Kenwood Hybrid net.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> > <andywestcottpublic@...> wrote:
> > >
> > > I like the idea of a Kenwood hybrid net - I bet it could become
> popular.
> > >
> > > The only question is what band?? I know a lot of you are in the USA so
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> > > So - on balance I suggest 40m.

> > >
> >
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>

--
Bryan

[Non-text portions of this message have been removed]

31239. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 04:21:04 UTC
From: Jojo Vicencio DU1VHY
Topic: 31206 Message: 31239

We in IARU Region 3 use 7.0 till 7.200 Mhz.

73,

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

----- Original Message ----
From: Bryan Sanders <flyfshn76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 11:58:44 AM
Subject: Re: [TS-520_820_530_830] Kenwood Hybrids net

I think that it is a great idea. Good timing for a net also. I won't be
able to make them all, but will make all that I can.

Bryan
K8BEC

On Wed, May 11, 2011 at 10:53 PM, Les Zwiebel WB6ORZ <wb6orz@...>wrote:

>
>
> How about Saturdays, 2 PM Eastern (11 AM for us on the West Coast, in case
> the band is open and long)? What say 7.225 or 7.250? There is a ham swap net
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> (((((73)))))
> Les
> ---===WB6ORZ===---
>
> ----- Original Message -----
> From: W2FID
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 5:09 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>
> OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET,
> AND IT SEEMS THAT MOST PEOPLE FEEL THAT 40 METERS IS THE BAND TO AT LEAST
> START ON, WHAT DAY OF THE WEEK AND TIME DO YOU GUYS THINK WOULD WORK FOR
> MOST MEMBERS OF THE GROUP WHO SHOWED INTEREST IN
> ORGANIZING AN ON AIR NET?
> MARSHALL
> W2FID

> --- On Wed, 5/11/11, Joe Loverti <ww8x.joe@...> wrote:
>
> From: Joe Loverti <ww8x.joe@...>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 4:12 PM
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> Joe WW8X
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> wrote:
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> >
> >
> > Count me in too. I have others around me that run the Kenwood Hybrids
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> > and the will be interested also. Gene WB9HLA
> >
> > ----- Original Message -----
> > From: Bob
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 11, 2011 1:08 PM
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> >
> > Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
> > 40. 40's got my vote, but whatever's good. Get 'er done! ;-}
> >
> > Bob, KD5MHQ
> >
> > --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
> >
> > From: W2FID <w2fid@...>
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> > To: TS-520_820_530_830@yahoogroups.com
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> > PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
> > MARSHALL
> > W2FID
> >
> > --- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:
> >
> > From: kd0fds <kd0fds@...>
> > Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> > To: TS-520_820_530_830@yahoogroups.com

> > Date: Wednesday, May 11, 2011, 7:07 AM
> >
> > I am interested in a Kenwood Hybrid net.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> > <andywestcottpublic@...> wrote:
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> popular.
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> > > The only question is what band?? I know a lot of you are in the USA so
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> > > So - on balance I suggest 40m.
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>
>

--
Bryan

[Non-text portions of this message have been removed]

Yahoo! Groups Links

31240. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 04:57:30 UTC
From: Danilo I.A.
Topic: 31195 Message: 31240

*
*Bob,
Yes! I would appreciate a schematic for that.
Tnx for help.
Danilo, IK1XHN

>
>
>
> BTW, I don't know if it was mentioned on this thread, but you can always
> just use a 9v battery and a 10K pot connected to the ALC input to reduce the
> output power. Need a schematic of that?
>
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, Danilo I.A. <danilo.ik1xhn@...> wrote:
>
> From: Danilo I.A. <danilo.ik1xhn@...>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> Date: Wednesday, May 11, 2011, 12:56 PM
>
>
>
> *Just a question (for TS-820): reducing carrier would not affect the life
> of
>
> tubes?
> Thanks.
> 73, Danilo (Daniel) IK1XHN
>
> *
> 2011/5/11 Ed <edrinkc@yahoo.com>
>
> >
> >
> > Rick -
> >
> > As John pointed out, reducing the carrier _only_ works on CW.
> >
> > Ed - KD0BKH
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Rick Hicks" <rick@...>
> wrote:

> > >
> >
> > > ......
> > >
> > > I have a 530SP and it may be different. I won't opine on the suggestion
> > > above, but I would just turn the CAR (carrier) down on mine.
> > >
> > > Rick KF7JFU
> > >
> > >
> >
> >
> >
>
> --
> Danilo Imperatore-Antonucci IK1XHN
>
> http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>
>
>
> Member of:
> * INORC* *# 582 Italian Naval “Old Rhytmers” Club
> * ARMI # 169 Associazione Radioamatori Marinai Italiani
> * SKCC # 4876 Straight Key Century Club
> * NAQCC # 4878 North American Qrp Cw Club
> * VCA # 048 Vibroplex Collector's Association
>
> <http://www.qrz.com/db/ik1xhn%20%20%20>
>
>
> [Non-text portions of this message have been removed]
>
>
>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

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* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

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31241. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 05:00:30 UTC
From: basketoak@cox.net
Topic: 31206 Message: 31241

From my QTH i n Virginia, 20 would be the only band to pull in 6/7 land.

I regularly hook up with the 14.300 Net which connects to sailing vessels from Long Beach, CA.

I suggest all check connectivity to that net and report back.

Unfortunately we may find that people in the mid west are too close to 6 land on 20, but we should try it.

40 mtrs would be fine after dark, or for an east coast regional net in day time.

Dave
KG4MGB
Burke, VA

---- Jojo Vicencio DU1VHY <jojo@...> wrote:

==========
We in IARU Region 3 use 7.0 till 7.200 Mhz.

73,

jojo

Jojo Vicencio - DU1VHY
+639178501759
+6325020674

----- Original Message ----
From: Bryan Sanders <flyfshn76@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 11:58:44 AM
Subject: Re: [TS-520_820_530_830] Kenwood Hybrids net

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able to make them all, but will make all that I can.

Bryan
K8BEC

On Wed, May 11, 2011 at 10:53 PM, Les Zwiebel WB6ORZ <wb6orz@...>wrote:

>
>
> How about Saturdays, 2 PM Eastern (11 AM for us on the West Coast, in case
> the band is open and long)? What say 7.225 or 7.250? There is a ham swap net
> out here on 7.240 at 12:30 local Pacific Time (3:30 EST).
> Thanks in advance.

> (((((73)))))
> Les
> ---===WB6ORZ===---
>
> ----- Original Message -----
> From: W2FID
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wednesday, May 11, 2011 5:09 PM
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
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> OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET,
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> MARSHALL
> W2FID
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>
> From: Joe Loverti <ww8x.joe@...>
> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
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> Date: Wednesday, May 11, 2011, 4:12 PM
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> Joe WW8X
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> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wednesday, May 11, 2011 1:08 PM
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> > Yeah, I kinda like the idea of 40m too; it's easier to load up my wire on
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> >
> > Bob, KD5MHQ
> >

> > --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
> >
> > From: W2FID <w2fid@...>
> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
> > To: TS-520_820_530_830@yahoogroups.com
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> > From: kd0fds <kd0fds@...>
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> > --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
> > <andywestcottpublic@...> wrote:
> > >
> > > I like the idea of a Kenwood hybrid net - I bet it could become
> popular.
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> > > The only question is what band?? I know a lot of you are in the USA so
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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>

--
Bryan

[Non-text portions of this message have been removed]

Yahoo! Groups Links

--
Dave Beadner

31242. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 07:47:24 UTC
From: pmarkavage@juno.com
Topic: 31206 Message: 31242

Didn't we go through all this "net" stuff several years ago? Anyway, once a frequency/band/time/day is decided upon (which is not a trivial exercise), there needs to be at least one or two net control stations to control/guide the masses that gather, or within ten minutes, anarchy will prevail.

Pete, wa2cwa

31243. RE: [TS-520_820_530_830] Re: Information please

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 12:28:04 UTC
From: fpath fpath
Topic: 31184 Message: 31243

Thanks Gregg, received a couple of responses also confirming parts received within last 24 hrs.

73's
Dave

To: TS-520_820_530_830@yahoogroups.com
From: gregg.paynter@...
Date: Thu, 12 May 2011 00:22:10 +0000
Subject: [TS-520_820_530_830] Re: Information please

Ken's still with us. Just received some parts from him today in the mail.

--- In TS-520_820_530_830@yahoogroups.com, fpath fpath <fpath@...> wrote:
>
>
>
> Greetings people,
>
> Anyone know if Ken K4EAA is OK? Have sent him several emails over last month and have not received anything back
>
> Regards,
>
> Dave
> VK5PDL
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31244. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 13:20:17 UTC
From: lw8eoq
Topic: 31206 Message: 31244

Hi,

I have confirmed qso's with several US stations on 40m with just my ts830s and a folded dipole 8 meters from ground... count me in.

73 de Guido, LW8EOQ
Argentina

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?
>
> If not, maybe we ought to start one.
>
> Robert
> WB5WSV
>

31245. Digital external VFO for 820s ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 11:21:00 UTC
From: kd8iju
Topic: 31245 Message: 31245

Someone had told me that kenwood made an external Digital readout VFO that would fit my 820S ?
or do I have to use a model made for another model transciever?

I am also new to the group and will be getting my 820s tommorow!!
Already have a kenwood AT-200 tuner that I have been cleaning up and getting ready. Can't wait to play!
Ill prob use the ole 706MKII mostly for PSK31
John Quail KD8IJU

31246. Re: Digital external VFO for 820s ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 15:41:55 UTC
From: w5rkl
Topic: 31245 Message: 31246

Hi John,

There are no external VFO's with digital read out, made by Kenwood, that are compatible with the TS-820. The VFO you may have been mistakenly referred to is the VFO-230 which is not compatible with the TS-520 and/or the TS-820.

The only external VFOs that are "plug and play" compatible with the TS-520 and TS-820 are the VFO-520 and VFO-820. Both VFO-520 and VFO-820 are interchangeable between the 520 and 820 series transceivers.

The
73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "kd8iju" <johnnyquail@...> wrote:
>
> Someone had told me that kenwood made an external Digital readout VFO that would fit my 820S ?
> or do I have to use a model made for another model transciever?
>
> I am also new to the group and will be getting my 820s tommorow!!
> Already have a kenwood AT-200 tuner that I have been cleaning up and getting ready. Can't wait to play!
> Ill prob use the ole 706MKII mostly for PSK31
> John Quail KD8IJU
>

31247. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 16:30:24 UTC
From: roberteleazer@rocketmail.com
Topic: 31206 Message: 31247

Pete:

Yes you are absolutely right. My personal experience with nets is limited to that with an OK storm warning net, which required very tight net control and coordination between the meterologist, radar, and the stations, always mindful that what we said might go out over the TV in seconds and was being listened to by the public with "Police Band" radios. This is extreme compared to a typical ragchew net but you still do need tight control. I have yet to break into any of the typical ragchews going on on 40M because they are moving so fast that you can't get a word in and have no net control.

I think we will need at least 3 nets, one for East coast, one for Midwest and one for West coast, with a net control for each, and once we get them up and running we may be able to combine them. We may even need to go with an even more regional approach, such as 4 land, 5 land, 6 land, etc. and then expand from there. And there is nothing wrong with fairly local nets on 10M - Lord knows there is plenty of bandwidth for them!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Didn't we go through all this "net" stuff several years ago? Anyway, once
> a frequency/band/time/day is decided upon (which is not a trivial
> exercise), there needs to be at least one or two net control stations to
> control/guide the masses that gather, or within ten minutes, anarchy will
> prevail.
>
> Pete, wa2cwa
>

31248. Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 16:49:04 UTC
From: Terry Wagoner
Topic: 31248 Message: 31248

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

31249. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 17:00:14 UTC
From: Bob
Topic: 31195 Message: 31249

Here's how it's done... I've attached a JPG.

73,

Bob, KD5MHQ

Yes, also I would like to know if somebody has connected this ALC
control in the ts-830 and How, as far as I know the back DIN connector
in TS-520 an 830 have different pin connections.
I remember that the TS-830 remote connector (the one that has the ALC
input) does not have ground pin, isn't it? so you have to get a ground
or maybe use pin 7 which is not used to bring a ground to the external
battery and pot just to use a male Din and not have cables around.

Al
CX8At
>
> Nope! I've done it with mine and there's absolutely no problem with
> doing that. As in all modes, remember to always keep watch of the
> plate current...that's your key to know what the tubes are doing.
>
> BTW, I don't know if it was mentioned on this thread, but you can
> always just use a 9v battery and a 10K pot connected to the ALC input
> to reduce the output power. Need a schematic of that?
>
> Bob, KD5MHQ

[Non-text portions of this message have been removed]

31250. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 17:02:21 UTC
From: Bob
Topic: 31195 Message: 31250

Ooops, looks like the attachment got removed!

--- On Thu, 5/12/11, Bob <bob4analog@...> wrote:

From: Bob <bob4analog@...>
Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
To: TS-520_820_530_830@yahoogroups.com
Cc: cx8at@...
Date: Thursday, May 12, 2011, 11:00 AM

Here's how it's done... I've attached a JPG.

73,

Bob, KD5MHQ

Yes, also I would like to know if somebody has connected this ALC
control in the ts-830 and How, as far as I know the back DIN connector
in TS-520 an 830 have different pin connections.
I remember that the TS-830 remote connector (the one that has the ALC
input) does not have ground pin, isn't it? so you have to get a ground
or maybe use pin 7 which is not used to bring a ground to the external
battery and pot just to use a male Din and not have cables around.

Al
CX8At
>
> Nope! I've done it with mine and there's absolutely no problem with
> doing that. As in all modes, remember to always keep watch of the
> plate current...that's your key to know what the tubes are doing.
>
> BTW, I don't know if it was mentioned on this thread, but you can
> always just use a 9v battery and a 10K pot connected to the ALC input
> to reduce the output power. Need a schematic of that?
>
> Bob, KD5MHQ

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31251. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 18:34:19 UTC
From: Danilo I.A.
Topic: 31195 Message: 31251

*Bob,
as you said, no attachment available.
Can u try again ?
Tnx
73, Danilo IK1XHN
*
2011/5/12 Bob <bob4analog@...>

>
>
> Ooops, looks like the attachment got removed!
>
> --- On Thu, 5/12/11, Bob <bob4analog@...m> wrote:
>
> From: Bob <bob4analog@...>
>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> Cc: cx8at@...
> Date: Thursday, May 12, 2011, 11:00 AM
>
>
>
>
>
> Here's how it's done... I've attached a JPG.
>
> 73,
>
> Bob, KD5MHQ
>
> -----
> Yes, also I would like to know if somebody has connected this ALC
> control in the ts-830 and How, as far as I know the back DIN connector
> in TS-520 an 830 have different pin connections.
> I remember that the TS-830 remote connector (the one that has the ALC
> input) does not have ground pin, isn't it? so you have to get a ground
> or maybe use pin 7 which is not used to bring a ground to the external
> battery and pot just to use a male Din and not have cables around.
>
> Al
> CX8At
> >
> > Nope! I've done it with mine and there's absolutely no problem with
> > doing that. As in all modes, remember to always keep watch of the
> > plate current...that's your key to know what the tubes are doing.

> >
> > BTW, I don't know if it was mentioned on this thread, but you can
> > always just use a 9v battery and a 10K pot connected to the ALC input
> > to reduce the output power. Need a schematic of that?
> >
> > Bob, KD5MHQ
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

Member of:
* INORC* *# 582 Italian Naval “Old Rhytmers” Club
* ARMI # 169 Associazione Radioamatori Marinai Italiani
* SKCC # 4876 Straight Key Century Club
* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

[Non-text portions of this message have been removed]

31252. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 18:37:36 UTC
From: CX8AT
Topic: 31195 Message: 31252

yes indeed Bob
Maybe you can upload that JPG to the Photo Archives file area of this
group, it will be appreciated.

Al,
CX8AT

> Ooops, looks like the attachment got removed!
>
> --- On Thu, 5/12/11, Bob <bob4analog@yahoo.com
> <mailto:bob4analog%40yahoo.com>> wrote:
>
> From: Bob <bob4analog@yahoo.com <mailto:bob4analog%40yahoo.com>>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Cc: cx8at@...m.uy <mailto:cx8at%40adinet.com.uy>
> Date: Thursday, May 12, 2011, 11:00 AM
>
>
>
> Here's how it's done... I've attached a JPG.
>
> 73,
>
> Bob, KD5MHQ
>
> -----
> Yes, also I would like to know if somebody has connected this ALC
> control in the ts-830 and How, as far as I know the back DIN connector
> in TS-520 an 830 have different pin connections.
> I remember that the TS-830 remote connector (the one that has the ALC
> input) does not have ground pin, isn't it? so you have to get a ground
> or maybe use pin 7 which is not used to bring a ground to the external
> battery and pot just to use a male Din and not have cables around.
>
> Al
> CX8At
> >
> > Nope! I've done it with mine and there's absolutely no problem with
> > doing that. As in all modes, remember to always keep watch of the
> > plate current...that's your key to know what the tubes are doing.
> >
> > BTW, I don't know if it was mentioned on this thread, but you can
> > always just use a 9v battery and a 10K pot connected to the ALC input

> > to reduce the output power. Need a schematic of that?
> >
> > Bob, KD5MHQ
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

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31253. TS-520 / TS-820 QRP ALC Mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 19:25:10 UTC
From: sceneryguru
Topic: 31253 Message: 31253

Good Afternoon Group:

Based on recent exchanges, I sifted through my Kenwood related files to find the file referenced above. Turns out a bare-bones version is already in the file section (on line) as a simple schematic.

The file I uploaded is the same drawing with the addition of explanatory text. Perhaps a bit more helpful...

tnx es 73

Tom G, Sr.
K3SSB

31254. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:02:18 UTC
From: w5rkl
Topic: 31195 Message: 31254

Attachments to responses have never been allowed, whether responses are made directly on the website or through e-mail.

For those who receive postings through e-mail, and others who have not read the "Description" on the group's "Home" page, the following is quoted from the group's Home "Description".

"Attachments are not allowed to help prevent virii and trojans; if you want to share a file or pictures, log in to the group and upload them to the files or pictures section, or share them directly off-list."

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Ooops, looks like the attachment got removed!
>
> --- On Thu, 5/12/11, Bob <bob4analog@...> wrote:
>
>
> From: Bob <bob4analog@...>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> Cc: cx8at@...
> Date: Thursday, May 12, 2011, 11:00 AM
>
>
> Â
>
>
>
> Here's how it's done... I've attached a JPG.
>
> 73,
>
> Bob, KD5MHQ
>
> -----
> Yes, also I would like to know if somebody has connected this ALC
> control in the ts-830 and How, as far as I know the back DIN connector
> in TS-520 an 830 have different pin connections.
> I remember that the TS-830 remote connector (the one that has the ALC
> input) does not have ground pin, isn't it? so you have to get a ground
> or maybe use pin 7 which is not used to bring a ground to the external

> battery and pot just to use a male Din and not have cables around.
>
> Al
> CX8At
> >
> > Nope! I've done it with mine and there's absolutely no problem with
> > doing that. As in all modes, remember to always keep watch of the
> > plate current...that's your key to know what the tubes are doing.
> >
> > BTW, I don't know if it was mentioned on this thread, but you can
> > always just use a 9v battery and a 10K pot connected to the ALC input
> > to reduce the output power. Need a schematic of that?
> >
> > Bob, KD5MHQ
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

31255. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:03:20 UTC
From: Joseph Stiles
Topic: 31248 Message: 31255

Terry,

1. DEOXIT D5 label says "More than just a cleaner." I have not used the F5. I pretty much use D5 exclusively...and nothing else. I am sure there are others that may work as well...just have not really use anything else for a number of years.

2. Turn off and unplug radio...especially if you plan on cleaning the rotary wafer switch in the final cage area. You are going to have to remove the top and bottom covers. The D5 has "L" "M" "H" on the top of the can...I use the "L" (less) use the wand and direct the spray into the pot/control... a little goes a long way.. and work back and forth numerous times...some caned air helps too.

3. Don't worry about the "shaft grease." some of that stuff has been in there for 20+ years...and a bit of cleaner can make them move a bit more easily(not so stiff) I do not use grease on other things...I use a fine tip oiler with synthetic lube with teflon...or "clock &watch" oil. The former is much cheaper.

73's joe wb7uqu

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 9:49:04 AM
Subject: [TS-520_820_530_830] Cleaning Scratchy Pots

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

[Non-text portions of this message have been removed]

31256. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:08:08 UTC
From: james27613
Topic: 31195 Message: 31256

hi,

the schematic is in the files section,
under MODS, look for QRP.

"Use ALC input to 'force' QRP operation"

I uploaded it a few years ago.

73 james ke4drn

31257. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:09:45 UTC
From: james27613
Topic: 31195 Message: 31257

hi,

I also built one for my TS-530.

be sure to use the DIN 270 degree type.

Same DIN that was used on the famous
Commodore 64 family of computers.

73 james ke4drn

31258. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:10:59 UTC
From: Bob
Topic: 31195 Message: 31258

I sent it to your direct email instead, since it appears that this user group removes these attachements.

Bob

--- On Thu, 5/12/11, Danilo I.A. <danilo.ik1xhn@...> wrote:

From: Danilo I.A. <danilo.ik1xhn@gmail.com>
Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 12:34 PM

*Bob,
as you said, no attachment available.
Can u try again ?
Tnx
73, Danilo IK1XHN
*
2011/5/12 Bob <bob4analog@...>

>
>
> Ooops, looks like the attachment got removed!
>
> --- On Thu, 5/12/11, Bob <bob4analog@...> wrote:
>
> From: Bob <bob4analog@...>
>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> Cc: cx8at@...
> Date: Thursday, May 12, 2011, 11:00 AM
>
>
>
>
> Here's how it's done... I've attached a JPG.
>
> 73,
>
> Bob, KD5MHQ
>
> -----
> Yes, also I would like to know if somebody has connected this ALC
> control in the ts-830 and How, as far as I know the back DIN connector
> in TS-520 an 830 have different pin connections.

> I remember that the TS-830 remote connector (the one that has the ALC
> input) does not have ground pin, isn't it? so you have to get a ground
> or maybe use pin 7 which is not used to bring a ground to the external
> battery and pot just to use a male Din and not have cables around.
>
> Al
> CX8At
> >
> > Nope! I've done it with mine and there's absolutely no problem with
> > doing that. As in all modes, remember to always keep watch of the
> > plate current...that's your key to know what the tubes are doing.
> >
> > BTW, I don't know if it was mentioned on this thread, but you can
> > always just use a 9v battery and a 10K pot connected to the ALC input
> > to reduce the output power. Need a schematic of that?
> >
> > Bob, KD5MHQ
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>
>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

Member of:
* INORC* *# 582 Italian Naval “Old Rhytmers” Club
* ARMI # 169 Associazione Radioamatori Marinai Italiani
* SKCC # 4876 Straight Key Century Club
* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31259. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:12:01 UTC
From: Bob
Topic: 31195 Message: 31259

Oh...yeah, that's agood idea, forgot about that, thanks. I'll work on that.

Bob

--- On Thu, 5/12/11, CX8AT <cx8at@...> wrote:

From: CX8AT <cx8at@...>
Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 12:37 PM

yes indeed Bob
Maybe you can upload that JPG to the Photo Archives file area of this
group, it will be appreciated.

Al,
CX8AT

> Ooops, looks like the attachment got removed!
>
> --- On Thu, 5/12/11, Bob <bob4analog@...
> <mailto:bob4analog%40yahoo.com>> wrote:
>
> From: Bob <bob4analog@... <mailto:bob4analog%40yahoo.com>>
> Subject: Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Cc: cx8at@... <mailto:cx8at%40adinet.com.uy>
> Date: Thursday, May 12, 2011, 11:00 AM
>
>
>
> Here's how it's done... I've attached a JPG.
>
> 73,
>
> Bob, KD5MHQ
>
> -----
> Yes, also I would like to know if somebody has connected this ALC
> control in the ts-830 and How, as far as I know the back DIN connector
> in TS-520 an 830 have different pin connections.
> I remember that the TS-830 remote connector (the one that has the ALC
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> or maybe use pin 7 which is not used to bring a ground to the external
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>
> Al
> CX8At
> >
> > Nope! I've done it with mine and there's absolutely no problem with
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> > BTW, I don't know if it was mentioned on this thread, but you can
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> > to reduce the output power. Need a schematic of that?
> >
> > Bob, KD5MHQ
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31260. Re: [TS-520_820_530_830] TS-520 / TS-820 QRP ALC Mod

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:12:56 UTC
From: Bob
Topic: 31253 Message: 31260

Thanks, this is good to know.

Bob

--- On Thu, 5/12/11, sceneryguru <k3ssb@...> wrote:

From: sceneryguru <k3ssb@...>
Subject: [TS-520_820_530_830] TS-520 / TS-820 QRP ALC Mod
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 1:25 PM

Good Afternoon Group:

Based on recent exchanges, I sifted through my Kenwood related files to find the file referenced above. Turns out a bare-bones version is already in the file section (on line) as a simple schematic.

The file I uploaded is the same drawing with the addition of explanatory text. Perhaps a bit more helpful...

tnx es 73

Tom G, Sr.
K3SSB

[Non-text portions of this message have been removed]

31261. Re: Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:14:07 UTC
From: roberteleazer@rocketmail.com
Topic: 31248 Message: 31261

Terry:

I wrote you a somewhat lengthy reply extolling the virtues of LPS-1 to fix scratchy pots but Yahoo seems to have eaten it and I do not wish to recreate it.

So try some LPS-1. That works better than anything else I know of.

Robert
WB5SV

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:
>
> 1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?
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> 2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?
>
> Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?
>
> Appreciate any suggestions that you have been successful with.
>
> Terry K9TW
>

31262. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 20:15:57 UTC
From: Bob
Topic: 31195 Message: 31262

I guess it's a octal socket for some (mine is a TS-520SE with that), a DIN for others.

Bob

--- On Thu, 5/12/11, james27613 <james27613@bellsouth.net> wrote:

From: james27613 <james27613@...>
Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 2:09 PM

hi,

I also built one for my TS-530.

be sure to use the DIN 270 degree type.

Same DIN that was used on the famous
Commodore 64 family of computers.

73 james ke4drn

[Non-text portions of this message have been removed]

31263. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 21:46:38 UTC
From: Terry Wagoner
Topic: 31248 Message: 31263

Joe--Thanks for sharing your practice. I have cleaned the bandswitch wafers on the RF board and the S22 in the PA cage. I used Deoxit D5 and blew it off with canned air. I havent cleaned any pots yet. As I mentioned the AF gain is getting scratchy especially at the minimum end of travel. So I wanted to find out what others were using on the pots. I did use Tri-flow on the VFO gear train and light machine oil on fan bushing felts.
73s Terry

From: Joseph Stiles <stilesjoseph@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 4:03:20 PM
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Terry,

1. DEOXIT D5 label says "More than just a cleaner." I have not used the F5. I pretty much use D5 exclusively...and nothing else. I am sure there are others that may work as well...just have not really use anything else for a number of years.

2. Turn off and unplug radio...especially if you plan on cleaning the rotary wafer switch in the final cage area. You are going to have to remove the top and

bottom covers. The D5 has "L" "M" "H" on the top of the can...I use the "L" (less) use the wand and direct the spray into the pot/control... a little goes a

long way.. and work back and forth numerous times...some caned air helps too.

3. Don't worry about the "shaft grease." some of that stuff has been in there for 20+ years...and a bit of cleaner can make them move a bit more easily(not so

stiff) I do not use grease on other things...I use a fine tip oiler with synthetic lube with teflon...or "clock &watch" oil. The former is much cheaper.

73's joe wb7uqu

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 9:49:04 AM
Subject: [TS-520_820_530_830] Cleaning Scratchy Pots

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots

(AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first

and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease

that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31264. Re: 530 No Transmit, No Receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 21:49:43 UTC
From: wrench101
Topic: 30202 Message: 31264

Ok, after sinkhole remediation has been performed on my house, I'm back at this 530! I have connected to an antenna, and there is no receive either. I thought the receiving end was ok since I could receive a marker signal. After checking my antenna connections, I can receive no psk signal on 20 meters which is usually hopping loud in the afternoon at my location. After a brief tune through the bands, nothing heard. So, my original thought that I could receive is false. After all that has been done, I have no receive and no transmit. The digital display is working, but no signal, in or out. Any ideas? thanks all for your previous posts and comments. 73 Steve

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Yes, Every 530 I have worked on has had some cut traces on the bottom of
> the IF board.
>
> Gordon
> N6WK
>
>
> On 4/6/2011 2:37 PM, wrench101 wrote:
> >
> > I was checking several boards for any cold solder joints, broken
> > traces, etc. and found a couple that needed addressing. I also noticed
> > that on the IF board, there seems to be a couple of traces that were
> > purposely cut out. Can anyone tell me if this is normal? I can send a
> > picture if you should need one. Thanks. 73 Steve
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > >
> > > Morning Steve,
> > >
> > > I just wanted to ensure the bias voltage was switching like it
> > should between receive and transmit and vice verse.
> > >
> > > You can check the driver bias voltage at the RF Unit plug 8 pin 1
> > and ground. In receive the voltage should be approximately -51VDC and
> > in transmit +.4VDC.
> > >
> > > Make sure the RF ATT push button on the front panel is not pressed.
> > The receive signals flows through the RF ATTN push button switch. The
> > CAL (Marker) signal does not flow through the RF ATTN switch. The PLL
> > Unit's "MKR" (CAL) signal flows directly to the RF Unit through plug 4
> > pin 2.
> > >
> > > 73s

> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "wrench101"
> > <wrench101@> wrote:
> > > >
> > > > Hi again Mike! I beleive I checked the voltages at the driver
> > tube, but I'm going to check again just in case. I beleive everything
> > there was ok. The s-meter works correctly with rf gain adjustment.
> > I'll clean the connectors once I get my first cup of java in me!
> > > >
> > > > 73
> > > > Steve
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > > > >
> > > > > Steve,
> > > > >
> > > > > Have you taken voltage readings on the driver tube to see if
> > there is any change in voltages between receive and transmit with the
> > new tubes? That's where I would start.
> > > > >
> > > > > It's quite possible the relay on the IF Unit may be causing the
> > problem. Clean the plugs on the IF and AF units, one at a time, with
> > contact cleaner, making sure the plugs seat flush on the boards.
> > > > >
> > > > > When you rotate the RF gain control CCW, in receive, does the
> > meter rise and eventually peg full scale to the right? This is what it
> > should do. Rotating the RF gain control CW should cause the meter to
> > fall back to zero. Again, that's what it should do.
> > > > >
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "wrench101"
> > <wrench101@> wrote:
> > > > > >
> > > > > > Ok, I've removed the key from the cw jack. I set the mode to
> > cw, load at minimum, car between 9 and 10, and switch to send, no alc
> > to peak. Meter switch to ip mode, only reading 60ma idle current. No
> > RF. I know that when I used to hit send, the meter would "bounce up" a
> > bit and return to nil. Now it doesn't do that anymore. I also notice

> > that the receive is acting funny. The marker signal is very weak and
> > sometimes isn't there at all. I remember once the other day when
> > tuning in the marker signal, that it faded out to barely audible with
> > the volume all the way up. The cw sidetone is plenty loud. It's as if
> > there isn't anything there for the finals to work with signal wise.
> > > > > >
> > > > > > Thanks again
> > > > > > > 73
> > > > > > > Steve
> > > > > >
> > > > >
> > >
> >
>

31265. Re: [TS-520_820_530_830] Re: Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 21:51:27 UTC
From: Terry Wagoner
Topic: 31248 Message: 31265

Robert--Sorry you lost your work. If you can resurrect it you can send it to me
off list at wagstw46@.... I will look into LPS-1. I am not familiar with
it. I am not committed to using Deoxit.
Thanks & 73s Terry K9TW

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 4:14:07 PM
Subject: [TS-520_820_530_830] Re: Cleaning Scratchy Pots

Terry:

I wrote you a somewhat lengthy reply extolling the virtues of LPS-1 to fix
scratchy pots but Yahoo seems to have eaten it and I do not wish to recreate it.

So try some LPS-1. That works better than anything else I know of.

Robert
WB5SV

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy
>pots (AF gain etc) on my TS-830s. Couple of questions:
>
> 1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5
>first and then the F5? Is there another brand that works as well?
>
> 2. How to you apply cleaner/lube to the pots? I dont really want to remove the
>front panel unless it is best way to do it. Is it possible to set rig on back
>(in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let
>lube flow down into the controls? I am afraid this might remove any shaft grease
>that manufacturer used?
>
> Looks like you can get spray tip extension in at an angle on most of the
>controls. Mode switch looks to be sealed unit?
>
>
> Appreciate any suggestions that you have been successful with.
>
> Terry K9TW
>

[Non-text portions of this message have been removed]

31266. RL1 replacement - Mouser

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 21:58:47 UTC
From: wrench101
Topic: 31266 Message: 31266

Hello all, I was looking for the part# 769-NR4EB-12V at Mouser as suggested in other postings as a replacement for RL1 and can't seem to find it. Does anyone know if the part number has changed? 73 Steve

31267. Re: RL1 replacement - Mouser

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 22:10:03 UTC
From: kd8hmo_us
Topic: 31266 Message: 31267

http://www.k4eaa.com/parts.htm

--- In TS-520_820_530_830@yahoogroups.com, "wrench101" <wrench101@...> wrote:
>
> Hello all, I was looking for the part# 769-NR4EB-12V at Mouser as suggested in other postings as a replacement for RL1 and can't seem to find it. Does anyone know if the part number has changed? 73 Steve
>

31268. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 22:30:44 UTC
From: Mel Farrer
Topic: 31248 Message: 31268

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 2:46:38 PM
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Joe--Thanks for sharing your practice. I have cleaned the bandswitch wafers on the RF board and the S22 in the PA cage. I used Deoxit D5 and blew it off with canned air. I havent cleaned any pots yet. As I mentioned the AF gain is getting

scratchy especially at the minimum end of travel. So I wanted to find out what others were using on the pots. I did use Tri-flow on the VFO gear train and light machine oil on fan bushing felts.
73s Terry

From: Joseph Stiles <stilesjoseph@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 4:03:20 PM
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Terry,

1. DEOXIT D5 label says "More than just a cleaner." I have not used the F5. I pretty much use D5 exclusively...and nothing else. I am sure there are others that may work as well...just have not really use anything else for a number of years.

2. Turn off and unplug radio...especially if you plan on cleaning the rotary wafer switch in the final cage area. You are going to have to remove the top and

bottom covers. The D5 has "L" "M" "H" on the top of the can...I use the "L" (less) use the wand and direct the spray into the pot/control... a little goes a

long way.. and work back and forth numerous times...some caned air helps too.

3. Don't worry about the "shaft grease." some of that stuff has been in there for 20+ years...and a bit of cleaner can make them move a bit more easily(not so

stiff) I do not use grease on other things...I use a fine tip oiler with synthetic lube with teflon...or "clock &watch" oil. The former is much cheaper.

73's joe wb7uqu

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 9:49:04 AM

Subject: [TS-520_820_530_830] Cleaning Scratchy Pots

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots

(AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first

and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease

that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

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31269. Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 22:44:27 UTC
From: james27613
Topic: 31195 Message: 31269

Hi Bob,

The TS-520/820 series used the octal socket
and the TS-530/830 series used DIN 270 socket.

I built a qrp circuit for my ts-520 and ts-530.

73 james ke4drn

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> I guess it's a octal socket for some (mine is a TS-520SE with that), a DIN for others.
> Â
> Bob
>
> --- On Thu, 5/12/11, james27613 <james27613@...> wrote:
>
>
> From: james27613 <james27613@...>
> Subject: [TS-520_820_530_830] Re: Reducing the output of a TS520SE
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, May 12, 2011, 2:09 PM

> hi,
>
> I also built one for my TS-530.
>
> be sure to use the DIN 270 degree type.
>
> Same DIN that was used on the famous
> Commodore 64 family of computers.
>
> 73 james ke4drn
>
>
>
>
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

31270. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 23:34:36 UTC
From: AI4WM Bill
Topic: 31248 Message: 31270

I've had excellent results cleaning pots and faders on broadcast equipment, consumer electronics and ham gear with DeOxit D5 followed by F5. They sued to be DeOxit and Cali-Lube. Same product different names and work great. If a pot is noisy clean it first with DeOxit and follow with lube. To preserve quiet operation every now and then a drop or so of lube will keep pots working quite long. Good for selector switches, lever switches and other contacts also. Just be careful around phenolic wafer switches as the phenolic material will absorb the liquids. BTW I only use the liquid with the needle applicator and not the spray. Spray is a last resort when I cannot fit the needle applicator. Spray is messy......

73,

Bill

AI4WM

--- On Thu, 5/12/11, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Cleaning Scratchy Pots
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 12:49 PM

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

[Non-text portions of this message have been removed]

31271. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-12 23:44:48 UTC
From: Bryan Sanders
Topic: 31206 Message: 31271

I could do net control every once in a while. Like I said I am a NCS for omiss. Never thought about stations outside of the us. I am sure we can find something. Just remember you can please some of the people some of the time, but you can't please all people all of the time. I will be happy to help anyway possible.

Bryan
K8BEC

On Wed, May 11, 2011 at 10:58 PM, Bryan Sanders <flyfshn76@...> wrote:

> I think that it is a great idea. Good timing for a net also. I won't be
> able to make them all, but will make all that I can.
>
> Bryan
> K8BEC
>
> On Wed, May 11, 2011 at 10:53 PM, Les Zwiebel WB6ORZ <wb6orz@...>wrote:
>
>>
>>
>> How about Saturdays, 2 PM Eastern (11 AM for us on the West Coast, in case
>> the band is open and long)? What say 7.225 or 7.250? There is a ham swap net
>> out here on 7.240 at 12:30 local Pacific Time (3:30 EST).
>> Thanks in advance.
>> (((((73)))))
>> Les
>> ---===WB6ORZ===---
>>
>> ----- Original Message -----
>> From: W2FID
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Wednesday, May 11, 2011 5:09 PM
>> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>>
>> OK.....NOW THAT WE SEEM TO HAVE A GOOD NUMBER OF PEOPLE FOR A NET,
>> AND IT SEEMS THAT MOST PEOPLE FEEL THAT 40 METERS IS THE BAND TO AT LEAST
>> START ON, WHAT DAY OF THE WEEK AND TIME DO YOU GUYS THINK WOULD WORK FOR
>> MOST MEMBERS OF THE GROUP WHO SHOWED INTEREST IN
>> ORGANIZING AN ON AIR NET?
>> MARSHALL
>> W2FID
>> --- On Wed, 5/11/11, Joe Loverti <ww8x.joe@...> wrote:
>>
>> From: Joe Loverti <ww8x.joe@...>
>> Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

>> To: TS-520_820_530_830@yahoogroups.com
>> Date: Wednesday, May 11, 2011, 4:12 PM
>>
>> I would also be interested in a Kenwood Hybrids Net. I know one other
>> person
>> who would be also. Count us in.
>>
>> Joe WW8X
>>
>> On Wed, May 11, 2011 at 2:11 PM, Gene Henderson <wb9hla@...>
>> wrote:
>>
>> >
>> >
>> > Count me in too. I have others around me that run the Kenwood Hybrids
>> also
>> > and the will be interested also. Gene WB9HLA
>> >
>> > ----- Original Message -----
>> > From: Bob
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Sent: Wednesday, May 11, 2011 1:08 PM
>> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>> >
>> > Yeah, I kinda like the idea of 40m too; it's easier to load up my wire
>> on
>> > 40. 40's got my vote, but whatever's good. Get 'er done! ;-}
>> >
>> > Bob, KD5MHQ
>> >
>> > --- On Wed, 5/11/11, W2FID <w2fid@...> wrote:
>> >
>> > From: W2FID <w2fid@...>
>> > Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Date: Wednesday, May 11, 2011, 11:02 AM
>> >
>> > COUNT ME IN. GREAT IDEA. 40 METERS SEEMS LIKE THE BEST BET FOR THE MOST
>> > PEOPLE. GENERAL PORTION OF THE BAND FOR THE NEW OPERATORS.
>> > MARSHALL
>> > W2FID
>> >
>> > --- On Wed, 5/11/11, kd0fds <kd0fds@...> wrote:
>> >
>> > From: kd0fds <kd0fds@...>
>> > Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Date: Wednesday, May 11, 2011, 7:07 AM
>> >
>> > I am interested in a Kenwood Hybrid net.

>> >
>> > --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
>> > <andywestcottpublic@...> wrote:
>> > >
>> > > I like the idea of a Kenwood hybrid net - I bet it could become
>> popular.
>> > >
>> > > The only question is what band?? I know a lot of you are in the USA so
>> > even 40m seems a bit dodgy, although not impossible. 20m would be
>> > impractical if the net were during the evenings.
>> > >
>> > > So - on balance I suggest 40m.
>> > >
>> >
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>
>
>
> --
> Bryan
>

--
Bryan

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31272. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 00:59:53 UTC
From: Terry Wagoner
Topic: 31248 Message: 31272

Bill---thanks. I saw the needle applicator and thought it might also be good for applying D5 to the board connectors.

From: AI4WM Bill <ai4wm@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 7:34:36 PM
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

I've had excellent results cleaning pots and faders on broadcast equipment, consumer electronics and ham gear with DeOxit D5 followed by F5. They sued to be DeOxit and Cali-Lube. Same product different names and work great. If a pot is noisy clean it first with DeOxit and follow with lube. To preserve quiet operation every now and then a drop or so of lube will keep pots working quite long. Good for selector switches, lever switches and other contacts also. Just be careful around phenolic wafer switches as the phenolic material will absorb the liquids. BTW I only use the liquid with the needle applicator and not the spray. Spray is a last resort when I cannot fit the needle applicator. Spray is messy......

73,

Bill

AI4WM

--- On Thu, 5/12/11, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: [TS-520_820_530_830] Cleaning Scratchy Pots
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 12:49 PM

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31273. Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 02:59:38 UTC
From: Robin
Topic: 31273 Message: 31273

I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with both an AT-180 tuner/power meter and a scope: with either I get 50W CW output for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at 800V. What is going on, please?

31274. Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 03:45:19 UTC
From: Bob
Topic: 31206 Message: 31274

Well, it looks like we got a pretty good number of folks that are in for the Hybrid Net, just need to determine where and when...unless that's already been determined and I missed that info.
Bob, KD5MHQ

--- On Wed, 5/11/11, churchguy_12901 <churchguy_12901@...> wrote:

From: churchguy_12901 <churchguy_12901@...>
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 11, 2011, 5:17 PM

COUNT ME IN, Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:

>

> Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?

>

> If not, maybe we ought to start one.

>

> Robert

> WB5WSV

>

[Non-text portions of this message have been removed]

31275. Re: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 03:49:40 UTC
From: Garrett, Russ
Topic: 31206 Message: 31275

I'm in too.
Russ
Kd7mpk

Sent from my BlackBerry Wireless Handheld

Russ Garrett | Attorney
Bullivant Houser Bailey PC | 805 Broadway St. | Suite 400 | Vancouver, WA 98660-3310
T 360.737.3363 | F 360.395.8504 | russ.garrett@...
Seattle . Vancouver . Portland . San Francisco . Las Vegas

From: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com>
To: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com>
Sent: Thu May 12 20:45:19 2011
Subject: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?

Well, it looks like we got a pretty good number of folks that are in for the Hybrid Net, just need to determine where and when...unless that's already been determined and I missed that info.
Bob, KD5MHQ

--- On Wed, 5/11/11, churchguy_12901 <churchguy_12901@...
<mailto:churchguy_12901%40yahoo.com> > wrote:

From: churchguy_12901 <churchguy_12901@... <mailto:churchguy_12901%40yahoo.com> >
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Date: Wednesday, May 11, 2011, 5:17 PM

COUNT ME IN, Mike w2waw

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> ,
"roberteleazer@..." <roberteleazer@...> wrote:

>

> Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?

>

> If not, maybe we ought to start one.

>

> Robert

> WB5WSV

>

[Non-text portions of this message have been removed]

mail.bullivant.com made the following annotations

Please be advised that, unless expressly stated otherwise, any U.S. federal tax advice contained in this e-mail, including attachments, is not intended to be used by any person for the purpose of avoiding any penalties that may be imposed by the Internal Revenue Service.

[Non-text portions of this message have been removed]

31276. Re: [TS-520_820_530_830] Re: Reducing the output of a TS520SE

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 03:53:29 UTC
From: John Davidson
Topic: 31195 Message: 31276

I do some QRP with my TS520, turning the carrier level down to 5-20 W often.
A lot less than 100 mA plate current key down.
My tubes have lasted 20 years since last replacement.
Less plate current = less heat = longer life.

From: Danilo I.A. <danilo.ik1xhn@gmail.com>
To:
*Just a question (for TS-820): reducing carrier would not affect the life of
tubes?
Thanks.
73, Danilo (Daniel) IK1XHN

*
2011/5/11 Ed <edrinkc@...>

>
>>

--
Danilo Imperatore-Antonucci IK1XHN

http://www.qrz.com/db/ik1xhn <http://www.qrz.com/db/ik1xhn%20%20%20>

Member of:
* INORC* *# 582 Italian Naval “Old Rhytmers” Club
* ARMI # 169 Associazione Radioamatori Marinai Italiani
* SKCC # 4876 Straight Key Century Club
* NAQCC # 4878 North American Qrp Cw Club
* VCA # 048 Vibroplex Collector's Association

<http://www.qrz.com/db/ik1xhn%20%20%20>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31277. Re: [TS-520_820_530_830] Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 04:01:46 UTC
From: John Davidson
Topic: 31234 Message: 31277

The problem with 20 M and higher is the long skip where closer stations never will hear each other.
40 is a good compromise where you will rarely have east and west coast hearing each other (well...at night they can) but everyone inbetween can hear each other. At least in the daytime hours.
 In winter the net can move to 80M when the band is open everywhere at night and there is little T-storm QRN.

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 11, 2011 9:11:50 PM
Subject: [TS-520_820_530_830] Hybrid Net

I would also be interested in a Hybrid Net. I think the band that is used should be determined by the time of the net. 20 meters would be better suited for daytime and I would think 40 would be better for night time or early morning. There is almost always some propagation on 20 meters in the day time.

Dan KI4AX

[Non-text portions of this message have been removed]

31278. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 04:04:16 UTC
From: John Davidson
Topic: 31234 Message: 31278

How can you be on 3905 and 40M at the same time?

From: kevin <kmx888@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 11, 2011 9:51:58 PM
Subject: [TS-520_820_530_830] Re: Hybrid Net

I sometimes participate in the 3905 Net on 40 in the late day/evening and on average it seems to work well. I am new enough to the hobby however to only know enough to be dangerous. I think this is a splendid idea.
Kevin
KD0ILM
>

[Non-text portions of this message have been removed]

31279. Re: [TS-520_820_530_830] Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 04:12:25 UTC
From: Bob
Topic: 31273 Message: 31279

Have you another known working tranceiver you could test your dummy load and power meter? I know you said they are accurate; just a suggestion to be sure it's working right. The plate current and plate voltage sound like they're right.
Bob, KD5mhq

--- On Thu, 5/12/11, Robin <r.mcneill@...> wrote:

I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with both an AT-180 tuner/power meter and a scope: with either I get 50W CW output for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at 800V. What is going on, please?

[Non-text portions of this message have been removed]

31280. Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 12:03:42 UTC
From: w5rkl
Topic: 31234 Message: 31280

The 3905 Century Club has nets/gatherings on 20, 40, 80, and 160.

http://www.3905ccn.com/newsite/index.htm

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> How can you be on 3905 and 40M at the same time?
>
>
>
>
> _____
> From: kevin <kmx888@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 11, 2011 9:51:58 PM
> Subject: [TS-520_820_530_830] Re: Hybrid Net
>
> Â
> I sometimes participate in the 3905 Net on 40 in the late day/evening and on
> average it seems to work well. I am new enough to the hobby however to only know
> enough to be dangerous. I think this is a splendid idea.
> Kevin
> KD0ILM
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31281. Kenwood External speakers, are they good?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 13:03:18 UTC
From: kd8iju
Topic: 31281 Message: 31281

I think this might have been asked before but....
Those of you that are using the Kenwood external speakers, are they any good?
Do the Filters help at all?
Obviously I like the fact that they match the rigs and allow hooking up two rigs to one speaker but I want anyone using one of these to give me your opinion on wether or not those filters actually help the sound??
I have an 820 so I might try the matching speaker

31282. Re: [TS-520_820_530_830] Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 14:45:09 UTC
From: Joseph Stiles
Topic: 31273 Message: 31282

Robin,

First check the value of the 4 20 ohm cathode resistors on the final board.....they should be close to 5 ohms to ground..the plate current metering is taken from these. You may be getting a "false" Ip if you are just using the front panel meter. Also, you may have a problem in the "final cage area," possibly L-1/C-7/C-8. These are suspect if you have good HV, good drive, and good finals. Power will usually fall into the 50-70 watt range. Check Ken Kemski's web site K4EAA.com regarding the "final cage repair." He has the parts too! good luck.................

73's joe wb7uqu

From: Robin <r.mcneill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 12, 2011 7:59:38 PM
Subject: [TS-520_820_530_830] Half power out with full plate current

I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with both an AT-180 tuner/power meter and a scope: with either I get 50W CW output for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at 800V. What is going on, please?

[Non-text portions of this message have been removed]

31283. Re: [TS-520_820_530_830] Kenwood External speakers, are they good?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 14:48:43 UTC
From: Joseph Stiles
Topic: 31281 Message: 31283

Filters help...speaker is satisfactory...lots better than the transistor radio speaker on the top cover. I pretty much use good quality headphones.

From: kd8iju <johnnyquail@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, May 13, 2011 6:03:18 AM
Subject: [TS-520_820_530_830] Kenwood External speakers, are they good?

I think this might have been asked before but....
Those of you that are using the Kenwood external speakers, are they any good?
Do the Filters help at all?
Obviously I like the fact that they match the rigs and allow hooking up two rigs to one speaker but I want anyone using one of these to give me your opinion on wether or not those filters actually help the sound??
I have an 820 so I might try the matching speaker

[Non-text portions of this message have been removed]

31284. Re: Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 15:18:45 UTC
From: w5rkl
Topic: 31273 Message: 31284

If your 530 is indicating full power output with 800VDC HV at 225ma IP current after tune up then that's the normal 180 watts DC input power in CW mode for the 530.

The final amplifiers in all of the hybrids operate in Class AB1. The final amplifier's typical efficiency rating is 55% which means typical power output in CW mode will be 100 watts (180 - 45% - 99).

I agree, try another watt meter and compare the results between the 2 watt meters. Don't use sideband as the test mode, use CW.

Check the top plate cap on the 6146. This is the tab soldered to the top of the tube, not the slide on cap with the parasitic suppressor. If the cap is loose then power output will be affected. Don't waste you time and money on matched tubes. That's not the source of your problem, based on the information you have provided.

Replace the short length of coax cable between the 530 and the dummy load/watt meter with a known good cable. A bad solder connection in the coax cable may show up as a good DC (ohm meter) connection but when RF is applied, that so called "good DC" connection can present a high resistance to RF.

Don't assume anything, check everything even to the point of using other watt meter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Robin" <r.mcneill@...> wrote:
>
> I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with both an AT-180 tuner/power meter and a scope: with either I get 50W CW output for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at 800V. What is going on, please?
>

31285. Re: Kenwood External speakers, are they good?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 16:42:45 UTC
From: w5rkl
Topic: 31281 Message: 31285

The important thing to remember about filters in speakers is, the filters are "audio filters" and will only filter the "audio" signal. Any signal that falls within the bandpass of the IF crystal filter can cause interference that can lead to significant reduction in the audio filter's output audio signal.

Selectivity in a receiver occurs at 2 stages

1. RF amplifier (antenna coils)

and

2. IF stage (crystal filters)

Skirts on crystal filters that do not have steep sides will allow signals to flow through which can result in interference. When this happens, especially if the interfering signal is quite strong, no amount of "audio filtering" will eliminate or significantly reduce the interfering signals.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Filters help...speaker is satisfactory...lots better than the transistor radio
> speaker on the top cover. I pretty much use good quality headphones.
>
>
>
>
> _____
> From: kd8iju <johnnyquail@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, May 13, 2011 6:03:18 AM
> Subject: [TS-520_820_530_830] Kenwood External speakers, are they good?
>
>
> I think this might have been asked before but....
> Those of you that are using the Kenwood external speakers, are they any good?
> Do the Filters help at all?
> Obviously I like the fact that they match the rigs and allow hooking up two rigs
> to one speaker but I want anyone using one of these to give me your opinion on
> wether or not those filters actually help the sound??
> I have an 820 so I might try the matching speaker
>
>
>

>
> [Non-text portions of this message have been removed]
>

31286. Re: [TS-520_820_530_830] Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 16:24:33 UTC
From: Jeramy Ross
Topic: 31273 Message: 31286

Agreed. Sounds like the cathode resistors have risen in value, and
they should be
looked at after checking the obvious external pieces of the puzzle
(i.e. ensuring
your dummy load, coax jumpers, and trying a different power meter to eliminate
a possible issue there). Checking the screen voltage may also show
that the screen
resistors have risen in value as well.

73,
Jeramy W5XTL

On Fri, May 13, 2011 at 9:45 AM, Joseph Stiles <stilesjoseph@yahoo.com> wrote:
> Robin,
>
>   First check the value of the 4 20 ohm cathode resistors on the final
> board.....they should be close to 5 ohms to ground..the plate current metering
> is taken from these. You may be getting a "false" Ip if you are just using the
> front panel meter. Also, you may have a problem in the "final cage area,"
> possibly L-1/C-7/C-8. These are suspect if you have good HV, good drive, and
> good finals. Power will usually fall into the 50-70 watt range. Check Ken
> Kemski's web site K4EAA.com regarding the "final cage repair." He has the parts
> too!   good luck.................
>
>   73's   joe   wb7uqu
>
>
>
>
> _________________________________
> From: Robin <r.mcneill@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, May 12, 2011 7:59:38 PM
> Subject: [TS-520_820_530_830] Half power out with full plate current
>
>
> I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with
> both an AT-180 tuner/power meter and a scope: with either I get 50W CW output
> for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if
> I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at
> 800V. What is going on, please?
>
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>
>

> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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31287. Re: [TS-520_820_530_830] Kenwood External speakers, are they good?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 16:35:53 UTC
From: Jeramy Ross
Topic: 31281 Message: 31287

The SP-820, which I'm addressing specifically since you mentioned that you had an 820 and were thinking about the matching speaker for it, is a very well built speaker and has a reasonably effective LC filter setup to cut high frequencies/low frequencies as advertised and enabling the operator to have a small degree of tone control in the received audio. Main use in my shack is to cut off the "high" highs to reduce listening fatigue.

If you're expecting DSP filtering or some form of active audio filtering in line with an Autek QF-1 style audio filter, you will not find that with the SP-820. The filters are simply there to provide a small degree of tone control as noted above. That's it.

Having said that, I have mine down stream from either an JPS NIR-10 or an Autek QF-1 and still find using the filters in the speaker help me with reducing the highs a bit which certainly cuts down on my listening fatigue. When using headphones, I plug them into the speaker's headphone jack to allow me to continue to use the speaker's filters for that purpose.

73,
Jeramy W5XTL

On Fri, May 13, 2011 at 8:03 AM, kd8iju <johnnyquail@...> wrote:
> I think this might have been asked before but....
> Those of you that are using the Kenwood external speakers, are they any good?
> Do the Filters help at all?
> Obviously I like the fact that they match the rigs and allow hooking up two rigs to one speaker but I want anyone using one of these to give me your opinion on wether or not those filters actually help the sound??
> I have an 820 so I might try the matching speaker
>
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> ------------------------------------
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> Yahoo! Groups Links
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>

31288. Re: Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 20:35:00 UTC
From: w5rkl
Topic: 31273 Message: 31288

If you suspect the IP meter display is, in fact, in error, I recommend checking not only the cathode resistors but also R6 (2.7K 1/2 watt) and R10 (6.8K 1/2 watt) as well.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> Agreed. Sounds like the cathode resistors have risen in value, and
> they should be
> looked at after checking the obvious external pieces of the puzzle
> (i.e. ensuring
> your dummy load, coax jumpers, and trying a different power meter to eliminate
> a possible issue there). Checking the screen voltage may also show
> that the screen
> resistors have risen in value as well.
>
> 73,
> Jeramy W5XTL
>
> On Fri, May 13, 2011 at 9:45 AM, Joseph Stiles <stilesjoseph@...> wrote:
> > Robin,
> >
> >   First check the value of the 4 20 ohm cathode resistors on the final
> > board.....they should be close to 5 ohms to ground..the plate current metering
> > is taken from these. You may be getting a "false" Ip if you are just using the
> > front panel meter. Also, you may have a problem in the "final cage area,"
> > possibly L-1/C-7/C-8. These are suspect if you have good HV, good drive, and
> > good finals. Power will usually fall into the 50-70 watt range. Check Ken
> > Kemski's web site K4EAA.com regarding the "final cage repair." He has the parts
> > too!   good luck.................
> >
> >   73's   joe   wb7uqu
> >
> >
> >
> >
> >
> > _____
> > From: Robin <r.mcneill@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, May 12, 2011 7:59:38 PM
> > Subject: [TS-520_820_530_830] Half power out with full plate current
> >
> >

> > I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with
> > both an AT-180 tuner/power meter and a scope: with either I get 50W CW output
> > for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if
> > I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at
> > 800V. What is going on, please?
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> >
> > [Non-text portions of this message have been removed]
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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>

31289. Anyone know what this is or why ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 20:27:24 UTC
From: yvadir
Topic: 31289 Message: 31289

Having nothing on the agenda today I decided to take a look inside my TS-830S I bought about 6 months ago. While familiaring myself I saw a patch of electrical tape covering something apparently to keep it from shorting to the case. When I removed the tape I see several resistors soldered to the final unit board under one of the finals sockets. My copy of the owners manual and the service manual don't show the resistors or anything being there. The apparent addition looks newer than the other components, so I'm assuming it's a mod. I haven't had a boat anchor in a long long time and I'm really rusty so any consideration and patience in figuring this out would be appreciated.

I created an album N5YPJ here in the photos and posted a photo of what I am asking about. I don't see a way to insert it here in the message.

73

Richard / N5YPJ

31290. Re: Anyone know what this is or why ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 21:21:25 UTC
From: w5rkl
Topic: 31289 Message: 31290

Hi Richard,

That is not factory!

I can't tell whether the resistors, all appear to be in parallel, are connected between the DRV terminal or pin "4" on the final tube socket and ground. I suspect they are connected between the final tube socket pin 4 and ground.

You need to remove all of those resistors then remove the "BLUE" and "WHITE" wires on the PC board. These wires are on the upper left and upper right corner of the picture. Then remove the PC board Phillips head mounting screws and gently pull the board out and look at the four 20 ohm 1/2 watt cathode resistors. More than likely they will be burnt open. If you find the 4 cathode resistors have been burnt open, replace them with new 20 ohm 1/2 watt resistors then install the board back into the 830 and reconnect the BLUE and WHITE wires to their pins and test the 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "yvadir" <yvadir@...> wrote:
>
>
> Having nothing on the agenda today I decided to take a look inside my
> TS-830S I bought about 6 months ago. While familiaring myself I saw a
> patch of electrical tape covering something apparently to keep it from
> shorting to the case. When I removed the tape I see several resistors
> soldered to the final unit board under one of the finals sockets. My
> copy of the owners manual and the service manual don't show the
> resistors or anything being there. The apparent addition looks newer
> than the other components, so I'm assuming it's a mod. I haven't had a
> boat anchor in a long long time and I'm really rusty so any
> consideration and patience in figuring this out would be appreciated.
>
> I created an album N5YPJ here in the photos and posted a photo of what I
> am asking about. I don't see a way to insert it here in the message.
>
> 73
>
> Richard / N5YPJ
>

31291. Re: [TS-520_820_530_830] Re: Anyone know what this is or why ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 22:13:55 UTC
From: n6wk@n6wk.com
Topic: 31289 Message: 31291

I agree with Mike.
Someone has put those resistors on the underside to make up for open R2
R3 R4 and R5
It appears the two Blue ones are two 10 ohm in series. Probably trying
to get the net result of everything in parallel close to 5 ohms
Remove them, remove the board and replace them with 20 ohm 1/2 watt
resistors. I generally only have to remove the Blue wire to get the
board to flip over.
It isn't hard to remove the screws to the board and gently flip it over
to see the resistors. Of course, you have to remove the tubes first :-)

Good luck and we are here to help

73,
gordon

On 5/13/2011 2:21 PM, w5rkl wrote:
>
> Hi Richard,
>
> That is not factory!
>
> I can't tell whether the resistors, all appear to be in parallel, are
> connected between the DRV terminal or pin "4" on the final tube socket
> and ground. I suspect they are connected between the final tube socket
> pin 4 and ground.
>
> You need to remove all of those resistors then remove the "BLUE" and
> "WHITE" wires on the PC board. These wires are on the upper left and
> upper right corner of the picture. Then remove the PC board Phillips
> head mounting screws and gently pull the board out and look at the
> four 20 ohm 1/2 watt cathode resistors. More than likely they will be
> burnt open. If you find the 4 cathode resistors have been burnt open,
> replace them with new 20 ohm 1/2 watt resistors then install the board
> back into the 830 and reconnect the BLUE and WHITE wires to their pins
> and test the 830.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "yvadir" <yvadir@...>
> wrote:
> >
> >

> > Having nothing on the agenda today I decided to take a look inside my
> > TS-830S I bought about 6 months ago. While familiaring myself I saw a
> > patch of electrical tape covering something apparently to keep it from
> > shorting to the case. When I removed the tape I see several resistors
> > soldered to the final unit board under one of the finals sockets. My
> > copy of the owners manual and the service manual don't show the
> > resistors or anything being there. The apparent addition looks newer
> > than the other components, so I'm assuming it's a mod. I haven't had a
> > boat anchor in a long long time and I'm really rusty so any
> > consideration and patience in figuring this out would be appreciated.
> >
> > I created an album N5YPJ here in the photos and posted a photo of what I
> > am asking about. I don't see a way to insert it here in the message.
> >
> > 73
> >
> > Richard / N5YPJ
> >
>
>

31292. Re: Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 22:48:07 UTC
From: Terry Wagoner
Topic: 31273 Message: 31292

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> I experienced very similar symptom with my TS-530SP. About 70 watts out @800v and 225ma. As Mike mentions if the silver anode cap on the tube has a poor connection to the plate lead that exits the tube you will have a high resistance connection there and you wont have 800V EP under load at that anode. You may find that silver cap pulls off the top of tube and is stuck in the plate connector when you attempt to remove it. They can be resoldered but the lead out of the glass envelope is typically very short. I had measured EP at top and bottom of the plate choke and it was good. I finally decided to try another set of finals and when I pulled the plate cap off the back tube it came off in my hand. I was holding the plastic plate cap, the parasitic suppressor and its accompanying lead that had pulled from the solder connection on top of the plate choke. Close look at the solder connection revealed a perfectly round hole that the suppressor lead could plug back in to. You couldnt see it when the lead was plugged back into the hole unless you looked real close. Only clue I should have noticed was the grey color of the solder joint. In short it was a cold solder connection. I reheated and applied a little more solder to both parasitic choke leads on top the plate choke. I now had 100+ watts output @ 225ma. This is not the first time I have had poor or missing soldering with connections inside the PA cage. Good luck. 73s Terry K9TW
> If your 530 is indicating full power output with 800VDC HV at 225ma IP current after tune up then that's the normal 180 watts DC input power in CW mode for the 530.
>
> The final amplifiers in all of the hybrids operate in Class AB1. The final amplifier's typical efficiency rating is 55% which means typical power output in CW mode will be 100 watts (180 - 45% - 99).
>
> I agree, try another watt meter and compare the results between the 2 watt meters. Don't use sideband as the test mode, use CW.
>
> Check the top plate cap on the 6146. This is the tab soldered to the top of the tube, not the slide on cap with the parasitic suppressor. If the cap is loose then power output will be affected. Don't waste you time and money on matched tubes. That's not the source of your problem, based on the information you have provided.
>
> Replace the short length of coax cable between the 530 and the dummy load/watt meter with a known good cable. A bad solder connection in the coax cable may show up as a good DC (ohm meter) connection but when RF is applied, that so called "good DC" connection can present a high resistance to RF.
>
> Don't assume anything, check everything even to the point of using other watt meter.
>
> 73s
> Mike
> W5RKL
>
>

>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Robin" <r.mcneill@> wrote:
> >
> > I just measured the output of my TS-530s into an accurate 50 Ohm dummy load with both an AT-180 tuner/power meter and a scope: with either I get 50W CW output for 225mA Ip, and SSB comes in at 65W PEP on the scope. I can get another 10W if I get Ip up to 300mA (though not intentionally!). Ep is where it should be, at 800V. What is going on, please?
> >
>

31293. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 00:46:05 UTC
From: Dennis Kippa
Topic: 31234 Message: 31293

We have a old gear net at 730 central time 3970. All old tube and hybrid rigs are welcome. For that matter everyone is welcome. Informal and we have a long comments section to the net. Net control is in TX and the band lengthens out by 8:00 pm.

Dennis n5dpk

On Fri, May 13, 2011 at 7:03 AM, w5rkl <w5rkl@...> wrote:

>
>
> The 3905 Century Club has nets/gatherings on 20, 40, 80, and 160.
>
> http://www.3905ccn.com/newsite/index.htm
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
> >
> > How can you be on 3905 and 40M at the same time?
> >
> >
> >
> >
> > _____
> > From: kevin <kmx888@...>
>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 11, 2011 9:51:58 PM
> > Subject: [TS-520_820_530_830] Re: Hybrid Net
> >
> > ?
> > I sometimes participate in the 3905 Net on 40 in the late day/evening and
> on
> > average it seems to work well. I am new enough to the hobby however to
> only know
> > enough to be dangerous. I think this is a splendid idea.
> > Kevin
> > KD0ILM
> > >
> >
> >
> >

> >
> > [Non-text portions of this message have been removed]
> >
>
>
>

[Non-text portions of this message have been removed]

31294. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 00:52:23 UTC
From: Dennis Kippa
Topic: 31234 Message: 31294

Sorry guys. Thats on Wednesday nights. Another brain fart. I hate when
that happens!

Dennis n5dpk

On Fri, May 13, 2011 at 7:03 AM, w5rkl <w5rkl@yahoo.com> wrote:

>
>
> The 3905 Century Club has nets/gatherings on 20, 40, 80, and 160.
>
> http://www.3905ccn.com/newsite/index.htm
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
> >
> > How can you be on 3905 and 40M at the same time?
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> > >
> > >
> > >
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> >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wed, May 11, 2011 9:51:58 PM
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> > >
> > > ?
> > > I sometimes participate in the 3905 Net on 40 in the late day/evening and
> > on
> > > average it seems to work well. I am new enough to the hobby however to
> > only know
> > > enough to be dangerous. I think this is a splendid idea.
> > > Kevin
> > > KD0ILM
> > > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]

> >
>
>
>

[Non-text portions of this message have been removed]

31295. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 01:54:51 UTC
From: John Davidson
Topic: 31234 Message: 31295

I have no problem working from MI to TX on 80M with my old TS520 but it has been so long since I tuned it above about 3560 that I'm not sure the dial still goes up there .! :D

----- Original Message ----
From: Dennis Kippa <n5dpk1@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, May 13, 2011 8:46:05 PM
Subject: Re: [TS-520_820_530_830] Re: Hybrid Net

We have a old gear net at 730 central time 3970. All old tube and hybrid rigs are welcome. For that matter everyone is welcome. Informal and we have a long comments section to the net. Net control is in TX and the band lengthens out by 8:00 pm.

31296. 3905/40 meters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 02:21:41 UTC
From: kevin
Topic: 31234 Message: 31296

I should have been more clear. Mike guessed right at what I was trying to say. The 3905 Century Club is a net on several different bands
at different times. The 40 meter net can go coast to coast with some occasional DX on many nights. It starts around 5:30PM CST. I do better on it as it starts to get dark from MN. It is a great place to listen to many different operators in a short period of time.(well over 100 many nites) Many are very good operators and few not so much. I use it to develop technique.
Kevin
KD0ILM

31297. Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 13:32:08 UTC
From: ki4ax
Topic: 31234 Message: 31297

I am assessing my location for a 40 meter antenna to get on the Hybrid Net. My first inclination would be to put up a dipole but due to trees, power lines, metal roof etc. this my not be practical. I'm trying to figure out how to put it up without getting too close to any of the above. I have an old TELEX Communication 18ATV/WB-A Vertical Radiator antenna that I believe is in usable condition. As many of you already know the 18ATV is a trapped vertical antenna which will work on the 10 thru 80 meter ham bands. I am wondering if anyone has used this type of antenna mounted above ground with out radials? I have used this antenna in the past while mounted at ground level and while I made contacts with it I remember it seemed pretty noisy and it did not get out too well. I am wondering if height will make a difference in its operation and whether I have to use radial or if I can get by without?

Thanks,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I have no problem working from MI to TX on 80M with my old TS520 but it has been
> so long since I tuned it above about 3560 that I'm not sure the dial still goes
> up there .! :D
>
>
>
> ----- Original Message ----
> From: Dennis Kippa <n5dpk1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, May 13, 2011 8:46:05 PM
> Subject: Re: [TS-520_820_530_830] Re: Hybrid Net
>
> We have a old gear net at 730 central time 3970. All old tube and hybrid
> rigs are welcome. For that matter everyone is welcome. Informal and we
> have a long comments section to the net. Net control is in TX and the band
> lengthens out by 8:00 pm.
>

31298. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 14:55:56 UTC
From: Jim S
Topic: 31234 Message: 31298

Almost any of the older trapped vertical designs are 1/4 wavelength antennas. The MUST be operated either above ground with at least 3 radials per band to be effective, or on the ground with a suitable ground plane of several more radials (maybe as many as 120, although that is pretty rare in a ham installation) resonant on the lowest frequency of operation.

Trying to operate the antenna without radials is like trying to operate half a dipole. It just won't work !

RE ground mounting: Radials do NOT have to be straight. They can be zig-zagged in order to fit the area you have available. If you need to compromise, it is better to install several shorter ones, rather than a few longer ones.

Remember too, that a vertical is going to have different radiation characteristics than a horizontal. It is going to radiate more strongly toward the horizon and less so at higher angles. That will make it a better DX antenna, but performance will suffer stateside. All things to keep in mind.

Good luck! 73 , Jim AG3Y

----- Original Message -----
From: ki4ax
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 14, 2011 9:32 AM
Subject: [TS-520_820_530_830] Re: Hybrid Net

I am assessing my location for a 40 meter antenna to get on the Hybrid Net. My first inclination would be to put up a dipole but due to trees, power lines, metal roof etc. this my not be practical. I'm trying to figure out how to put it up without getting too close to any of the above. I have an old TELEX Communication 18ATV/WB-A Vertical Radiator antenna that I believe is in usable condition. As many of you already know the 18ATV is a trapped vertical antenna which will work on the 10 thru 80 meter ham bands. I am wondering if anyone has used this type of antenna mounted above ground with out radials? I have used this antenna in the past while mounted at ground level and while I made contacts with it I remember it seemed pretty noisy and it did not get out too well. I am wondering if height will make a difference in its operation and whether I have to use radial or if I can get by without?

Thanks,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I have no problem working from MI to TX on 80M with my old TS520 but it has been
> so long since I tuned it above about 3560 that I'm not sure the dial still goes
> up there .! :D

>
>
>
> ----- Original Message ----
> From: Dennis Kippa <n5dpk1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, May 13, 2011 8:46:05 PM
> Subject: Re: [TS-520_820_530_830] Re: Hybrid Net
>
> We have a old gear net at 730 central time 3970. All old tube and hybrid
> rigs are welcome. For that matter everyone is welcome. Informal and we
> have a long comments section to the net. Net control is in TX and the band
> lengthens out by 8:00 pm.
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31299. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 16:42:13 UTC
From: AI4WM Bill
Topic: 31248 Message: 31299

I like the needle applicator best because it can be used anywhere without making a mess. Also look at the pen applicator for edge finger cleaning. An alternative is the needle applicator and a chamois tipped tape head cleaner. Q-Tips work also and both eliminate the cost of the pen applicator. At one time the pens contained a more highly concentrated solution, but I have not purchased any in several years since I use the tipped applicators and saturate the tip as needed with the needle applicator. Caig also sells tiny brushes that work great for cleaning socket connectors and are more firm than a pipe cleaner.

73,

Bill

AI4WM

--- On Thu, 5/12/11, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 8:59 PM

Bill---thanks. I saw the needle applicator and thought it might also be good for

applying D5 to the board connectors.

_____

From: AI4WM Bill <ai4wm@...>

To: TS-520_820_530_830@yahoogroups.com

Sent: Thu, May 12, 2011 7:34:36 PM

Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

I've had excellent results cleaning pots and faders on broadcast equipment,

consumer electronics and ham gear with DeOxit D5 followed by F5. They sued to

be DeOxit and Cali-Lube. Same product different names and work great. If a pot

is noisy clean it first with DeOxit and follow with lube. To preserve quiet

operation every now and then a drop or so of lube will keep pots working quite

long. Good for selector switches, lever switches and other contacts also. Just

be careful around phenolic wafer switches as the phenolic material will absorb

the liquids. BTW I only use the liquid with the needle applicator and not the

spray. Spray is a last resort when I cannot fit the needle applicator. Spray is messy......

73,

Bill

AI4WM

--- On Thu, 5/12/11, Terry Wagoner <wagstw46@yahoo.com> wrote:

From: Terry Wagoner <wagstw46@...>

Subject: [TS-520_820_530_830] Cleaning Scratchy Pots

To: TS-520_820_530_830@yahoogroups.com

Date: Thursday, May 12, 2011, 12:49 PM

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

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[Non-text portions of this message have been removed]

31300. Re: [TS-520_820_530_830] Cleaning Scratchy Pots

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 16:56:54 UTC
From: Jim S
Topic: 31248 Message: 31300

I seem to remember some "Q-Tip" type applicators that are made of a foam rubber substance, rather than cotton fibres. I would prefer them to Q-Tips simply because they would leave nothing behind if you used them to swab the edge of a circuit card. You can probably find them at your local drug store.

Jim S

----- Original Message -----
From: AI4WM Bill
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 14, 2011 12:42 PM
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

I like the needle applicator best because it can be used anywhere without making a mess. Also look at the pen applicator for edge finger cleaning. An alternative is the needle applicator and a chamois tipped tape head cleaner. Q-Tips work also and both eliminate the cost of the pen applicator. At one time the pens contained a more highly concentrated solution, but I have not purchased any in several years since I use the tipped applicators and saturate the tip as needed with the needle applicator. Caig also sells tiny brushes that work great for cleaning socket connectors and are more firm than a pipe cleaner.

73,

Bill

AI4WM

--- On Thu, 5/12/11, Terry Wagoner <wagstw46@...> wrote:

From: Terry Wagoner <wagstw46@...>
Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 12, 2011, 8:59 PM

Bill---thanks. I saw the needle applicator and thought it might also be good for

applying D5 to the board connectors.

From: AI4WM Bill <ai4wm@...>

To: TS-520_820_530_830@yahoogroups.com

Sent: Thu, May 12, 2011 7:34:36 PM

Subject: Re: [TS-520_820_530_830] Cleaning Scratchy Pots

I've had excellent results cleaning pots and faders on broadcast equipment,

consumer electronics and ham gear with DeOxit D5 followed by F5. They sued to be DeOxit and Cali-Lube. Same product different names and work great. If a pot is noisy clean it first with DeOxit and follow with lube. To preserve quiet operation every now and then a drop or so of lube will keep pots working quite long. Good for selector switches, lever switches and other contacts also. Just be careful around phenolic wafer switches as the phenolic material will absorb the liquids. BTW I only use the liquid with the needle applicator and not the spray. Spray is a last resort when I cannot fit the needle applicator. Spray is messy......

73,

Bill

AI4WM

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From: Terry Wagoner <wagstw46@...>

Subject: [TS-520_820_530_830] Cleaning Scratchy Pots

To: TS-520_820_530_830@yahoogroups.com

Date: Thursday, May 12, 2011, 12:49 PM

Hi gang--Thinking of buying some Deoxit F5 Fader Lube for cleaning scratchy pots (AF gain etc) on my TS-830s. Couple of questions:

1. Is the F5 a cleaner/lube or just a lube? Do you need to apply Deoxit D5 first and then the F5? Is there another brand that works as well?

2. How to you apply cleaner/lube to the pots? I dont really want to remove the front panel unless it is best way to do it. Is it possible to set rig on back (in styrofoam shipper) and remove knobs and apply cleaner to the shafts and let lube flow down into the controls? I am afraid this might remove any shaft grease that manufacturer used?

Looks like you can get spray tip extension in at an angle on most of the controls. Mode switch looks to be sealed unit?

Appreciate any suggestions that you have been successful with.

Terry K9TW

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(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17510)
http://www.pctools.com/
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31301. patch coax cable types

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 17:10:46 UTC
From: ktwhy2003
Topic: 31301 Message: 31301

I'm wondering if for short patch cables, the type of coax used it very critical?

I've have my TS-830S set up a short time now (haven't used it much due to a lot of probs coming down on me right now)
and right now I'm using about 2 foot long RG-58 cable left over from the cb dayz many eons ago. It's seems to work fine, but I'm wondering if I should get a cable made with RG-8X or something else, and if it's make much of a difference for only a couple feet.

The coax going out to me antenna is RG-8X into a multi-bank mobile antenna on my apartment balcony, see http://radio.kentsoftware.com
That antenna will be replaced in time, it's on loan to me, from the same ham that loaned me his TS-50S to get me on HF (which I will be returning now that I was able to make the USS Yorktown special event contact today :)

thanks

Kent
VE3KNT

31302. Re: [TS-520_820_530_830] patch coax cable types

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 17:26:34 UTC
From: Jim S
Topic: 31301 Message: 31302

Some years ago, IIRC, Collins made some special jumper cables to run between their exciters (S line, etc.) and their 30L-1 Amp. I used a KWM-2 and a 30L-1 together, and never bothered with the special jumper, but maybe I was just lucky!

Since 2 feet is just a tiny fraction of a wavelength, even on 10 meters, I cannot imagine that there would be any difference at all between running 8X or 58, or even the smaller stuff, provided that it was rated for at least the voltage that the exciter put out. Most equipment rated at 100 watts or less should be quite happy with just about any cable, and the difference in losses between the various types would be almost un-detectable for that short a run.

However, as is always recommended, go for a good quality cable like Belden, since it has much better shielding characteristics, and is much less likely to cause problems like RF leakthrough (RF in the shack) etc.

JMHO 73, Jim AG3Y

----- Original Message -----
From: ktwhy2003
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 14, 2011 1:10 PM
Subject: [TS-520_820_530_830] patch coax cable types

I'm wondering if for short patch cables, the type of coax used it very critical?

I've have my TS-830S set up a short time now (haven't used it much due to a lot of probs coming down on me right now)
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That antenna will be replaced in time, it's on loan to me, from the same ham that loaned me his TS-50S to get me on HF (which I will be returning now that I was able to make the USS Yorktown special event contact today :)

thanks

Kent
VE3KNT

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31303. Re: [TS-520_820_530_830] Re: Hybrid Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 17:45:00 UTC
From: John Davidson
Topic: 31234 Message: 31303

A Quarterwave vertical without radials is only half an antenna and will
dissapoint you in it's perfprmance !

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 14, 2011 9:32:08 AM
Subject: [TS-520_820_530_830] Re: Hybrid Net

I am assessing my location for a 40 meter antenna to get on the Hybrid Net. My
first inclination would be to put up a dipole but due to trees, power lines,
metal roof etc. this my not be practical. I'm trying to figure out how to put it
up without getting too close to any of the above. I have an old TELEX
Communication 18ATV/WB-A Vertical Radiator antenna that I believe is in usable
condition. As many of you already know the 18ATV is a trapped vertical antenna
which will work on the 10 thru 80 meter ham bands. I am wondering if anyone has
used this type of antenna mounted above ground with out radials? I have used
this antenna in the past while mounted at ground level and while I made contacts
with it I remember it seemed pretty noisy and it did not get out too well. I am
wondering if height will make a difference in its operation and whether I have
to use radial or if I can get by without?

Thanks,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> I have no problem working from MI to TX on 80M with my old TS520 but it has
>been
>
> so long since I tuned it above about 3560 that I'm not sure the dial still goes
>
> up there .! :D
>
>
>
> ----- Original Message ----
> From: Dennis Kippa <n5dpk1@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, May 13, 2011 8:46:05 PM
> Subject: Re: [TS-520_820_530_830] Re: Hybrid Net
>
> We have a old gear net at 730 central time 3970. All old tube and hybrid
> rigs are welcome. For that matter everyone is welcome. Informal and we
> have a long comments section to the net. Net control is in TX and the band

> lengthens out by 8:00 pm.
>

[Non-text portions of this message have been removed]

31304. Re: [TS-520_820_530_830] patch coax cable types

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-14 17:55:22 UTC
From: John Davidson
Topic: 31301 Message: 31304

I had some left over 1/4 inch superflex hard line for a jumper from my TS440s to an antenna selector switch and it got awkward if I had to move anything around.
 The "superflex" name is a misnomer.
 I went back to RG58 for my jumpers in the shack.
I use mostly RG8x for my long feedlines to antennas in the woods behind the house. The loss is not a factor because 'the antennas are used for 160-30M bands.

From: ktwhy2003 <ktwhy2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 14, 2011 1:10:46 PM
Subject: [TS-520_820_530_830] patch coax cable types

I'm wondering if for short patch cables, the type of coax used it very critical?

I've have my TS-830S set up a short time now (haven't used it much due to a lot of probs coming down on me right now)
and right now I'm using about 2 foot long RG-58 cable left over from the cb dayz many eons ago. It's seems to work fine, but I'm wondering if I should get a cable made with RG-8X or something else, and if it's make much of a difference for only a couple feet.

The coax going out to me antenna is RG-8X into a multi-bank mobile antenna on my apartment balcony, see http://radio.kentsoftware.com
That antenna will be replaced in time, it's on loan to me, from the same ham that loaned me his TS-50S to get me on HF (which I will be returning now that I was able to make the USS Yorktown special event contact today :)

thanks

Kent
VE3KNT

[Non-text portions of this message have been removed]

31305. Kenwood Hybrids Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 00:05:52 UTC
From: roberteleazer@rocketmail.com
Topic: 31305 Message: 31305

Who was it that suggested we use 15 meters for a Kenwood Hybrids net?

Maybe that is not a bad idea.

I just made my first two contacts ever on 15 Meters.

One was in Poland and the other one was in Germany. Good clear USB comm, too.

I was using with my TS-520 with a homemade dipole antenna located in my attic.

And I had thought I was doing quite well when I got Tucson on 10M a few weeks back.

Robert
WB5WSV

31306. RE: [TS-520_820_530_830] Kenwood Hybrids Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 01:33:56 UTC
From: Walter Milton
Topic: 31305 Message: 31306

Robert,

I was the one who suggested 15 M. Looking at 40 M would leave a lot of people out who would like to take part in the net. On 20 M we would have to find a hole and then communicate that to everyone. 15M has a lot of room and the band is coming alive and staying open into the evening hours. I am open to the majority as to what band we should try first.

Walt, KA2NJF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of roberteleazer@...
Sent: Saturday, May 14, 2011 8:06 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood Hybrids Net

Who was it that suggested we use 15 meters for a Kenwood Hybrids net?

Maybe that is not a bad idea.

I just made my first two contacts ever on 15 Meters.

One was in Poland and the other one was in Germany. Good clear USB comm, too.

I was using with my TS-520 with a homemade dipole antenna located in my attic.

And I had thought I was doing quite well when I got Tucson on 10M a few weeks back.

Robert
WB5WSV

[Non-text portions of this message have been removed]

31307. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 03:31:26 UTC
From: Jeffrey P Nast
Topic: 31206 Message: 31307

Pete et al.,

Yes, there were lots of net attempts a couple years ago, but lousy conditions finally won out. Hopefully that is changing for the better by now.

And as a side note, a separate Yahoo Group called "KenwoodQSO" was created to keep traffic about and for nets to a minimum on this group. Looks as though Walt N9WB and Ellen AF9J were/are sysops for the KenwoodQSO group and there are 77 members.

-Jeff KC0MKS

pmarkavage@... wrote:
>
> Didn't we go through all this "net" stuff several years ago? Anyway, once
> a frequency/band/time/day is decided upon (which is not a trivial
> exercise), there needs to be at least one or two net control stations to
> control/guide the masses that gather, or within ten minutes, anarchy will
> prevail.
>
> Pete, wa2cwa
>
>

31308. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 15:24:39 UTC
From: ki4ax
Topic: 31206 Message: 31308

Do we have a consensus on the net? Is there a process by which we need to chose frequency, time, and control op? I would certainly enjoy talking with the others in this group and would participate in the net if the net's schedule permits.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "lw8eoq" <gperazzoli@...> wrote:
>
> Hi,
>
> I have confirmed qso's with several US stations on 40m with just my ts830s and a folded dipole 8 meters from ground... count me in.
>
> 73 de Guido, LW8EOQ
> Argentina
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Do any of y'all know if there is a Kenwood Hybrids Net that meets regularly on the HF bands?
> >
> > If not, maybe we ought to start one.
> >
> > Robert
> > WB5WSV
> >
>

31309. Re: Half power out with full plate current

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 09:20:40 UTC
From: Robin
Topic: 31273 Message: 31309

Thank you... hole in one! Yes, the 9.8 Ohms measured is not close to 5 Ohms and explains everything nicely. Problem solved.

73 Robin

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Robin,
>
> First check the value of the 4 20 ohm cathode resistors on the final
> board.....they should be close to 5 ohms to ground..the plate current metering
> is taken from these. You may be getting a "false" Ip if you are just using the
> front panel meter.....

31310. Re: VFO-5SS used with a TS-520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 12:48:53 UTC
From: dutchnewbie
Topic: 11927 Message: 31310

Better late then never...

Don't see why not, hope you still have them both and you've since found the schematics.
I hope no-one thinks I'm spamming : got a 530 myself and saw an ad for the VFO-5.
But the output is 4.9~5.5 Mc (same as the 520's VFO)and I'd need 5.4~6.1.
Of course I could try to modify it, but it seems too much trouble for me.
Don't have a good F-meter or HF-voltmeter, and (temperature) stability would possibly also be a challenge.
And since I don't have the need for a second VFO I decided not to bother.
If my IF would be the same as the 520/510 however, I'd probably only need to change plugs.

73's , Vic

--- In TS-520_820_530_830@yahoogroups.com, "Mike Nelson" <kb7vco@...> wrote:
>
> Hello to the group.
> Several years ago a friend gave me a Kenwood VFO-5SS that was modified
> to work with a home-brew rig he no longer owns. From what I can gather
> from the web, this VFO was an accessory to the TS-511 series. I'd like
> to use this VFO with my 520S but I do not have the manual or
> schematics. I am wondering if anyone in the group knows anything about
> this piece.
> 73,
> Mike Nelson
> kb7vco
>

31311. Anyone know what this is or why ?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-13 20:51:05 UTC
From: yvadir
Topic: 31289 Message: 31311

Having nothing on the agenda today I decided to take a look inside my TS-830S I bought about 6 months ago. While familiaring myself I saw a patch of electrical tape covering something apparently to keep it from shorting to the case. When I removed the tape I see several resistors soldered to the final unit board under one of the finals sockets. My copy of the owners manual and the service manual don't show the resistors or anything being there. The apparent addition looks newer than the other components, so I'm assuming it's a mod. I haven't had a boat anchor in a long long time and I'm really rusty so any consideration and patience in figuring this out would be appreciated.

I created an album N5YPJ here in the photos and posted a photo of what I am asking about. I don't see a way to insert it here in the message.

73

Richard / N5YPJ

31312. Attention All The Six-Meter Norman Hams/Amateur Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 16:53:38 UTC
From: Allan C
Topic: 31312 Message: 31312

Six Meter Net Frequency has been changed.

The Net Will be held on 50.200 I repeat 50.200 MHz at 8:00 PM Monday Night

The First Net was on 50.135 MHz but has been changed to 50.200 MHz

Please make note and Pass this information around to your Friends We Will Hold the Net on Monday Night 8:00 PM Central Time on 50.200 MHz.

Have a good Sunday and God Bless Everyone.

KB5DOH / Allan

[Non-text portions of this message have been removed]

31313. Restoration technician reference needed.....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 17:14:53 UTC
From: Brian
Topic: 31313 Message: 31313

Hi,

I'm new to the group. Been a ham since 84 and now hold an extra license. After about a 13 year layoff I'm back or trying to get there, I sold all my equipment years ago, but have found and trying to purchase my first radio, TS 520, I purchased when I was 14.(very long time ago. A local ham bought it way back then and still has it. Been sitting up about 20 years.

It does have some problems but was surprised to find folks could restore the radio to original factory performance.

I'm very familiar with k4eaa. I have talked to him on email and spent much time on his site. But he is waaaay backed up, and it will be a long time before he can get to any other rigs.

Can any one comment on "old ham dave"-David Lyndon? He seems to know what he is talking about but don't have any references to go buy.
Anyone else out there that does this?
I'm looking for the full service option, cleaning, replacing, full alignment, etc....

Thank you

31314. Re: [TS-520_820_530_830] Kenwood Hybrids Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 17:53:11 UTC
From: John Davidson
Topic: 31305 Message: 31314

From: "roberteleazer@..." <roberteleazer@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 14, 2011 8:05:52 PM
Subject: [TS-520_820_530_830] Kenwood Hybrids Net

Who was it that suggested we use 15 meters for a Kenwood Hybrids net?

Maybe that is not a bad idea.

I just made my first two contacts ever on 15 Meters.

One was in Poland and the other one was in Germany. Good clear USB comm, too.

I was using with my TS-520 with a homemade dipole antenna located in my attic.

And I had thought I was doing quite well when I got Tucson on 10M a few weeks back.

Robert
WB5WSV

The problem with 15 or 10 M for a net is that you rarely hear anything closer than a thousand miles . you would not hear any check-ins except for local and VERY far.

[Non-text portions of this message have been removed]

31315. Re: [TS-520_820_530_830] Kenwood Hybrids Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 19:01:59 UTC
From: Chris Robinson
Topic: 31305 Message: 31315

I have to agree about being heard near and far. While we are on vacation right now in Washington State, I have been active but dont hear anything but the very close and Russia! I tried 20 and 40 but I tend to cause issues with our smoke detector(wired), and at 10 pm with two children under 5, and a wife trying to sleep that chirp just doesnt go over well here! (ah the good ol days before smoke detectors!, said sarcasticlly.

I hear a few nets on 15 but I am never able to hear all sides of the roundtable, this would be a huge problem as this would cause many of us to key up not knowing the others are presently on air. This has been a cause to me not being on 15 to often other then to listen, once home I can do things differently. 15 is great for contests and simple ragchewing otherwise I think!

my $2 worth,(inflation caused by children and marriage)

On Sun, May 15, 2011 at 10:53 AM, John Davidson <k8jd@...> wrote:

>
>
>
>
> _____
> From: "roberteleazer@..." <roberteleazer@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, May 14, 2011 8:05:52 PM
> Subject: [TS-520_820_530_830] Kenwood Hybrids Net
>
>
> Who was it that suggested we use 15 meters for a Kenwood Hybrids net?
>
> Maybe that is not a bad idea.
>
> I just made my first two contacts ever on 15 Meters.
>
> One was in Poland and the other one was in Germany. Good clear USB comm,
> too.
>
> I was using with my TS-520 with a homemade dipole antenna located in my
> attic.
>
> And I had thought I was doing quite well when I got Tucson on 10M a few
> weeks
> back.
>
> Robert

> WB5WSV
>
> The problem with 15 or 10 M for a net is that you rarely hear anything
> closer than a thousand miles . you would not hear any check-ins except for
>
> local and VERY far.
>
> [Non-text portions of this message have been removed]
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

31316. 14.238 need audio check

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 19:11:28 UTC
From: n6wk_skcc3
Topic: 31316 Message: 31316

Anyone on this Afternoon around 14.238?
I need an audio check on a TS-520 here

thanks,
Gordon
N6WK

31317. RE: [TS-520_820_530_830] Restoration technician reference needed.....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 19:14:20 UTC
From: Walter Milton
Topic: 31313 Message: 31317

Try AVVID at this URL http://www.avvid.com/ I had cliff repair my
TS-830S and he did a very good job at a reasonable price.

Walt, KA2NJF

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Brian
Sent: Sunday, May 15, 2011 1:15 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Restoration technician reference needed.....

Hi,

I'm new to the group. Been a ham since 84 and now hold an extra license.
After about a 13 year layoff I'm back or trying to get there, I sold all my
equipment years ago, but have found and trying to purchase my first radio,
TS 520, I purchased when I was 14.(very long time ago. A local ham bought
it way back then and still has it. Been sitting up about 20 years.

It does have some problems but was surprised to find folks could restore
the radio to original factory performance.

I'm very familiar with k4eaa. I have talked to him on email and spent much
time on his site. But he is waaaay backed up, and it will be a long time
before he can get to any other rigs.

Can any one comment on "old ham dave"-David Lyndon? He seems to know what
he is talking about but don't have any references to go buy.
Anyone else out there that does this?
I'm looking for the full service option, cleaning, replacing, full
alignment, etc....

Thank you

[Non-text portions of this message have been removed]

31318. RE: [TS-520_820_530_830] 14.238 need audio check

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 19:54:54 UTC
From: Rick Hicks
Topic: 31316 Message: 31318

I'm monitoring 14.238 now.

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n6wk_skcc3
Sent: Sunday, May 15, 2011 12:11 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] 14.238 need audio check

Anyone on this Afternoon around 14.238?
I need an audio check on a TS-520 here

thanks,
Gordon
N6WK

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1500/3639 - Release Date: 05/15/11

[Non-text portions of this message have been removed]

31319. Re: [TS-520_820_530_830] 14.238 need audio check

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 20:07:23 UTC
From: n6wk@n6wk.com
Topic: 31316 Message: 31319

Hi Rick,
I had to break for Lunch and now have company.
Sorry I missed you.
Butch K0PSA helped me with the Audio check.
Thanks Butch and Thanks Rick.

73,
Gordon
N6WK

On 5/15/2011 12:54 PM, Rick Hicks wrote:
>
> I'm monitoring 14.238 now.
>
> Rick KF7JFU
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of n6wk_skcc3
> Sent: Sunday, May 15, 2011 12:11 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] 14.238 need audio check
>
> Anyone on this Afternoon around 14.238?
> I need an audio check on a TS-520 here
>
> thanks,
> Gordon
> N6WK
>
> _____
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1375 / Virus Database: 1500/3639 - Release Date: 05/15/11
>
> [Non-text portions of this message have been removed]
>
>

31320. Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:31:11 UTC
From: Chris Parnell
Topic: 31320 Message: 31320

Hi All,

Had my 830 working nicely until Saturday... for some reason I was struggling to get above 50W on tune up and then suddenly nothing out.
The HV reading is still there... looking through the final cage, I can see one of the tube filaments is light, but can't tell if the other is... I am suspecting not.

Just to clarify, I get no IP movement, no RF out and no ALC meter movement either.

Am I right in thinking the tube(s) are likely EOL?

Thanks
Chris, ZL1CDP

31321. Re: [TS-520_820_530_830] Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:48:47 UTC
From: n6wk@n6wk.com
Topic: 31320 Message: 31321

Hi Chris,
If one final is lite, the other must be too. The filaments are wired in series.
Check the resistors on the Rectifier board to see if any have gone up in value or opened.
What sort of IP were you showing at 50W out before nothing?

Gordon

On 5/15/2011 2:31 PM, Chris Parnell wrote:
>
> Hi All,
>
> Had my 830 working nicely until Saturday... for some reason I was
> struggling to get above 50W on tune up and then suddenly nothing out.
> The HV reading is still there... looking through the final cage, I can
> see one of the tube filaments is light, but can't tell if the other
> is... I am suspecting not.
>
> Just to clarify, I get no IP movement, no RF out and no ALC meter
> movement either.
>
> Am I right in thinking the tube(s) are likely EOL?
>
> Thanks
> Chris, ZL1CDP
>
>

31322. Re: [TS-520_820_530_830] Restoration technician reference needed.....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:38:18 UTC
From: Jeramy Ross
Topic: 31313 Message: 31322

Hello Brian,

Old ham Dave is a good guy, but I do not know how much he is involved with the restoration and repair or rigs any more. Drop him a line and find out. If you're willing to work around my work schedule (I'm a systems engineer/analyst on several radar projects for my "day job"), I'd be more than willing to do it for you. Everything electrical and most mechanical issues. The only thing I cannot take care of is painting. Again, the only thing with me is my work schedule. I am on tap for live fire testing of one of our radars in Arizona later this month (tentative scheduling dependent on range time). That, if it does come to be, would take a week and a half out of my possible time to do it. Beyond that, I look pretty free other than my usual M-F work week.

73,
Jeramy Ross W5XTL

On Sun, May 15, 2011 at 12:14 PM, Brian <bsa0791@...> wrote:
> Hi,
>
> I'm new to the group. Been a ham since 84 and now hold an extra license. After about a 13 year layoff I'm back or trying to get there, I sold all my equipment years ago, but have found and trying to purchase my first radio, TS 520, I purchased when I was 14.(very long time ago. A local ham bought it way back then and still has it. Been sitting up about 20 years.
>
> It does have some problems but was surprised to find folks could restore the radio to original factory performance.
>
> I'm very familiar with k4eaa. I have talked to him on email and spent much time on his site. But he is waaaay backed up, and it will be a long time before he can get to any other rigs.
>
> Can any one comment on "old ham dave"-David Lyndon? He seems to know what he is talking about but don't have any references to go buy.
> Anyone else out there that does this?
> I'm looking for the full service option, cleaning, replacing, full alignment, etc....
>
> Thank you
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links

>
>
>
>

31323. Re: [TS-520_820_530_830] Restoration technician reference needed.....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:49:32 UTC
From: Jeramy Ross
Topic: 31313 Message: 31323

I had forgotten about Cliff. Cliff is a good one as well, and if
you're going to be down
in his neck of the woods, he used to offer drop off service if you
contacted him and
arranged it prior. Drop it off and then spend a few days in DFW, and
then go pick
up your rig.

Also of note, my offer wasn't intended to take away from the guys who do this as
their job. My offer was only extended in case Brian couldn't find
someone to do
the work on his rig due to their being back logged way into the
future. I do not
work on rigs as a job/profession, and never desire to take away from those who
do. For those of you who promptly emailed me (courteously), I wasn't nor do I
ever intend to do any such thing as taking business away from someone.

With that, I hope everyone had a great weekend, and got to enjoy some time
on the air even with the propagation gods being less than nice to us
here of late.

73 to all,
Jeramy W5XTL

On Sun, May 15, 2011 at 2:14 PM, Walter Milton <wmilton@...> wrote:
> Try AVVID at this URL http://www.avvid.com/ I had cliff repair my
> TS-830S and he did a very good job at a reasonable price.
>
> Walt, KA2NJF
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Brian
> Sent: Sunday, May 15, 2011 1:15 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Restoration technician reference needed.....
>
>
> Hi,
>
> I'm new to the group. Been a ham since 84 and now hold an extra license.
> After about a 13 year layoff I'm back or trying to get there, I sold all my
> equipment years ago, but have found and trying to purchase my first radio,
> TS 520, I purchased when I was 14.(very long time ago. A local ham bought
> it way back then and still has it. Been sitting up about 20 years.
>
> It does have some problems but was surprised to find folks could restore

> the radio to original factory performance.
>
> I'm very familiar with k4eaa. I have talked to him on email and spent much
> time on his site. But he is waaaay backed up, and it will be a long time
> before he can get to any other rigs.
>
> Can any one comment on "old ham dave"-David Lyndon? He seems to know what
> he is talking about but don't have any references to go buy.
> Anyone else out there that does this?
> I'm looking for the full service option, cleaning, replacing, full
> alignment, etc....
>
> Thank you
>
>
>
> [Non-text portions of this message have been removed]
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

31324. Re: [TS-520_820_530_830] Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:51:44 UTC
From: n6wk@n6wk.com
Topic: 31320 Message: 31324

That should say LIT note LITE hi hi

On 5/15/2011 2:48 PM, n6wk@... wrote:
> Hi Chris,
> If one final is lite, the other must be too. The filaments are wired in
> series.
> Check the resistors on the Rectifier board to see if any have gone up in
> value or opened.
> What sort of IP were you showing at 50W out before nothing?
>
> Gordon
>
>
> On 5/15/2011 2:31 PM, Chris Parnell wrote:
>> Hi All,
>>
>> Had my 830 working nicely until Saturday... for some reason I was
>> struggling to get above 50W on tune up and then suddenly nothing out.
>> The HV reading is still there... looking through the final cage, I can
>> see one of the tube filaments is light, but can't tell if the other
>> is... I am suspecting not.
>>
>> Just to clarify, I get no IP movement, no RF out and no ALC meter
>> movement either.
>>
>> Am I right in thinking the tube(s) are likely EOL?
>>
>> Thanks
>> Chris, ZL1CDP
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31325. Re: [TS-520_820_530_830] Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 21:53:14 UTC
From: Chris Parnell
Topic: 31320 Message: 31325

Hi Gordon,

Originally... I was getting around 200mA for around 75w... then it dropped to around 50w at 200mA etc.

I have suspected the tubes were on their way out for a while - A friend of mine who helped with a repair said that he thought on one of the tubes was drawing more current than the other, as one was much hotter than the other.

Cheers
Chris

On 16/05/2011, at 9:48 AM, n6wk@... wrote:

> Hi Chris,
> If one final is lite, the other must be too. The filaments are wired in
> series.
> Check the resistors on the Rectifier board to see if any have gone up in
> value or opened.
> What sort of IP were you showing at 50W out before nothing?
>
> Gordon
>
>
> On 5/15/2011 2:31 PM, Chris Parnell wrote:
>>
>> Hi All,
>>
>> Had my 830 working nicely until Saturday... for some reason I was
>> struggling to get above 50W on tune up and then suddenly nothing out.
>> The HV reading is still there... looking through the final cage, I can
>> see one of the tube filaments is light, but can't tell if the other
>> is... I am suspecting not.
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>> Just to clarify, I get no IP movement, no RF out and no ALC meter
>> movement either.
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>> Am I right in thinking the tube(s) are likely EOL?
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>> Thanks
>> Chris, ZL1CDP
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31326. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 22:34:09 UTC
From: w5rkl
Topic: 31320 Message: 31326

Chris,

Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.

You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Gordon,
>
> Originally... I was getting around 200mA for around 75w... then it dropped to around 50w at 200mA etc.
>
> I have suspected the tubes were on their way out for a while - A friend of mine who helped with a repair said that he thought on one of the tubes was drawing more current than the other, as one was much hotter than the other.
>
> Cheers
> Chris
>
>
> On 16/05/2011, at 9:48 AM, n6wk@... wrote:
>
> > Hi Chris,
> > If one final is lite, the other must be too. The filaments are wired in
> > series.
> > Check the resistors on the Rectifier board to see if any have gone up in
> > value or opened.
> > What sort of IP were you showing at 50W out before nothing?
> >
> > Gordon
> >
> >
> > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> >>
> >> Hi All,
> >>
> >> Had my 830 working nicely until Saturday... for some reason I was
> >> struggling to get above 50W on tune up and then suddenly nothing out.

> >> The HV reading is still there... looking through the final cage, I can
> >> see one of the tube filaments is light, but can't tell if the other
> >> is... I am suspecting not.
> >>
> >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> >> movement either.
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> >> Chris, ZL1CDP
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31327. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 22:46:55 UTC
From: Chris Parnell
Topic: 31320 Message: 31327

Hi Mike,

No I haven't measured anything yet (other than noticing that the HV meter on the 830 measures correctly).
I also do not have a spare set of tubes either at this point in time, but will do some measuring tonight when I get home.

Is it an easy measurement to do?

Thanks
Chris

On 16/05/2011, at 10:34 AM, w5rkl wrote:

> Chris,
>
> Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.
>
> You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Gordon,
> >
> > Originally... I was getting around 200mA for around 75w... then it dropped to around 50w at 200mA etc.
> >
> > I have suspected the tubes were on their way out for a while - A friend of mine who helped with a repair said that he thought on one of the tubes was drawing more current than the other, as one was much hotter than the other.
> >
> > Cheers
> > Chris
> >
> >
> > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
> >
> > > Hi Chris,
> > > If one final is lite, the other must be too. The filaments are wired in

> > > series.
> > > Check the resistors on the Rectifier board to see if any have gone up in
> > > value or opened.
> > > What sort of IP were you showing at 50W out before nothing?
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> > > Gordon
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> > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
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> > >> Hi All,
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31328. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 22:50:36 UTC
From: Mel Farrer
Topic: 31320 Message: 31328

Mike is probably on the right track. I have repaired many older radios and the resistor values do change over time. One Kenwood rig had the value of the screen dropping resistor doubled in value and the other one was open.

Mel, K6KBE

From: w5rkl <w5rkl@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 15, 2011 3:34:09 PM
Subject: [TS-520_820_530_830] Re: Transmit has died

Chris,

Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.

You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
wrote:
>
> Hi Gordon,
>
> Originally... I was getting around 200mA for around 75w... then it dropped to
>around 50w at 200mA etc.
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> I have suspected the tubes were on their way out for a while - A friend of mine
>who helped with a repair said that he thought on one of the tubes was drawing
>more current than the other, as one was much hotter than the other.
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> Cheers
> Chris
>
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> > Hi Chris,
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> > Gordon
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> >> The HV reading is still there... looking through the final cage, I can
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31329. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 22:54:06 UTC
From: Chris Parnell
Topic: 31320 Message: 31329

Hi Mel,

I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
Will double check.

Cheers
Chris

On 16/05/2011, at 10:50 AM, Mel Farrer wrote:

> Mike is probably on the right track. I have repaired many older radios and the
> resistor values do change over time. One Kenwood rig had the value of the
> screen dropping resistor doubled in value and the other one was open.
>
> Mel, K6KBE
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, May 15, 2011 3:34:09 PM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
> Chris,
>
> Have you measured the final tube's screen voltage and compared the voltages
> between the two tubes? If not then I recommend you do that.
>
> You can't tell how good a tube is working by simply feeling the bulb
> temperature. Voltage checks and comparisons between the two final tubes will
> tell you more about the final tubes than anything else you can do.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> wrote:
> >
> > Hi Gordon,
> >
> > Originally... I was getting around 200mA for around 75w... then it dropped to
> >around 50w at 200mA etc.
> >
> > I have suspected the tubes were on their way out for a while - A friend of mine
> >who helped with a repair said that he thought on one of the tubes was drawing

> >more current than the other, as one was much hotter than the other.
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> > Cheers
> > Chris
> >
> >
> > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
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> > > Hi Chris,
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> > > Check the resistors on the Rectifier board to see if any have gone up in
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> > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
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> > >> Hi All,
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> > >> Am I right in thinking the tube(s) are likely EOL?
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> > >> Thanks
> > >> Chris, ZL1CDP
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31330. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-15 23:31:52 UTC
From: pmarkavage@juno.com
Topic: 31206 Message: 31330

Ah; so there you go, all you net enthusiasts. A Group already set up to manage/discuss/plan/setup all your on-the-air net(s) activities.

Pete ,wa2cwa

On Sat, 14 May 2011 22:31:26 -0500 Jeffrey P Nast <kc0mks@...> writes:
> Pete et al.,
>
> Yes, there were lots of net attempts a couple years ago, but lousy
> conditions finally won out. Hopefully that is changing for the
> better by
> now.
>
> And as a side note, a separate Yahoo Group called "KenwoodQSO" was
> created to keep traffic about and for nets to a minimum on this
> group.
> Looks as though Walt N9WB and Ellen AF9J were/are sysops for the
> KenwoodQSO group and there are 77 members.
>
> -Jeff KC0MKS
>

31331. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 01:27:56 UTC
From: Chris Parnell
Topic: 31320 Message: 31331

Hi all, a quick update.

Firstly I checked the resistors in the final unit and they were as follows (once removed)

R2 - 21.2 Ohms
R3 - No value
R4 - 20 Ohms
R5 - 21.2 Ohms

When I read the value in place, should be around 5 Ohms, they read around 7.4 Ohms.

Also R10 was high too... supposed to be 4.7K and was at 6.76K... so I will replace all of these and see if it solves my problem

One other thing I did notice though, which wouldn't have helped, I'm sure is that one tube is 6146B and the other is plane old 6146.

Cheers
Chris, ZL1CDP

On 16/05/2011, at 10:54 AM, Chris Parnell wrote:

> Hi Mel,
>
> I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
> Will double check.
>
> Cheers
> Chris
>
> On 16/05/2011, at 10:50 AM, Mel Farrer wrote:
>
>> Mike is probably on the right track. I have repaired many older radios and the
>> resistor values do change over time. One Kenwood rig had the value of the
>> screen dropping resistor doubled in value and the other one was open.
>>
>> Mel, K6KBE
>>
>> _____
>> From: w5rkl <w5rkl@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Sun, May 15, 2011 3:34:09 PM
>> Subject: [TS-520_820_530_830] Re: Transmit has died
>>
>> Chris,
>>

>> Have you measured the final tube's screen voltage and compared the voltages
>> between the two tubes? If not then I recommend you do that.
>>
>> You can't tell how good a tube is working by simply feeling the bulb
>> temperature. Voltage checks and comparisons between the two final tubes will
>> tell you more about the final tubes than anything else you can do.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>> wrote:
>>>
>>> Hi Gordon,
>>>
>>> Originally... I was getting around 200mA for around 75w... then it dropped to
>>> around 50w at 200mA etc.
>>>
>>> I have suspected the tubes were on their way out for a while - A friend of mine
>>> who helped with a repair said that he thought on one of the tubes was drawing
>>> more current than the other, as one was much hotter than the other.
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>>> Cheers
>>> Chris
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>>>
>>> On 16/05/2011, at 9:48 AM, n6wk@... wrote:
>>>
>>>> Hi Chris,
>>>> If one final is lite, the other must be too. The filaments are wired in
>>>> series.
>>>> Check the resistors on the Rectifier board to see if any have gone up in
>>>> value or opened.
>>>> What sort of IP were you showing at 50W out before nothing?
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>>>> Gordon
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>>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
>>>>>
>>>>> Hi All,
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>>>>> Had my 830 working nicely until Saturday... for some reason I was
>>>>> struggling to get above 50W on tune up and then suddenly nothing out.
>>>>> The HV reading is still there... looking through the final cage, I can
>>>>> see one of the tube filaments is light, but can't tell if the other
>>>>> is... I am suspecting not.
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>>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter

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>>>>> Am I right in thinking the tube(s) are likely EOL?
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31332. 3898 pecker

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 02:17:42 UTC
From: kevin
Topic: 31332 Message: 31332

I purchased a "pecker" to help me tune my amp without melting it from ignorance. I was trying it out on my 830. Basically you turn the VOX on, put the radio in SSB and then hit the switch on the pecker. You adjust the ALC to the far edge of the scale. (after you tune you put the ALC back where you would normally use it) My understanding is that it puts out a signal at a very low duty cycle which allows you to tune with no damage from tuning too long. They say that using a PEP wattmeter you can measure peak SSB.
Does anyone know why I get more wattage using CW than SSB using this method? (I understand about the peaks etc of SSB versus CW so maybe this is not a fair comparison.)What bothered me more was that there was that I got about 80 watts out on LSB and 50 on USB. (100 with CW. Why the difference between USB and LSB?

31333. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 02:45:46 UTC
From: ki4ax
Topic: 31206 Message: 31333

I checked the Kenwood QSO group's page and it appears that there has not been activity on that group page since November of 2009.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> Ah; so there you go, all you net enthusiasts. A Group already set up to
> manage/discuss/plan/setup all your on-the-air net(s) activities.
>
> Pete ,wa2cwa
>
> On Sat, 14 May 2011 22:31:26 -0500 Jeffrey P Nast <kc0mks@...>
> writes:
> > Pete et al.,
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> > Yes, there were lots of net attempts a couple years ago, but lousy
> > conditions finally won out. Hopefully that is changing for the
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> > And as a side note, a separate Yahoo Group called "KenwoodQSO" was
> > created to keep traffic about and for nets to a minimum on this
> > group.
> > Looks as though Walt N9WB and Ellen AF9J were/are sysops for the
> > KenwoodQSO group and there are 77 members.
> >
> > -Jeff KC0MKS
> >
>

31334. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 03:51:39 UTC
From: w5rkl
Topic: 31320 Message: 31334

If the one or more of the 4 cathode resistor values changes, that results in a total parallel resistance change which affects the current through the tube plus the voltage drop that occurs across the cathode resistors which can affect the IP meter indication.

Since R3 is either burnt open or has changed to some significantly higher value, I recommend replacing all 4 of the cathode resistors. Don't assume it's okay to replace only R3 and that's good enough. The current through R2 through R5 in parallel changes as the total resistance changes.

R6 is part of the IP metering circuit and since R6 has changed values, i recommend changing both R6 and R10 with new resistors. Resistors R6 and R10 must be within the 2700 and 4700 ohm tolerance in order to ensure the IP meter display is as accurate as possible. Failure to take this into consideration can result in an inaccurate IP meter display.

While one 6146B and one 6146 may appear to cause the problem, the different tubes is most likely not the source of your problem.

There is very little difference between the 6146/6146A and 6146B. The only inter-electrode capacitance difference between the two tubes is as follows:

6146A
Grid #1 to Plate is 24pf maximum

6146B
Grid #1 to Plate is 22pf maximum

That's "2pf" difference which is not a significant difference to cause your problem, especially when operating in the HF spectrum.

The other inter-electrode capacitance values in the 6146/6146A and 6146b are the same.

Yes, I know the plate dissipation of the 6146B, as compared to the 6146/6146A, is much higher but when considering differences in inter-electrode capacitance between the 6146/6146A and 6146B, plate dissipation is irrelevant.

The 6146 and 6146A are identical tubes with the exception of the filament in the 6146A. The "A" filament has what is called a "Dark Filament". This means the "A" filament operates at a filament temperature of 350 degrees Kelvin below the filament temperature of the 6146. Other than that, there is, as I said, no difference between the 6146 and 6146A.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all, a quick update.
>

> Firstly I checked the resistors in the final unit and they were as follows (once removed)
>
> R2 - 21.2 Ohms
> R3 - No value
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> Also R10 was high too... supposed to be 4.7K and was at 6.76K... so I will replace all of these and see if it solves my problem
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> One other thing I did notice though, which wouldn't have helped, I'm sure is that one tube is 6146B and the other is plane old 6146.
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> >> From: w5rkl <w5rkl@...>
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Sent: Sun, May 15, 2011 3:34:09 PM
> >> Subject: [TS-520_820_530_830] Re: Transmit has died
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> >> Chris,
> >>
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> >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
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> >>>> Check the resistors on the Rectifier board to see if any have gone up in
> >>>> value or opened.
> >>>> What sort of IP were you showing at 50W out before nothing?
> >>>>
> >>>> Gordon
> >>>>
> >>>>
> >>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
> >>>>>
> >>>>> Hi All,
> >>>>>
> >>>>> Had my 830 working nicely until Saturday... for some reason I was
> >>>>> struggling to get above 50W on tune up and then suddenly nothing out.
> >>>>> The HV reading is still there... looking through the final cage, I can
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> >>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter
> >>>>> movement either.
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> >>>>> Am I right in thinking the tube(s) are likely EOL?

> >>>>>
> >>>>> Thanks
> >>>>> Chris, ZL1CDP
> >>>>>
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31335. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 04:07:11 UTC
From: Chris Parnell
Topic: 31320 Message: 31335

Thanks Mike. Although I don't see the cathode resistors being the cause of the problem I am going to change them anyway (all)..

I have been and looked for replacements today but can only find 1/2w 20 ohm metal film (they are quite small)... or 1 watt 22 ohm carbon (slightly bigger physically than original ones).. I realise that physical size is not what's important here so I wonder what your thoughts are on either?

Cheers
Chris

Sent from my iPhone

On 16/05/2011, at 15:51, w5rkl <w5rkl@...> wrote:

> If the one or more of the 4 cathode resistor values changes, that results in a total parallel resistance change which affects the current through the tube plus the voltage drop that occurs across the cathode resistors which can affect the IP meter indication.
>
> Since R3 is either burnt open or has changed to some significantly higher value, I recommend replacing all 4 of the cathode resistors. Don't assume it's okay to replace only R3 and that's good enough. The current through R2 through R5 in parallel changes as the total resistance changes.
>
> R6 is part of the IP metering circuit and since R6 has changed values, i recommend changing both R6 and R10 with new resistors. Resistors R6 and R10 must be within the 2700 and 4700 ohm tolerance in order to ensure the IP meter display is as accurate as possible. Failure to take this into consideration can result in an inaccurate IP meter display.
>
> While one 6146B and one 6146 may appear to cause the problem, the different tubes is most likely not the source of your problem.
>
> There is very little difference between the 6146/6146A and 6146B. The only inter-electrode capacitance difference between the two tubes is as follows:
>
> 6146A
> Grid #1 to Plate is 24pf maximum
>
> 6146B
> Grid #1 to Plate is 22pf maximum
>
> That's "2pf" difference which is not a significant difference to cause your problem, especially when operating in the HF spectrum.
>
> The other inter-electrode capacitance values in the 6146/6146A and 6146b are the same.
>

> Yes, I know the plate dissipation of the 6146B, as compared to the 6146/6146A, is much higher but when considering differences in inter-electrode capacitance between the 6146/6146A and 6146B, plate dissipation is irrelevant.
>
> The 6146 and 6146A are identical tubes with the exception of the filament in the 6146A. The "A" filament has what is called a "Dark Filament". This means the "A" filament operates at a filament temperature of 350 degrees Kelvin below the filament temperature of the 6146. Other than that, there is, as I said, no difference between the 6146 and 6146A.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi all, a quick update.
> >
> > Firstly I checked the resistors in the final unit and they were as follows (once removed)
> >
> > R2 - 21.2 Ohms
> > R3 - No value
> > R4 - 20 Ohms
> > R5 - 21.2 Ohms
> >
> > When I read the value in place, should be around 5 Ohms, they read around 7.4 Ohms.
> >
> > Also R10 was high too... supposed to be 4.7K and was at 6.76K... so I will replace all of these and see if it solves my problem
> >
> > One other thing I did notice though, which wouldn't have helped, I'm sure is that one tube is 6146B and the other is plane old 6146.
> >
> > Cheers
> > Chris, ZL1CDP
> >
> >
> >
> > On 16/05/2011, at 10:54 AM, Chris Parnell wrote:
> >
> > > Hi Mel,
> > >
> > > I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
> > > Will double check.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 16/05/2011, at 10:50 AM, Mel Farrer wrote:

> > >
> > >> Mike is probably on the right track. I have repaired many older radios and the
> > >> resistor values do change over time. One Kenwood rig had the value of the
> > >> screen dropping resistor doubled in value and the other one was open.
> > >>
> > >> Mel, K6KBE
> > >>
> > >> _____
> > >> From: w5rkl <w5rkl@...>
> > >> To: TS-520_820_530_830@yahoogroups.com
> > >> Sent: Sun, May 15, 2011 3:34:09 PM
> > >> Subject: [TS-520_820_530_830] Re: Transmit has died
> > >>
> > >> Chris,
> > >>
> > >> Have you measured the final tube's screen voltage and compared the voltages
> > >> between the two tubes? If not then I recommend you do that.
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> > >> You can't tell how good a tube is working by simply feeling the bulb
> > >> temperature. Voltage checks and comparisons between the two final tubes will
> > >> tell you more about the final tubes than anything else you can do.
> > >>
> > >> 73s
> > >> Mike
> > >> W5RKL
> > >>
> > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >> wrote:
> > >>>
> > >>> Hi Gordon,
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> > >>> Originally... I was getting around 200mA for around 75w... then it dropped to
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> > >>> who helped with a repair said that he thought on one of the tubes was drawing
> > >>> more current than the other, as one was much hotter than the other.
> > >>>
> > >>> Cheers
> > >>> Chris
> > >>>
> > >>>
> > >>> On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > >>>
> > >>>> Hi Chris,
> > >>>> If one final is lite, the other must be too. The filaments are wired in
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> > >>>> Check the resistors on the Rectifier board to see if any have gone up in
> > >>>> value or opened.
> > >>>> What sort of IP were you showing at 50W out before nothing?

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> > >>>> Gordon
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> > >>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > >>>>>
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> > >>>>> Had my 830 working nicely until Saturday... for some reason I was
> > >>>>> struggling to get above 50W on tune up and then suddenly nothing out.
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> > >>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > >>>>> movement either.
> > >>>>>
> > >>>>> Am I right in thinking the tube(s) are likely EOL?
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> > >>>>> Thanks
> > >>>>> Chris, ZL1CDP
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31336. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 10:26:58 UTC
From: w5rkl
Topic: 31320 Message: 31336

Hi Chris,

Mouser sells 20 ohm 1/2 watt metal oxide flame proof resistors for 15 cent each. Their part number is 660-MOS1/2CT52R200J.

The data sheet for the 20 ohm metal oxide flame proof resistors is

http://www.koaspeer.com/pdfs/res52.pdf

Vacuumtubes.net

http://www.vacuumtubes.net/Prices%206000%20to%207199.htm

sells 6146Bs for $32 each. I would replace both final tubes.

Once you have done those things, test the 830 for operation, tune into a dummy load.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Thanks Mike. Although I don't see the cathode resistors being the cause of the problem I am going to change them anyway (all)..
>
> I have been and looked for replacements today but can only find 1/2w 20 ohm metal film (they are quite small)... or 1 watt 22 ohm carbon (slightly bigger physically than original ones).. I realise that physical size is not what's important here so I wonder what your thoughts are on either?
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>
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> Cheers
> Chris
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> Sent from my iPhone
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> > If the one or more of the 4 cathode resistor values changes, that results in a total parallel resistance change which affects the current through the tube plus the voltage drop that occurs across the cathode resistors which can affect the IP meter indication.
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> > Since R3 is either burnt open or has changed to some significantly higher value, I recommend replacing all 4 of the cathode resistors. Don't assume it's okay to replace only R3 and that's good enough. The current through R2 through R5 in parallel changes as the

total resistance changes.
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> > R6 is part of the IP metering circuit and since R6 has changed values, i recommend changing both R6 and R10 with new resistors. Resistors R6 and R10 must be within the 2700 and 4700 ohm tolerance in order to ensure the IP meter display is as accurate as possible. Failure to take this into consideration can result in an inaccurate IP meter display.
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> > While one 6146B and one 6146 may appear to cause the problem, the different tubes is most likely not the source of your problem.
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> > There is very little difference between the 6146/6146A and 6146B. The only inter-electrode capacitance difference between the two tubes is as follows:
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> > The other inter-electrode capacitance values in the 6146/6146A and 6146b are the same.
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> > Yes, I know the plate dissipation of the 6146B, as compared to the 6146/6146A, is much higher but when considering differences in inter-electrode capacitance between the 6146/6146A and 6146B, plate dissipation is irrelevant.
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> > The 6146 and 6146A are identical tubes with the exception of the filament in the 6146A. The "A" filament has what is called a "Dark Filament". This means the "A" filament operates at a filament temperature of 350 degrees Kelvin below the filament temperature of the 6146. Other than that, there is, as I said, no difference between the 6146 and 6146A.
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> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
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> > > Hi all, a quick update.
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> > > When I read the value in place, should be around 5 Ohms, they read around 7.4 Ohms.
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> > > Also R10 was high too... supposed to be 4.7K and was at 6.76K... so I will replace all of these and see if it solves my problem
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> > > One other thing I did notice though, which wouldn't have helped, I'm sure is that one tube is 6146B and the other is plane old 6146.
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> > > >> screen dropping resistor doubled in value and the other one was open.
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> > > >> Mel, K6KBE
> > > >>
> > > >> _____
> > > >> From: w5rkl <w5rkl@>
> > > >> To: TS-520_820_530_830@yahoogroups.com
> > > >> Sent: Sun, May 15, 2011 3:34:09 PM
> > > >> Subject: [TS-520_820_530_830] Re: Transmit has died
> > > >>
> > > >> Chris,
> > > >>
> > > >> Have you measured the final tube's screen voltage and compared the voltages
> > > >> between the two tubes? If not then I recommend you do that.
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> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>

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> > > >>>
> > > >>> Hi Gordon,
> > > >>>
> > > >>> Originally... I was getting around 200mA for around 75w... then it dropped to
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> > > >>> Cheers
> > > >>> Chris
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> > > >>>
> > > >>> On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > >>>
> > > >>>> Hi Chris,
> > > >>>> If one final is lite, the other must be too. The filaments are wired in
> > > >>>> series.
> > > >>>> Check the resistors on the Rectifier board to see if any have gone up in
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> > > >>>> What sort of IP were you showing at 50W out before nothing?
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> > > >>>> Gordon
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> > > >>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > >>>>>
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> > > >>>>> Had my 830 working nicely until Saturday... for some reason I was
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> > > >>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter
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> > > >>>>> Am I right in thinking the tube(s) are likely EOL?
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31337. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 11:44:17 UTC
From: Chris Parnell
Topic: 31320 Message: 31337

Hi Mike, Gordon and all.

OK... replacing the resistors in the final unit has enabled me to TX again - although I still only get 50W output (on an external meter). I am following the procedure to a T on the K4EAA website for tuning.
I replaced the R10 resistor in the final unit too, with a 10K resistor as per the schematic I have.... my IP reading is as follows:-

40Mts - IP around 160mA - delivers around 55W
20Mts - IP is around 160mA - delivers around 55W

Interestingly I can deliver more IP but less PO.

Any help to solve this problem would be greatly appreciated.
I have ordered a new set of valves but not sure this is the problem, I had a spare 6146 and now the TX (albeit low) is a lot more stable

Thanks
Chris, ZL1CDP

On 16/05/2011, at 10:54 AM, Chris Parnell wrote:

> Hi Mel,
>
> I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
> Will double check.
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> Cheers
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> On 16/05/2011, at 10:50 AM, Mel Farrer wrote:
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>> Mike is probably on the right track. I have repaired many older radios and the
>> resistor values do change over time. One Kenwood rig had the value of the
>> screen dropping resistor doubled in value and the other one was open.
>>
>> Mel, K6KBE
>>
>> _____
>> From: w5rkl <w5rkl@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Sun, May 15, 2011 3:34:09 PM
>> Subject: [TS-520_820_530_830] Re: Transmit has died
>>
>> Chris,
>>

>> Have you measured the final tube's screen voltage and compared the voltages
>> between the two tubes? If not then I recommend you do that.
>>
>> You can't tell how good a tube is working by simply feeling the bulb
>> temperature. Voltage checks and comparisons between the two final tubes will
>> tell you more about the final tubes than anything else you can do.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>> wrote:
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>>> Hi Gordon,
>>>
>>> Originally... I was getting around 200mA for around 75w... then it dropped to
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>>> I have suspected the tubes were on their way out for a while - A friend of mine
>>> who helped with a repair said that he thought on one of the tubes was drawing
>>> more current than the other, as one was much hotter than the other.
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>>> Cheers
>>> Chris
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>>>
>>> On 16/05/2011, at 9:48 AM, n6wk@... wrote:
>>>
>>>> Hi Chris,
>>>> If one final is lite, the other must be too. The filaments are wired in
>>>> series.
>>>> Check the resistors on the Rectifier board to see if any have gone up in
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>>>> What sort of IP were you showing at 50W out before nothing?
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>>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter

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31338. Re: [TS-520_820_530_830] Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 13:37:18 UTC
From: jpr3232819@aol.com
Topic: 31206 Message: 31338

In a message dated 5/15/2011 7:32:53 P.M. Eastern Daylight Time,
pmarkavage@... writes:

KenwoodQSO group

How do I find the KenwoodQSO group on yahoo I searched groups but no luck

[Non-text portions of this message have been removed]

31339. Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 15:06:53 UTC
From: ki4ax
Topic: 31206 Message: 31339

I was able to find it by doing a google search. For those that are interested, though, here is a link.

http://groups.yahoo.com/group/KenwoodQSO/

It appears that you will have to copy and paste the link into your address bar and hit go.

Perhaps some of us can set up a schedule to meet on the air. We could try different bands to see which one we get the best coverage with or something like that. I have an antenna that will resonate on 10 and 15 meters, already up, and I have been listening on 10 and 15 over the last few weeks. There is not much propagation on 10m (at least that I can hear). 15 meters opens some on most days but it is long stuff and usually best late in the day and early evening. I am in Florida and most of what I hear on 15m is Europe and West Coast USA.

I have a 20m wire up but I get a lot of TVI on that band so it is only open for me late at night until I can get the issue resolved. If we are going to do 40m I will take the 20m wire down and put up one cut for 40m. Or try a fan dipole or something like that. Any one had any luck with a multi-band dipole in the "fan" configuration?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, jpr3232819@... wrote:
>
>
> In a message dated 5/15/2011 7:32:53 P.M. Eastern Daylight Time,
> pmarkavage@... writes:
>
> KenwoodQSO group
>
>
> How do I find the KenwoodQSO group on yahoo I searched groups but no luck
>
>
> [Non-text portions of this message have been removed]
>

31340. service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 21:46:46 UTC
From: Joseph Stiles
Topic: 31340 Message: 31340

Greetings group,

In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):

What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.

Can a regular VTVM be used in place of an AF VTVM?

I am trying to become self sufficient as much as possible

tnx 73's joe wb7uqu

[Non-text portions of this message have been removed]

31341. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 22:46:50 UTC
From: John Davidson
Topic: 31206 Message: 31341

I put up a hasty 20/30M fan dipole last fall just before winter it us.
It worked well enough that I recently straightened up the angles of the wires
and raised the feed point higher into the tree.
We finally had a few decent days where I could trim the wire for lower SWR in
the CW band on the 20M section..Good SWR on both bands below 1.5:1 now.

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 16, 2011 11:06:53 AM
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net

one cut for 40m. Or try a fan dipole or something like that. Any one had any
luck with a multi-band dipole in the "fan" configuration?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, jpr3232819@... wrote:
>
>
> In a message dated 5/15/2011 7:32:53 P.M. Eastern Daylight Time,
> pmarkavage@... writes:
>
> KenwoodQSO group
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> How do I find the KenwoodQSO group on yahoo I searched groups but no luck
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>
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31342. Re: [TS-520_820_530_830] service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-16 22:52:53 UTC
From: John Davidson
Topic: 31340 Message: 31342

From: Joseph Stiles <stilesjoseph@yahoo.com>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Mon, May 16, 2011 5:46:46 PM
Subject: [TS-520_820_530_830] service equip. question

Greetings group,

In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):

What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.[A loudspeaker]

Can a regular VTVM be used in place of an AF VTVM? [sure just do the math to convert AC Volts to dB]

I am trying to become self sufficient as much as possible [you still can use our help to be self sufficient]

tnx 73's joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31343. Re: service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 00:04:50 UTC
From: Terry Wagoner
Topic: 31340 Message: 31343

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
>   In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):
>
>   What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.
>
>   Can a regular VTVM be used in place of an AF VTVM?
>
>   I am trying to become self sufficient as much as possible
>
>
>
>   tnx   73's   joe   wb7uqu

Joe: Most VTVMs will be reasonably accurate in the AF (20hz to 20Khz) frequency range. However, the problem you may encounter is that they may not go low enough in the mv range. For example, my Heath IM-18 VTVM has lowest range of 1.5 volts and the smallest graduated increment is 20 millivolts. This makes it very difficult to accurately read 5 millivolts or 6.3 millivolts as called out in the TS-830s service manual. My HP3400A True RMS Voltmeter on the other hand has 1 millivolt, 3 millivolt, and 10 millivolt full scale ranges that allow reading these lower millivolt levels very accurately. I also feel that a RF Millivolt meter is a must for performing many of the service manual alignment/calibration steps. You can slowly overtime assemble your service bench. A counter, scope, RF and AF millivolt meters, VTVM, Function generator, RF signal generator, dummy load, and wattmeter make up a pretty functional service bench for these old hybrids. Probably the most expensive item is the RF signal generator. You can get by with one of the old Heath or EICO generators we used in the old 455 IF can alignment days, but a HP8640b or similar is really the way to go. You dont really need a Spectrum Analyzer or Service Monitor. I have recently added Audio Spectrum Analyzer software to my lap top (Spectogram) and it is great fun to be able to see the filter passband and the effect of the VBT and IF shift. Just my opinion. Terry K9TW
>
>
> [Non-text portions of this message have been removed]
>

31344. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 00:35:45 UTC
From: Terry Wagoner
Topic: 31320 Message: 31344

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>Chris--I should probably let the experts handle this, but I am curious. You mentioned that you had problems 3 mos ago and replaced a "regulator". I am unaware of any regulated voltages associated with the final tubes? The screen supply is not regulated and as Mike suggested you need to read the 6146 screen voltage (pin 3). It should be around 225 vdc key down. I would also read the anode voltage at the plate choke and/or at the HV filter caps (red wire). It should read around 820 vdc key down. Please observe good safe work practice making these measurements as these are lethal voltages and currents. Make sure you have good quality test leads on your meter.
Let me know what regulator you replaced. Good luck Terry K9TW

> Hi Mike, Gordon and all.
>
> OK... replacing the resistors in the final unit has enabled me to TX again - although I still only get 50W output (on an external meter). I am following the procedure to a T on the K4EAA website for tuning.
> I replaced the R10 resistor in the final unit too, with a 10K resistor as per the schematic I have.... my IP reading is as follows:-
>
> 40Mts - IP around 160mA - delivers around 55W
> 20Mts - IP is around 160mA - delivers around 55W
>
> Interestingly I can deliver more IP but less PO.
>
> Any help to solve this problem would be greatly appreciated.
> I have ordered a new set of valves but not sure this is the problem, I had a spare 6146 and now the TX (albeit low) is a lot more stable
>
> Thanks
> Chris, ZL1CDP
>
> On 16/05/2011, at 10:54 AM, Chris Parnell wrote:
>
> > Hi Mel,
> >
> > I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
> > Will double check.
> >
> > Cheers
> > Chris
> >
> > On 16/05/2011, at 10:50 AM, Mel Farrer wrote:
> >
>> Mike is probably on the right track. I have repaired many older radios and the

> >> resistor values do change over time. One Kenwood rig had the value of the
> >> screen dropping resistor doubled in value and the other one was open.
> >>
> >> Mel, K6KBE
> >>
> >> _____
> >> From: w5rkl <w5rkl@...>
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Sent: Sun, May 15, 2011 3:34:09 PM
> >> Subject: [TS-520_820_530_830] Re: Transmit has died
> >>
> >> Chris,
> >>
> >> Have you measured the final tube's screen voltage and compared the voltages
> >> between the two tubes? If not then I recommend you do that.
> >>
> >> You can't tell how good a tube is working by simply feeling the bulb
> >> temperature. Voltage checks and comparisons between the two final tubes will
> >> tell you more about the final tubes than anything else you can do.
> >>
> >> 73s
> >> Mike
> >> W5RKL
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >> wrote:
> >>>
> >>> Hi Gordon,
> >>>
> >>> Originally... I was getting around 200mA for around 75w... then it dropped to
> >>> around 50w at 200mA etc.
> >>>
> >>> I have suspected the tubes were on their way out for a while - A friend of mine
> >>> who helped with a repair said that he thought on one of the tubes was drawing
> >>> more current than the other, as one was much hotter than the other.
> >>>
> >>> Cheers
> >>> Chris
> >>>
> >>>
> >>> On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> >>>
> >>>> Hi Chris,
> >>>> If one final is lite, the other must be too. The filaments are wired in
> >>>> series.
> >>>> Check the resistors on the Rectifier board to see if any have gone up in
> >>>> value or opened.
> >>>> What sort of IP were you showing at 50W out before nothing?
> >>>>
> >>>> Gordon

> >>>>
> >>>>
> >>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
> >>>>>
> >>>>> Hi All,
> >>>>>
> >>>>> Had my 830 working nicely until Saturday... for some reason I was
> >>>>> struggling to get above 50W on tune up and then suddenly nothing out.
> >>>>> The HV reading is still there... looking through the final cage, I can
> >>>>> see one of the tube filaments is light, but can't tell if the other
> >>>>> is... I am suspecting not.
> >>>>>
> >>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter
> >>>>> movement either.
> >>>>>
> >>>>> Am I right in thinking the tube(s) are likely EOL?
> >>>>>
> >>>>> Thanks
> >>>>> Chris, ZL1CDP
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31345. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 03:22:00 UTC
From: Chris Parnell
Topic: 31320 Message: 31345

Hi Terry,

Sorry... I meant Rectifier unit (not Regulator)....
My post was supposed to read that I replaced the resistors (R2,3,4 & 5) on the Final Unit and the main resistor on the rectifier unit (R14 from memory).

Cheers
Chris

On 17/05/2011, at 12:35 PM, Terry Wagoner wrote:

>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >Chris--I should probably let the experts handle this, but I am curious. You mentioned that you had problems 3 mos ago and replaced a "regulator". I am unaware of any regulated voltages associated with the final tubes? The screen supply is not regulated and as Mike suggested you need to read the 6146 screen voltage (pin 3). It should be around 225 vdc key down. I would also read the anode voltage at the plate choke and/or at the HV filter caps (red wire). It should read around 820 vdc key down. Please observe good safe work practice making these measurements as these are lethal voltages and currents. Make sure you have good quality test leads on your meter.
> Let me know what regulator you replaced. Good luck Terry K9TW
>
> > Hi Mike, Gordon and all.
> >
> > OK... replacing the resistors in the final unit has enabled me to TX again - although I still only get 50W output (on an external meter). I am following the procedure to a T on the K4EAA website for tuning.
> > I replaced the R10 resistor in the final unit too, with a 10K resistor as per the schematic I have.... my IP reading is as follows:-
> >
> > 40Mts - IP around 160mA - delivers around 55W
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> > Interestingly I can deliver more IP but less PO.
> >
> > Any help to solve this problem would be greatly appreciated.
> > I have ordered a new set of valves but not sure this is the problem, I had a spare 6146 and now the TX (albeit low) is a lot more stable
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > On 16/05/2011, at 10:54 AM, Chris Parnell wrote:
> >
> > > Hi Mel,

> > >
> > > I have previously replaced the resistors in the final unit and regulator previously before I had an issue with the 830 about 3 months ago.
> > > Will double check.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 16/05/2011, at 10:50 AM, Mel Farrer wrote:
> > >
> > >> Mike is probably on the right track. I have repaired many older radios and the
> > >> resistor values do change over time. One Kenwood rig had the value of the
> > >> screen dropping resistor doubled in value and the other one was open.
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> > >> Mel, K6KBE
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> > >> _____
> > >> From: w5rkl <w5rkl@...>
> > >> To: TS-520_820_530_830@yahoogroups.com
> > >> Sent: Sun, May 15, 2011 3:34:09 PM
> > >> Subject: [TS-520_820_530_830] Re: Transmit has died
> > >>
> > >> Chris,
> > >>
> > >> Have you measured the final tube's screen voltage and compared the voltages
> > >> between the two tubes? If not then I recommend you do that.
> > >>
> > >> You can't tell how good a tube is working by simply feeling the bulb
> > >> temperature. Voltage checks and comparisons between the two final tubes will
> > >> tell you more about the final tubes than anything else you can do.
> > >>
> > >> 73s
> > >> Mike
> > >> W5RKL
> > >>
> > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >> wrote:
> > >>>
> > >>> Hi Gordon,
> > >>>
> > >>> Originally... I was getting around 200mA for around 75w... then it dropped to
> > >>> around 50w at 200mA etc.
> > >>>
> > >>> I have suspected the tubes were on their way out for a while - A friend of mine
> > >>> who helped with a repair said that he thought on one of the tubes was drawing
> > >>> more current than the other, as one was much hotter than the other.
> > >>>
> > >>> Cheers
> > >>> Chris
> > >>>

> > >>>
> > >>> On 16/05/2011, at 9:48 AM, n6wk@ wrote:
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> > >>>> Hi Chris,
> > >>>> If one final is lite, the other must be too. The filaments are wired in
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> > >>>> Gordon
> > >>>>
> > >>>>
> > >>>> On 5/15/2011 2:31 PM, Chris Parnell wrote:
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> > >>>>> Hi All,
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> > >>>>> Had my 830 working nicely until Saturday... for some reason I was
> > >>>>> struggling to get above 50W on tune up and then suddenly nothing out.
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> > >>>>> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > >>>>> movement either.
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> > >>>>> Am I right in thinking the tube(s) are likely EOL?
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> > >>>>> Chris, ZL1CDP
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31346. Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 03:43:51 UTC
From: Chris Parnell
Topic: 31346 Message: 31346

Hi,

Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???

Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.

Cheers
Chris

31347. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 04:16:54 UTC
From: W LEWIS
Topic: 31346 Message: 31347

I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.
73s,
Butch Lewis
KØPSA

On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
Date: Monday, May 16, 2011, 10:43 PM

Hi,

Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???

Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.

Cheers
Chris

[Non-text portions of this message have been removed]

31348. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 04:24:16 UTC
From: Chris Parnell
Topic: 31346 Message: 31348

Hi Butch, thanks....

I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.

It's as follows:-

Final Unit (X56-1380-00)

C1
C2
C11, 12
C13
PS1, 2
L1
L2
R2 - 5 (Solid 20 Ohm 1/2W)
R7, 8 (Solid 100 Ohm 1/2W)

And that's it... no value for R6 in the list and no value for R10.

Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.

Cheers
Chris

On 17/05/2011,

at 4:16 PM, W LEWIS wrote:

> I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.
> 73s,
> Butch Lewis
> K?PSA
>
> On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
>
> From: Chris Parnell <cparnell1001@...>
> Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> Date: Monday, May 16, 2011, 10:43 PM
>
>
>
> Hi,

>
> Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
> I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???
>
> Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
>
> Cheers
> Chris
>
> [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

31349. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 04:46:27 UTC
From: W LEWIS
Topic: 31346 Message: 31349

There is an R-10 in the Rectifier unit (X43-1370-00). Is that the one you're looking for?

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, May 16, 2011, 11:24 PM

Hi Butch, thanks....

I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.

It's as follows:-

Final Unit (X56-1380-00)

C1
C2
C11, 12
C13
PS1, 2
L1
L2
R2 - 5 (Solid 20 Ohm 1/2W)
R7, 8 (Solid 100 Ohm 1/2W)

And that's it... no value for R6 in the list and no value for R10.

Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.

Cheers
Chris

On 17/05/2011,

at 4:16 PM, W LEWIS wrote:

> I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.
> 73s,
> Butch Lewis
> KØPSA
>
> On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
>
> From: Chris Parnell <cparnell1001@...>
> Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

> To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> Date: Monday, May 16, 2011, 10:43 PM
>
>
>
> Hi,
>
> Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
> I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???
>
> Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
>
> Cheers
> Chris
>
> [Non-text portions of this message have been removed]
>
>

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Yahoo! Groups Links

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31350. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 04:48:48 UTC
From: Phillip Legate
Topic: 31346 Message: 31350

Most of the Final boards want 5 ohms to sample about 200 mA of plate current.

So they use 4, 20 ohm 1/2 watt resistors in parallel. The voltage produced would be 1 volt across 5 ohms at 200 mAmps

The metering voltage divider for the current sample is usually a series resistor of 2.7k with a 10k resistor to ground forming a 2/3 ratio. So the voltage going to the meter would be 0.75 volts.

--- On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, May 16, 2011, 11:24 PM

Hi Butch, thanks....

I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.

It's as follows:-

Final Unit (X56-1380-00)

C1
C2
C11, 12
C13
PS1, 2
L1
L2
R2 - 5 (Solid 20 Ohm 1/2W)
R7, 8 (Solid 100 Ohm 1/2W)

And that's it... no value for R6 in the list and no value for R10.

Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.

Cheers
Chris

On 17/05/2011,

at 4:16 PM, W LEWIS wrote:

> I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.

> 73s,
> Butch Lewis
> KØPSA
>
> On Mon, 5/16/11, Chris Parnell <cparnell1001@...m> wrote:
>
> From: Chris Parnell <cparnell1001@...>
> Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> Date: Monday, May 16, 2011, 10:43 PM
>
>
>
> Hi,
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> Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
> I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???
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> Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
>
> Cheers
> Chris
>
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Yahoo! Groups Links

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31351. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 05:07:55 UTC
From: Chris Parnell
Topic: 31346 Message: 31351

Thanks Philip,

Makes sense... I have put a 10K in there, but am getting a maximum of 50 / 60 Watts out and a maximum IP rating of around 160mA max for 50/60Watts out.

Cheers
Chris

On 17/05/2011, at 4:48 PM, Phillip Legate wrote:

> Most of the Final boards want 5 ohms to sample about 200 mA of plate current.
>
> So they use 4, 20 ohm 1/2 watt resistors in parallel. The voltage produced would be 1 volt across 5 ohms at 200 mAmps
>
> The metering voltage divider for the current sample is usually a series resistor of 2.7k with a 10k resistor to ground forming a 2/3 ratio. So the voltage going to the meter would be 0.75 volts.
>
> --- On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
>
> From: Chris Parnell <cparnell1001@me.com>
> Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, May 16, 2011, 11:24 PM
>
> Hi Butch, thanks....
>
> I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.
>
> It's as follows:-
>
> Final Unit (X56-1380-00)
>
> C1
> C2
> C11, 12
> C13
> PS1, 2
> L1
> L2
> R2 - 5 (Solid 20 Ohm 1/2W)
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> And that's it... no value for R6 in the list and no value for R10.

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> Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.
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> On 17/05/2011,
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> > On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
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> > From: Chris Parnell <cparnell1001@...>
> > Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> > To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> > Date: Monday, May 16, 2011, 10:43 PM
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> > Hi,
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> > Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
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> > Cheers
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31352. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 07:30:12 UTC
From: pmarkavage@juno.com
Topic: 31346 Message: 31352

There were three issued versions (-00, -10, and -20) of the TS-830S
service manual. The "-10" was mainly cosmetic/hardware changes but "-20"
had some component changes.

Pete, wa2cwa

On Tue, 17 May 2011 15:43:51 +1200 Chris Parnell <cparnell1001@...>
writes:
> Hi,
>
> Not sure if it's been mentioned before, but I have a "downloaded"
> technical supplement for the TS-830s and the schematic of the final
> unit shows R10 at a value of 10K.
> I have another schematic of the same final unit and it shows R10 as
> a 4.7K resistor???
>
> Any ideas why? will it make much difference? I believe it's just for
> meter scaling purposes.
>
> Cheers
> Chris

31353. Re: Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 11:14:15 UTC
From: Terry Wagoner
Topic: 31346 Message: 31353

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>OK Chris I understand you replaced a rectifier. It would be interesting to know why it failed?

If you are uncertain if your Plate Current is accurate and what value your meter multiplier resistors should be you could use a DMM and read the voltage drop across your paralleled cathode resistors. My schematic shows 1.36vdc drop across the 5 ohms at key down which equates to 270ma which includes about 6 ma of screen grid current. So max plate current would be around 265 ma. My operating manual says to load to max of 265 ma (which I never do). So the 1.36 volt drop across the cathode resistors would be a good reading to verify your meter voltage divider is accurate. Terry K9TW

> Thanks Philip,
>
> Makes sense... I have put a 10K in there, but am getting a maximum of 50 / 60 Watts out and a maximum IP rating of around 160mA max for 50/60Watts out.
>
> Cheers
> Chris
>
>
> On 17/05/2011, at 4:48 PM, Phillip Legate wrote:
>
> > Most of the Final boards want 5 ohms to sample about 200 mA of plate current.
> >
> > So they use 4, 20 ohm 1/2 watt resistors in parallel. The voltage produced would be 1 volt across 5 ohms at 200 mAmps
> >
> > The metering voltage divider for the current sample is usually a series resistor of 2.7k with a 10k resistor to ground forming a 2/3 ratio. So the voltage going to the meter would be 0.75 volts.
> >
> > --- On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
> >
> > From: Chris Parnell <cparnell1001@...>
> > Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> > To: TS-520_820_530_830@yahoogroups.com
> > Date: Monday, May 16, 2011, 11:24 PM
> >
> > Hi Butch, thanks....
> >
> > I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.
> >
> > It's as follows:-

> >
> > Final Unit (X56-1380-00)
> >
> > C1
> > C2
> > C11, 12
> > C13
> > PS1, 2
> > L1
> > L2
> > R2 - 5 (Solid 20 Ohm 1/2W)
> > R7, 8 (Solid 100 Ohm 1/2W)
> >
> > And that's it... no value for R6 in the list and no value for R10.
> >
> > Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.
> >
> > Cheers
> > Chris
> >
> > On 17/05/2011,
> >
> > at 4:16 PM, W LEWIS wrote:
> >
> > > I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.
> > > 73s,
> > > Butch Lewis
> > > KØPSA
> > >
> > > On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
> > >
> > > From: Chris Parnell <cparnell1001@...>
> > > Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> > > To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> > > Date: Monday, May 16, 2011, 10:43 PM
> > >
> > >
> > >
> > > Hi,
> > >
> > > Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
> > > I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???
> > >
> > > Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
> > >

> > > Cheers
> > > Chris
> > >
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31354. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 15:04:48 UTC
From: Phillip Legate
Topic: 31346 Message: 31354

Assuming you have set the ALC to max in TUNE, the idle current in SSB mode (keyed) is on the order of 50-60 mAmps,

My experience with these hybrids using a good 12BY7A driver and good 6146 finals is that with the CW (constant carrier) output into a dummy load is 55-60 Watts at an Ip reading of 200 mA (using the CARRIER control) and with the plate dipped properly. Pushing the plate current any higher may result in blowing the 6 amp fuse.

Now in SSB modes with a properly tuned rig, the PEP will be about 120 Watts with a peak reading Wattmeter, which is about the max you can expect from these rigs. Of course, this will depend greatly on the mike gain setting and or compression. IMHO, 5db compression is the max one should use on these rigs, or you will negate the audio quality typical of Kenwood rigs.

If you drive a linear with these rigs, you will need an ALC negative voltage bias control or an attenuator, or you will beat the linear's grids to death.

For sampling the HV supply volatges, I use a BK PR-29A probe. Be careful as these volatges are lethal and on the order of 950 Volts in receive and 780 volts in trransmit. Never sample the plate supply voltage at the tube caps since there will be RF as well as DC there. SAmple the voltages at the PS caps or at the plate choke coil.

--- On Tue, 5/17/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, May 17, 2011, 12:07 AM

Thanks Philip,

Makes sense... I have put a 10K in there, but am getting a maximum of 50 / 60 Watts out and a maximum IP rating of around 160mA max for 50/60Watts out.

Cheers
Chris

On 17/05/2011, at 4:48 PM, Phillip Legate wrote:

> Most of the Final boards want 5 ohms to sample about 200 mA of plate current.
>
> So they use 4, 20 ohm 1/2 watt resistors in parallel. The voltage produced would be 1 volt across 5 ohms at 200 mAmps
>
> The metering voltage divider for the current sample is usually a series resistor of 2.7k with a 10k resistor to ground forming a 2/3 ratio. So the voltage going to the meter would be 0.75 volts.
>

> --- On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
>
> From: Chris Parnell <cparnell1001@...>
> Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, May 16, 2011, 11:24 PM
>
> Hi Butch, thanks....
>
> I also did this, but in the service manual I have it doesn't state R`10 at all in the parts list.
>
> It's as follows:-
>
> Final Unit (X56-1380-00)
>
> C1
> C2
> C11, 12
> C13
> PS1, 2
> L1
> L2
> R2 - 5 (Solid 20 Ohm 1/2W)
> R7, 8 (Solid 100 Ohm 1/2W)
>
> And that's it... no value for R6 in the list and no value for R10.
>
> Then as I mentioned I have two different schematics for the Final unit - one reads 10K the other reads 4.7K - Confusing, unless I am missing something really obvious.
>
> Cheers
> Chris
>
> On 17/05/2011,
>
> at 4:16 PM, W LEWIS wrote:
>
> > I also found some items that did not agree so I went to the parts list in the service manual to get the correct values.
> > 73s,
> > Butch Lewis
> > KØPSA
> >
> > On Mon, 5/16/11, Chris Parnell <cparnell1001@...> wrote:
> >
> > From: Chris Parnell <cparnell1001@...>
> > Subject: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s
> > To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> > Date: Monday, May 16, 2011, 10:43 PM

> >
> >
> >
> > Hi,
> >
> > Not sure if it's been mentioned before, but I have a "downloaded" technical supplement for the TS-830s and the schematic of the final unit shows R10 at a value of 10K.
> > I have another schematic of the same final unit and it shows R10 as a 4.7K resistor???
> >
> > Any ideas why? will it make much difference? I believe it's just for meter scaling purposes.
> >
> > Cheers
> > Chris
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31355. TS-520S/820S DC-DC Module For sale

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 03:56:38 UTC
From: jsloss
Topic: 31355 Message: 31355

Like new., $45 + a pittance for USPS.

Pls reply direct

Joe k7mks

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31356. FS: VFO 820 (and maybe the TS-820)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 17:06:42 UTC
From: jmcgsd
Topic: 31356 Message: 31356

I have a close to mint VFO820 that works perfectly that I would like to sell. It is complete with cable, original instructions and warranty card. $125 shipped and I can take Paypal.

I am also considering selling my TS-820. It has the 500Hz CW filter, original service manual and original noise cancelling Kenwood hand mic. I would sell the package (TS-820s/VFO-820) for $350 but would as soon not ship. If you are local in So. Cal. I could arrange to meet for delivery.

Please email me at af6ni@... if interested.

Thanks and 73.
Joe
AF6NI

31357. TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 21:13:09 UTC
From: ki4ax
Topic: 31357 Message: 31357

I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."

Thanks,

Dan KI4AX

31358. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 22:31:23 UTC
From: w5rkl
Topic: 31357 Message: 31358

Dan,

I would pay close attention to the IP idling current in transmit. If it starts to show instability, stop transmitting and replace the final tubes. I also would not trust the filter capacitors either. It's quite possible the filter capacitors have aged to the point they need to be replaced. 20 years is a long time for a radio to sit without being powered on. I recommend replacing the power supply filter capacitors before you continue operating the 520.

As for low S meter reading, the S meter sensitivity and Zero pots could be dirty/corroded which could be causing the S meter to be less than normal. Have you checked the service manual's first step, measured and adjusted, if necessary, the 9VDC and 3.3VDC? If not then check these voltages. Perform the voltage adjustment steps in the order given in the service manual.

The driver and both final tubes will have nothing to do with the low S meter reading. You should see at least S9 or higher S meter reading on 80 meters with the calibrator turned on and the VFO adjusted for a beat note at 25Khz intervals on the dial. The S meter will be less as you go higher in bands.

The band switch settings are

1.8 = 160 meters
3.5 = 80 meters
7 = 40 meters
14 = 20 meters
21 = 15 meters
28/28.5/29/29.5 = 10 meters

If you have the first 520 model, not 520S or 520SE, then you won't have 160 meters, only 80 thru 10. 160 meters wasn't included until the 520S and 520SE.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With

10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
>
> Thanks,
>
> Dan KI4AX
>

31359. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 23:30:42 UTC
From: ki4ax
Topic: 31357 Message: 31359

Mike,

Thanks for your response to my post about low receive. I will keep an eye on the idle Ip for stability. So far I haven't noticed any problem with it but I have not exactly been looking at it either. When I went through the rig and cleaned all the pots I also replaced the HV caps using the HV kit from Ken K4EAA, checked and adjusted the 9v and the 3.3v regulated voltages, and cleaned the vox and transmit/ antenna relay. There was one set of contacts in the tx/ant relay that seemed pretty dirty but also seemed to clean up pretty good. Tx does not seem to have any problems.... I have several very excellent reports including the outstanding audio like a kenwood with a shure 444 mic should. Its the receive I'm not sure about. As I started to say, in my previous post, a station 2 miles from mine, barefoot, only develops about an 8.5 to 9 s-units. But I seem to hear ok.

I will see if I can clean the s-meter pots and see what happens. I will also check the marker strenth on 80m as you have suggested.

Thanks for your help Mike,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Dan,
>
> I would pay close attention to the IP idling current in transmit. If it starts to show instability, stop transmitting and replace the final tubes. I also would not trust the filter capacitors either. It's quite possible the filter capacitors have aged to the point they need to be replaced. 20 years is a long time for a radio to sit without being powered on. I recommend replacing the power supply filter capacitors before you continue operating the 520.
>
> As for low S meter reading, the S meter sensitivity and Zero pots could be dirty/corroded which could be causing the S meter to be less than normal. Have you checked the service manual's first step, measured and adjusted, if necessary, the 9VDC and 3.3VDC? If not then check these voltages. Perform the voltage adjustment steps in the order given in the service manual.
>
> The driver and both final tubes will have nothing to do with the low S meter reading. You should see at least S9 or higher S meter reading on 80 meters with the calibrator turned on and the VFO adjusted for a beat note at 25Khz intervals on the dial. The S meter will be less as you go higher in bands.
>
> The band switch settings are
>
> 1.8 = 160 meters
> 3.5 = 80 meters

> 7 = 40 meters
> 14 = 20 meters
> 21 = 15 meters
> 28/28.5/29/29.5 = 10 meters
>
> If you have the first 520 model, not 520S or 520SE, then you won't have 160 meters, only 80 thru 10. 160 meters wasn't included until the 520S and 520SE.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31360. Re: [TS-520_820_530_830] service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-17 23:58:52 UTC
From: AI4WM Bill
Topic: 31340 Message: 31360

I've not pulled my service manual so I do not know which procedures are referenced that require an 8 ohm dummy load. Generally any non-inductive resistor of the same resistance can be substituted for a dummy load. The power requirement will need to be met. For example if the dummy load is 8 ohms at 5 watts then an 8 ohm non inductive resistor can be used.

The difference in a VTVM and AF VTVM will be the frequency response and a VTVM may not have a dB scale. Generally an AF-VTVM will have logarithmic voltage scales and a dB scale although some may have linear voltage scales. An AF VTVM would be used for DC and AF since any small amount RF will not affect (or minimally affect) the reading(s).

73,

Bill

AI4WM

--- On Mon, 5/16/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: [TS-520_820_530_830] service equip. question
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Monday, May 16, 2011, 5:46 PM

Greetings group,

   In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):

        What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.

         Can a regular VTVM be used in place of an AF VTVM?

          I am trying to become self sufficient as much as possible

          tnx   73's   joe   wb7uqu

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31361. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 01:43:40 UTC
From: roberteleazer@rocketmail.com
Topic: 31357 Message: 31361

Dan:

I have the same situation with my TS-520. Even when the received station is loud and clear the S-meter barely registers. And using the calibrator the S-meter indication seems to be too low on any band.

But - I have worked Poland, Germany, and Italy on 15 meters USB over the past week using a dipole strung in my attic, so I am not worried about what the S-meter says. I'll open it up and see if I can adjust the S-meter sometime. In the meantime I give the other station an S-meter reading but tell them not to believe it.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
>
> Thanks,
>
> Dan KI4AX
>

31362. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 01:56:31 UTC
From: w5rkl
Topic: 31357 Message: 31362

The reason I mentioned monitoring the IP current was because I experienced a similar issue with a Heathkit HW-101 that sat for 22 years, never powered up. After cleaning, inspecting, and replacing obvious bad parts and loose connections, I was able to power the transceiver up. It worked fine for about 4 days, 105 watts output, good receive, and no instability UNTIL the first Saturday morning. I place the transceiver in TUNE and notice the PLATE current meter, same as IP in the Kenwood hybrids, was fluctuation up and down (instability). This happened about 4 times then all of a sudden the PLATE current soared full scale and tripped the HP-23 power supply breaker. At the same time the current soared, the final tubes arced. I reset the breaker, turned the transceiver back on and it worked fine, as long as I didn't transmit. The moment, fraction of a section is how long it took, I switched to transmit, PTT, CW key, etc, the IP current soared full scale, final tubes arced, and the power supply breaker tripped.

I tested the tubes and both tubes tested "good". I replaced both final tubes with known good tubes, problem solved.

Air/gasses can enter the tube's vacuum over time through openings around the base pin. As the tubes are heated, cooled, heated, cooled, many times, the seals around the tube pins becomes less, allowing gas accumulation inside the tube. When current flow within the tube occurs and I'm not talking about filament voltage but rather electron flow from the cathode to the screen and ultimately the plate, arcing can occur. When this happens, throw the tubes away and installed known good tubes.

You can't eliminate the gas accumulation in the tubes by letting the tubes sit with no conduction and filament voltage only. Tubes like the 6146 have Barium as the gas absorbing material. If you look closely on the side of the tube's plate area there may be a round element and the inside of the tubes around the area of this element is shinny "silver" or 'chrome'. The shinny silver/chrome coating is the result of the "getter flash" that occurs during the last stage of the tube's construction. The getter flash absorbs any residual gas that may remain after the vacuum producing stage of construction. Most low power and receiving tubes have this silver/chrome inner coating and behind or at the coating area on the inside of the tube is where you will see the getter element. The element may be a round "ring", "square" shaped element which is the getter element. When the tube conducts, heat is produced. Heating the getter element helps to eliminate gas in the tube. Filament only power will not produce sufficient heat to allow the getter element to absorb gas, the tube has to conduct (be in operation) for the getter element to work. If the shinny/chrome coating turns "white", that's an indication there is a crack in the glass envelope and there is no more vacuum inside the glass envelope. When you see this, throw the tube away, you can't fix it.

High power tubes such as the 3-500Z, 4-400, 813, 572B, and 811A, for example, have their plates coated with Zirconium. The plates appear to be a dusty gray color. The gray dusty coating is Zirconium. Zirconium is used to absorb gases inside the tube. Zirconium is not used in small receiving/low power tubes such as the 6146, 12AX7, 6EA8, etc.

For Zirconium to absorb gases, the plate must be heated to a very high temperature, approximately 1,000 degrees centigrade. A sign the plates are heated to this high temperature is the plates will show a dull red glow during transmissions. This is "normal" and should not be thought of as a problem. The worse thing one can do, when operating 4-400, 3-500Z, 811A, etc, is to operate the tube during transmissions with the plate NOT showing a dull red glow.

Small receiving and low power transmit tubes such as the 6146, sweep tubes, 12AX7, 12BY7, the plates of these tubes should never show any color! If they do then the tube itself is bad or the circuit is causing excessive current to flow, or there's a short in the tube elements or the circuit. I've seen 12AX7 plates glow a dull red. I couldn't see the red glow until I turned the lights out and visually inspected the tube's in a dark room. The tube turned out to be bad.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Mike,
>
> Thanks for your response to my post about low receive. I will keep an eye on the idle Ip for stability. So far I haven't noticed any problem with it but I have not exactly been looking at it either. When I went through the rig and cleaned all the pots I also replaced the HV caps using the HV kit from Ken K4EAA, checked and adjusted the 9v and the 3.3v regulated voltages, and cleaned the vox and transmit/ antenna relay. There was one set of contacts in the tx/ant relay that seemed pretty dirty but also seemed to clean up pretty good. Tx does not seem to have any problems.... I have several very excellent reports including the outstanding audio like a kenwood with a shure 444 mic should. Its the receive I'm not sure about. As I started to say, in my previous post, a station 2 miles from mine, barefoot, only develops about an 8.5 to 9 s-units. But I seem to hear ok.
>
> I will see if I can clean the s-meter pots and see what happens. I will also check the marker strenth on 80m as you have suggested.
>
> Thanks for your help Mike,
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Dan,
> >
> > I would pay close attention to the IP idling current in transmit. If it starts to show instability, stop transmitting and replace the final tubes. I also would not trust the filter capacitors either. It's quite possible the filter capacitors have aged to the point they need to be replaced. 20 years is a long time for a radio to sit without being powered on. I recommend replacing the power supply filter capacitors before you continue operating the 520.
> >
> > As for low S meter reading, the S meter sensitivity and Zero pots could be

dirty/corroded which could be causing the S meter to be less than normal. Have you checked the service manual's first step, measured and adjusted, if necessary, the 9VDC and 3.3VDC? If not then check these voltages. Perform the voltage adjustment steps in the order given in the service manual.
> >
> > The driver and both final tubes will have nothing to do with the low S meter reading. You should see at least S9 or higher S meter reading on 80 meters with the calibrator turned on and the VFO adjusted for a beat note at 25Khz intervals on the dial. The S meter will be less as you go higher in bands.
> >
> > The band switch settings are
> >
> > 1.8 = 160 meters
> > 3.5 = 80 meters
> > 7 = 40 meters
> > 14 = 20 meters
> > 21 = 15 meters
> > 28/28.5/29/29.5 = 10 meters
> >
> > If you have the first 520 model, not 520S or 520SE, then you won't have 160 meters, only 80 thru 10. 160 meters wasn't included until the 520S and 520SE.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> > >
> > > Thanks,
> > >
> > > Dan KI4AX

> > >
> >
>

31363. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 01:56:43 UTC
From: ki4ax
Topic: 31357 Message: 31363

Robert,

I'm thinking that it may just be the meter, also, but I would like to make a determination one way or the other if I can. I know I should not let things like this bother me but I guess its just my nature. I just don't want to go in and turn the meter up if it doesn't deserve to be turned up... if you know what I mean. If I can't figure it out with out a lot of test gear I guess it will wait until I can find someone with the gear I need. Like you, I have been making some nice DX contacts with it so I guess its not doing too poorly.

Thanks,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Dan:
>
> I have the same situation with my TS-520. Even when the received station is loud and clear the S-meter barely registers. And using the calibrator the S-meter indication seems to be too low on any band.
>
> But - I have worked Poland, Germany, and Italy on 15 meters USB over the past week using a dipole strung in my attic, so I am not worried about what the S-meter says. I'll open it up and see if I can adjust the S-meter sometime. In the meantime I give the other station an S-meter reading but tell them not to believe it.
>
> Robert
> WB5WSV
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was

newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31364. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 02:15:00 UTC
From: w5rkl
Topic: 31357 Message: 31364

The S meter is controlled in the 520 by Q7 and Q8, meter amplifier. The last IF signal is applied to the AGC circuit where AGC voltage is produced. The AGC voltage is applied to the IF and RF amplifiers to control the gain of these 2 stages. In addition, the AGC voltage is also applied to the meter amplifiers and depending on the meter zero and sensitivity pots are set determines how well the AGC voltage is displayed as 'S Units' on the meter in receive.

Follow the 520's service manual's S meter adjustments to correct this problem. Naturally, the rest of the receive sections must also be working properly for this adjustment to be correct.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Dan:
>
> I have the same situation with my TS-520. Even when the received station is loud and clear the S-meter barely registers. And using the calibrator the S-meter indication seems to be too low on any band.
>
> But - I have worked Poland, Germany, and Italy on 15 meters USB over the past week using a dipole strung in my attic, so I am not worried about what the S-meter says. I'll open it up and see if I can adjust the S-meter sometime. In the meantime I give the other station an S-meter reading but tell them not to believe it.
>
> Robert
> WB5WSV
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with

the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31365. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 02:16:47 UTC
From: w5rkl
Topic: 31357 Message: 31365

If the meter is displaying correct ALC, HV, RF, and IP indications then the meter's not the problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Robert,
>
> I'm thinking that it may just be the meter, also, but I would like to make a determination one way or the other if I can. I know I should not let things like this bother me but I guess its just my nature. I just don't want to go in and turn the meter up if it doesn't deserve to be turned up... if you know what I mean. If I can't figure it out with out a lot of test gear I guess it will wait until I can find someone with the gear I need. Like you, I have been making some nice DX contacts with it so I guess its not doing too poorly.
>
> Thanks,
>
> Dan KI4AX
>
>
>
> --- In TS-520_820_530_830@...m, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Dan:
> >
> > I have the same situation with my TS-520. Even when the received station is loud and clear the S-meter barely registers. And using the calibrator the S-meter indication seems to be too low on any band.
> >
> > But - I have worked Poland, Germany, and Italy on 15 meters USB over the past week using a dipole strung in my attic, so I am not worried about what the S-meter says. I'll open it up and see if I can adjust the S-meter sometime. In the meantime I give the other station an S-meter reading but tell them not to believe it.
> >
> > Robert
> > WB5WSV
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need

to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> > >
> > > Thanks,
> > >
> > > Dan KI4AX
> > >
> >
>

31366. Continuing adventures with twins

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 04:48:02 UTC
From: Bill
Topic: 31366 Message: 31366

Hi Everybody,

I've done some more work with my T-599. I have been unable to get the desired QRP response from ALC with 9 volt battery trick. One of the transistors on the control board seems to be suffering from something like secondary breakdown. I don't have a suitable replacement so I'll be shopping for the part I need. To make the postage worthwhile I'm looking at a few of the other parts in the Twins that might be vulnerable to 'accidents'. I found the remains of a burned out, melted down, crispy fried wire way down deep from some kind of past repair. That lil clue was laying right along the track of the wire from the ALC terminal, although that may not be the source of the wire fragment, nor the present ALC problem.

Even though the ALC is not working 100 per cent the transmitter is still usable. I just have to avoid overdriving it. I have no external amp to worry about. And I'll be far from overdriving it at QRP levels. Without the ALC trick I can run the output down to around two watts with only the carrier control. I actually have to turn it *up* to achieve "full" QRP power levels now. I did some deep cleaning and aligned everything but the 8 MHz bandpass filter. It behaves very well now.

Next, converters for the Twins to get on the WARC bands (30, 17, and 12 meters). The receiver already covers 30 meters in the "WWV" band. The receiver has that "EXT" (intended for 11 meters) band and that would be a good place for the 12 meter band (possibly taking advantage of the existing 10 meter hardware). That leaves the empty six meter converter bay for a place to add 17 meters. The separate converter for transmit will be driven from the "transverter" output on the T-599. More about all of those things as I get some of them done.

73,

Bill KU8H

31367. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 09:41:33 UTC
From: Chris Parnell
Topic: 31320 Message: 31367

Hi Mike and all..

Tonight I have done some voltage measurements on the tubes, as follows:- -

Pins 1, 4 and 6 are :

0V in RX and 0.417V in TX

Pin 3 RX is 242V and in TX it drops to 228V

Pin 5 RX is -94.8V and in TX it is -42.2V

These are exactly the same for both tubes.

Any comments very welcomed:

Thanks
Chris, ZL1CDP

On 16/05/2011, at 10:34 AM, w5rkl wrote:

> Chris,
>
> Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.
>
> You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Gordon,
> >
> > Originally... I was getting around 200mA for around 75w... then it dropped to around 50w at 200mA etc.
> >
> > I have suspected the tubes were on their way out for a while - A friend of mine who helped with a repair said that he thought on one of the tubes was drawing more current than the other, as one was much hotter than the other.
> >
> > Cheers
> > Chris

> >
> >
> > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
> >
> > > Hi Chris,
> > > If one final is lite, the other must be too. The filaments are wired in
> > > series.
> > > Check the resistors on the Rectifier board to see if any have gone up in
> > > value or opened.
> > > What sort of IP were you showing at 50W out before nothing?
> > >
> > > Gordon
> > >
> > >
> > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > >>
> > >> Hi All,
> > >>
> > >> Had my 830 working nicely until Saturday... for some reason I was
> > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > >> The HV reading is still there... looking through the final cage, I can
> > >> see one of the tube filaments is light, but can't tell if the other
> > >> is... I am suspecting not.
> > >>
> > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > >> movement either.
> > >>
> > >> Am I right in thinking the tube(s) are likely EOL?
> > >>
> > >> Thanks
> > >> Chris, ZL1CDP
> > >>
> > >>
> > >
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31368. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 11:08:04 UTC
From: Terry Wagoner
Topic: 31320 Message: 31368

Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate current. Is that what your IP reading is on the rig panel meter? 80ma x 820v = 68 watts x 65% efficiency = 45 watts key down output power. I think you said you were getting about 50 watts out. Your screen voltage is OK so if your plate voltage is good then output power you are seeing is correct for how you have the rig loaded. If your panel meter Is Not reading 80 ma then your meter multipliers are not right. I think you said you replaced one of them? I am sure someone else will do the calcs and verify my assessment. I dont think there is anything wrong with your tubes or power supplies. I would take a look at your meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 5:41:33 AM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Mike and all..

Tonight I have done some voltage measurements on the tubes, as follows:- -

Pins 1, 4 and 6 are :

0V in RX and 0.417V in TX

Pin 3 RX is 242V and in TX it drops to 228V

Pin 5 RX is -94.8V and in TX it is -42.2V

These are exactly the same for both tubes.

Any comments very welcomed:

Thanks
Chris, ZL1CDP

On 16/05/2011, at 10:34 AM, w5rkl wrote:

> Chris,
>
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>between the two tubes? If not then I recommend you do that.
>
>
> You can't tell how good a tube is working by simply feeling the bulb
>temperature. Voltage checks and comparisons between the two final tubes will
>tell you more about the final tubes than anything else you can do.

>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>wrote:
> >
> > Hi Gordon,
> >
> > Originally... I was getting around 200mA for around 75w... then it dropped to
>around 50w at 200mA etc.
> >
> > I have suspected the tubes were on their way out for a while - A friend of
>mine who helped with a repair said that he thought on one of the tubes was
>drawing more current than the other, as one was much hotter than the other.
> >
> > Cheers
> > Chris
> >
> >
> > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
> >
> > > Hi Chris,
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> > > series.
> > > Check the resistors on the Rectifier board to see if any have gone up in
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> > >
> > > Gordon
> > >
> > >
> > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > >>
> > >> Hi All,
> > >>
> > >> Had my 830 working nicely until Saturday... for some reason I was
> > >> struggling to get above 50W on tune up and then suddenly nothing out.
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> > >> see one of the tube filaments is light, but can't tell if the other
> > >> is... I am suspecting not.
> > >>
> > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > >> movement either.
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> > >> Am I right in thinking the tube(s) are likely EOL?
> > >>
> > >> Thanks
> > >> Chris, ZL1CDP

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Yahoo! Groups Links

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31369. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 11:13:29 UTC
From: Chris Parnell
Topic: 31320 Message: 31369

Hi Terry,

I am seeing around 160 mA at the highest power out (on an external Meter).

I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10 on the final unit).

Thanks
Chris

Sent from my iPhone

On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:

> Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you
> should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =
> 68 watts x 65% efficiency = 45 watts key down output power. I think you said
> you were getting about 50 watts out. Your screen voltage is OK so if your plate
> voltage is good then output power you are seeing is correct for how you have the
> rig loaded. If your panel meter Is Not reading 80 ma then your meter
> multipliers are not right. I think you said you replaced one of them? I am sure
> someone else will do the calcs and verify my assessment. I dont think there is
> anything wrong with your tubes or power supplies. I would take a look at your
> meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:41:33 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Hi Mike and all..
>
> Tonight I have done some voltage measurements on the tubes, as follows:- -
>
> Pins 1, 4 and 6 are :
>
> 0V in RX and 0.417V in TX
>
> Pin 3 RX is 242V and in TX it drops to 228V
>
> Pin 5 RX is -94.8V and in TX it is -42.2V
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> Any comments very welcomed:
>
> Thanks
> Chris, ZL1CDP
>
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> > Chris,
> >
> > Have you measured the final tube's screen voltage and compared the voltages
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> > W5RKL
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> >wrote:
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> > > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
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> > > > Hi Chris,
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> > > > Check the resistors on the Rectifier board to see if any have gone up in
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> > > > What sort of IP were you showing at 50W out before nothing?
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> > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:

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31370. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 11:41:37 UTC
From: w5rkl
Topic: 31320 Message: 31370

Hi Chris,

What position was the MODE switch set to when you measured the voltages in transmit? It appears you have the Mode switch set to either LSB or USB.

If the final tube cathode resistors are within tolerance and the final amplifier is tuned up properly for full output (220ma showing on the IP meter), the cathode voltage on the final tubes (pins 1, 4, or 6) will be approximately 1.125VDC.

The transmit cathode voltage (pins 1, 4, and 6) indicates 60ma of idling current flowing in the final tubes, no RF output.

The final tubes are wired in parallel. That's why the voltages are the same on both tubes.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Mike and all..
>
> Tonight I have done some voltage measurements on the tubes, as follows:- -
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> Pins 1, 4 and 6 are :
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> 0V in RX and 0.417V in TX
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> Pin 3 RX is 242V and in TX it drops to 228V
>
> Pin 5 RX is -94.8V and in TX it is -42.2V
>
> These are exactly the same for both tubes.
>
>
> Any comments very welcomed:
>
> Thanks
> Chris, ZL1CDP
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> > Chris,
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> > Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.
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> > You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.
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31371. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 11:49:44 UTC
From: Terry Wagoner
Topic: 31320 Message: 31371

Chris---The external meter is a watt meter-- correct? The 160 ma is the IP reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate current. Unless your 5 ohm cathode resistors are not actually 5 ohms. I would go back and read the parallel combination of your 4 -20 ohm resistors. Maybe you read the color code wrong when you replaced them. It is easy to do. Also, my schematic shows R10 to be 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my multipliers are approx 2/3 ratio. I dont know what the panel meter FS is or the internal resistance. I suppose it is possible that Kenwood used different meters for different production runs but that would be unusual. The pros on here would know if they used different meters that required different meter multipliers. If your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode resistor.
Terry

From: Chris Parnell <cparnell1001@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, May 18, 2011 7:13:29 AM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Terry,

I am seeing around 160 mA at the highest power out (on an external Meter).

I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10 on the final unit).

Thanks
Chris

Sent from my iPhone

On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:

> Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you
>
> should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =

> 68 watts x 65% efficiency = 45 watts key down output power. I think you said
> you were getting about 50 watts out. Your screen voltage is OK so if your plate
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> multipliers are not right. I think you said you replaced one of them? I am sure

>
> someone else will do the calcs and verify my assessment. I dont think there is

> anything wrong with your tubes or power supplies. I would take a look at your
> meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW
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> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:41:33 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Hi Mike and all..
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> Any comments very welcomed:
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> Thanks
> Chris, ZL1CDP
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31372. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 12:09:34 UTC
From: w5rkl
Topic: 31320 Message: 31372

I agree with Terry.

If the cathode resistors are 5 ohms and the 830 tunes up with 220ma showing on the IP meter, then the cathode voltage will be approximately 1.125VDC. You can determine how the final amplifier is working by monitoring the cathode voltage (pins 1 on the final tube sockets).

If the cathode resistors increase in value by only "1" ohm resulting in a cathode resistance of 6 ohms and the same 220ma is indicated on the IP meter, the cathode voltage will be approximately 1.35VDC instead of approximately 1.125VDC.

Example:
Cathode resistance is 5 ohms
Final amplifier current at max power output is 220ma
Cathode voltage is 1.125VDC

E = I x R

or

.220 x 5 = 1.125VDC

Cathode resistance has changed to "6" ohms
Same final amplifier current, 220ma
Cathode voltage is now "1.35VDC".

Notice the increase in cathode voltage by an increase of only "1" ohm of cathode resistance.

If the final amplifier is showing 160ma and the cathode resistors are within tolerance, 5 ohms, then the cathode voltage will be approximately .8VDC (.160 x 5 = .8VDC).

If the IP meter indicates 60ma with no RF output, the cathode resistors are within tolerance, 5 ohms, the cathode voltage will be approximately .3VDC (.060 x 5 = .3VDC).

The cathode voltage will tell you a lot of how the final amplifier is working.

73s
Mike
W5RKL

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you

> should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =
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> someone else will do the calcs and verify my assessment. I dont think there is
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:41:33 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
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> Hi Mike and all..
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> On 16/05/2011, at 10:34 AM, w5rkl wrote:
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31373. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 12:44:14 UTC
From: Terry Wagoner
Topic: 31320 Message: 31373

Hi Mike--I hate to sit on the side line! Maybe Chris should retrace his steps?
Problem/Symptoms:
1. 75 watts output with 200ma IP........ normal/ok
2. Suddenly 50 watts output with 200ma IP.........Driver tube? Plate/Screen Voltage low? Cathode Resistors increasing in value?
3. Suddenly "0" watts output, "0" ma IP, "0" alc, EP 800+.............Open cathode resistors most likely cause (didnt hear them pop)

Actions:
1. Replaced Cathode Resistors.......Back to 50 watts out for 200ma IP
2. Replaced R10 (6.8k) with a 10K resistor......Why make this mod? Suspected panel meter not reading accurately?
3. Measured all tube voltages with 50 watts out and IP reading approx 160 ma.....Cathode voltage and IP do not compute for 5 ohm resistor

Suggested Actions:
1. Make sure voltage readings taken in keydown CW mode. Should not get 50 watts out if measuring in USB or LSB with mike keyed.
2. Re-measure cathode resistors
3. Remove meter multiplier mod and install new 2.7K R6 and 4.7K R10 to restore meter circuit to factory as-built configuration
4. Re tune rig to 225ma IP and report output power to the group
5. Sell rig to Mike or Terry for $50.00!

Mike--dont you just want to fly over and get your hands on this problem! My favorite part of the hobby!

73s Terry

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 8:09:34 AM
Subject: [TS-520_820_530_830] Re: Transmit has died

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Example:
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31374. Re: TS-520 Low Recieve

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 13:25:47 UTC
From: ki4ax
Topic: 31357 Message: 31374

Mike,

When I said I think it is the meter, in my previous post, I meant the adjustments... I didn't mean the actual meter. The meter it self works fine and displays the correct ALC, HV, RF, and Ip. First chance I get I will address the adjustments for the meter by cleaning and adjusting.

I enjoyed reading the information on vacume tubes. I was aware of the getter elements in some tubes but did not know about the other coatings and methods of removing gas from tubes. Now that you mention it I did have to replace the driver tube, in this rig, when I first fired it up because it turned white. The replacement was NOS and tested before it went in. I also re-aligned the driver coil afterwards.

I will keep an eye out for the fluctuating Ip but so far so good.

Thanks,

Dan

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If the meter is displaying correct ALC, HV, RF, and IP indications then the meter's not the problem.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > Robert,
> >
> > I'm thinking that it may just be the meter, also, but I would like to make a determination one way or the other if I can. I know I should not let things like this bother me but I guess its just my nature. I just don't want to go in and turn the meter up if it doesn't deserve to be turned up... if you know what I mean. If I can't figure it out with out a lot of test gear I guess it will wait until I can find someone with the gear I need. Like you, I have been making some nice DX contacts with it so I guess its not doing too poorly.
> >
> > Thanks,
> >
> > Dan KI4AX
> >
> >

> >
> > --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> > >
> > > Dan:
> > >
> > > I have the same situation with my TS-520. Even when the received station is loud and clear the S-meter barely registers. And using the calibrator the S-meter indication seems to be too low on any band.
> > >
> > > But - I have worked Poland, Germany, and Italy on 15 meters USB over the past week using a dipole strung in my attic, so I am not worried about what the S-meter says. I'll open it up and see if I can adjust the S-meter sometime. In the meantime I give the other station an S-meter reading but tell them not to believe it.
> > >
> > > Robert
> > > WB5WSV
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > > >
> > > > I am trying to determine if I am experiencing "low receive" on my TS-520 or if I need to adjust the s-meter. This rig sat idle for close to 20 years. A few months ago I went through the rig and cleaned all the pots, relays, and variable caps. I also did some tuning on the coil pack following the procedure in the book. All in all the rig seems ok and the receive, especially 10m, seemed to respond to tuning the coil pack because it does have more sensitivity (according to s-meter and ear) than before the tuning. I can seem to "hear" pretty good with the rig and have worked a few DX stations with it over the last few weeks. However, I have noticed that it seems pretty "tight" as far as the s-meter is concerned. When I do the 25khz marker test I get varing results depending on the band. With 10m I can only get about 3 s-units with the marker... on 20m (I think its 20m) about the best I can get is about 6-1/2 to 7 s-units. This afternoon I was listening on 20m and heard a station that is local to me... only about 2 miles down the road. I am not familiar with the station I was listening to so I do not know what antenna he was using or its orientation. I have a dipole up about 25 feet. Seems I can remember, back when the rig was newer, stations that would easily do 20+ s-units but that does not seem to be the case now. Is there an easy straight forward way to determine if it is the receive or s-meter that is "tight" with out a lot of sophisticated equipment (that I don't have)? I know that meter don't mean much but it is a way to judge things "relativly."
> > > >
> > > > Thanks,
> > > >
> > > > Dan KI4AX
> > > >
> > >
> > >
> >
>

31375. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 13:45:42 UTC
From: w5rkl
Topic: 31320 Message: 31375

Hi Terry and Chris,

I question the same 200ma IP current indication with 2 different power outputs. If the controls were not touched, the 830 was producing 75 watts output at 200ma then the power output suddenly dropped to 50 watts, the IP meter should display a "different" current indication, typically less IP current. This is assuming there has been no change in load to the transmitter (dummy load, SWR, etc) and the controls remained the same. The HV indication would also be different, HV would be slightly higher.

As current flows through the final tubes, a voltage drop occurs across the HV supply. This voltage drop results in the HV indication to be "less" as the current through the tubes increases. The opposite occurs when the current through the tube "decreases". This can be seen by monitoring the final tube's cathode voltage. As current through the tube increases so does the cathode voltage. As the current through the tubes "decreases" so does the cathode voltage.

Chris, if R10 was originally 4700 ohms 1/2 watt but you changed R10 to 10K 1/2 watt because someone said their schematic shows R10 as 10K, that is a bad idea! If you changed R10 from 4700 ohms to 10K ohms then the IP meter indications will be wrong. Change R10 back to 4700 ohms 1/2 watt.

Chris, I recommend you tune the 830 up into a dummy load for full output. The IP meter should indicate approximately 225ma and the cathode voltage should be 1.125VDC at full output. If this is what you see but your watt meter shows only 75 watts then I suspect your watt meter is at fault, not the 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Mike--I hate to sit on the side line! Maybe Chris should retrace his steps?
> Problem/Symptoms:
> 1. 75 watts output with 200ma IP........ normal/ok
> 2. Suddenly 50 watts output with 200ma IP........Driver tube? Plate/Screen
> Voltage low? Cathode Resistors increasing in value?
> 3. Suddenly "0" watts output, "0" ma IP, "0" alc, EP 800+............Open
> cathode resistors most likely cause (didnt hear them pop)
>
> Actions:
> 1. Replaced Cathode Resistors.......Back to 50 watts out for 200ma IP
> 2. Replaced R10 (6.8k) with a 10K resistor......Why make this mod? Suspected
> panel meter not reading accurately?
> 3. Measured all tube voltages with 50 watts out and IP reading approx 160
> ma.....Cathode voltage and IP do not compute for 5 ohm resistor

>
> Suggested Actions:
> 1. Make sure voltage readings taken in keydown CW mode. Should not get 50 watts
> out if measuring in USB or LSB with mike keyed.
> 2. Re-measure cathode resistors
> 3. Remove meter multiplier mod and install new 2.7K R6 and 4.7K R10 to restore
> meter circuit to factory as-built configuration
> 4. Re tune rig to 225ma IP and report output power to the group
> 5. Sell rig to Mike or Terry for $50.00!
>
> Mike--dont you just want to fly over and get your hands on this problem! My
> favorite part of the hobby!
>
> 73s Terry
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 8:09:34 AM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
>
> I agree with Terry.
>
> If the cathode resistors are 5 ohms and the 830 tunes up with 220ma showing on
> the IP meter, then the cathode voltage will be approximately 1.125VDC. You can
> determine how the final amplifier is working by monitoring the cathode voltage
> (pins 1 on the final tube sockets).
>
> If the cathode resistors increase in value by only "1" ohm resulting in a
> cathode resistance of 6 ohms and the same 220ma is indicated on the IP meter,
> the cathode voltage will be approximately 1.35VDC instead of approximately
> 1.125VDC.
>
> Example:
> Cathode resistance is 5 ohms
> Final amplifier current at max power output is 220ma
> Cathode voltage is 1.125VDC
>
> E = I x R
>
> or
>
> .220 x 5 = 1.125VDC
>
> Cathode resistance has changed to "6" ohms
> Same final amplifier current, 220ma
> Cathode voltage is now "1.35VDC".

>
> Notice the increase in cathode voltage by an increase of only "1" ohm of cathode
> resistance.
>
> If the final amplifier is showing 160ma and the cathode resistors are within
> tolerance, 5 ohms, then the cathode voltage will be approximately .8VDC (.160 x
> 5 = .8VDC).
>
> If the IP meter indicates 60ma with no RF output, the cathode resistors are
> within tolerance, 5 ohms, the cathode voltage will be approximately .3VDC (.060
> x 5 = .3VDC).
>
> The cathode voltage will tell you a lot of how the final amplifier is working.
>
> 73s
> Mike
> W5RKL
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you
> >
> > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> > current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =
> >
> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said
> > you were getting about 50 watts out. Your screen voltage is OK so if your plate
> >
> > voltage is good then output power you are seeing is correct for how you have
> >the
> >
> > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > multipliers are not right. I think you said you replaced one of them? I am sure
> >
> > someone else will do the calcs and verify my assessment. I dont think there is
>
> > anything wrong with your tubes or power supplies. I would take a look at your
> > meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:41:33 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died

> >
> > Hi Mike and all..
> >
> > Tonight I have done some voltage measurements on the tubes, as follows:- -
> >
> > Pins 1, 4 and 6 are :
> >
> > 0V in RX and 0.417V in TX
> >
> > Pin 3 RX is 242V and in TX it drops to 228V
> >
> > Pin 5 RX is -94.8V and in TX it is -42.2V
> >
> > These are exactly the same for both tubes.
> >
> >
> > Any comments very welcomed:
> >
> > Thanks
> > Chris, ZL1CDP
> >
> >
> >
> > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> >
> > > Chris,
> > >
> > > Have you measured the final tube's screen voltage and compared the voltages
> > >between the two tubes? If not then I recommend you do that.
> > >
> > >
> > > You can't tell how good a tube is working by simply feeling the bulb
> > >temperature. Voltage checks and comparisons between the two final tubes will
> > >tell you more about the final tubes than anything else you can do.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >wrote:
> > > >
> > > > Hi Gordon,
> > > >
> > > > Originally... I was getting around 200mA for around 75w... then it dropped
> >to
> > >
> > >around 50w at 200mA etc.
> > > >
> > > > I have suspected the tubes were on their way out for a while - A friend of

>
> > >mine who helped with a repair said that he thought on one of the tubes was
> > >drawing more current than the other, as one was much hotter than the other.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > >
> > > > > Hi Chris,
> > > > > If one final is lite, the other must be too. The filaments are wired in
> > > > > series.
> > > > > Check the resistors on the Rectifier board to see if any have gone up in
>
> > > > > value or opened.
> > > > > What sort of IP were you showing at 50W out before nothing?
> > > > >
> > > > > Gordon
> > > > >
> > > > >
> > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > >>
> > > > >> Hi All,
> > > > >>
> > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > > > >> The HV reading is still there... looking through the final cage, I can
> > > > >> see one of the tube filaments is light, but can't tell if the other
> > > > >> is... I am suspecting not.
> > > > >>
> > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > >> movement either.
> > > > >>
> > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > >>
> > > > >> Thanks
> > > > >> Chris, ZL1CDP
> > > > >>
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31376. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 14:19:22 UTC
From: w5rkl
Topic: 31320 Message: 31376

Hi Terry,

If the cathode resistors are open, the cathode current path changes from the normal 4 cathode resistors to R6 and R10 series string. This would result in the IP indication, in transmit, to peg the meter full scale ot the right. There doesn't appear to be any indication of this.

Loss of IP current can be caused by the relay on the AF Unit. When the terminals of the AF Unit relay fail, the final tube's bias voltage remains at the "receive" or "standby" level which results in a "zero" IP current indication. This also causes the HV to remain at the receive or standby level as well, approximately 950VDC or so. If both of these indications are true then loss of IP current in transmit is not caused by bad cathode resistors.

R10 in the 830 is 4700 ohms not 6800, unless I missed something.

As I said in my last response, I would tune up into a dummy load for maximum power output, monitor the cathode voltage, and if the IP indications are 225ma and the cathode voltage is 1.125VDC then the final amplifier is producing maximum input power. If this is true then I suspect the watt meter is at fault not the transceiver. Remember, the same "225ma" of IP current is also flowing through the cathode resistors. Therefore, (E = I x R) .225 x 5 = 1.125VDC of cathode voltage. This is assuming the cathode resistors are within 10% tolerance. A higher cathode voltage at full output displaying the same 225ma IP current will indicate one or more of the cathode resistors have changed values.

I believe Chris said cathode resistor R3 was open. If that's true than the cathode resistance is no longer 5 ohms but approximately 6.666 ohms. This will result in a increase in cathode voltage to approximately 1.499VDC instead of 1.125VDC when all 4 cathode resistors are within tolerance.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Mike--I hate to sit on the side line! Maybe Chris should retrace his steps?
> Problem/Symptoms:
> 1. 75 watts output with 200ma IP........ normal/ok
> 2. Suddenly 50 watts output with 200ma IP........Driver tube? Plate/Screen
> Voltage low? Cathode Resistors increasing in value?
> 3. Suddenly "0" watts output, "0" ma IP, "0" alc, EP 800+............Open
> cathode resistors most likely cause (didnt hear them pop)
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> Actions:
> 1. Replaced Cathode Resistors.......Back to 50 watts out for 200ma IP
> 2. Replaced R10 (6.8k) with a 10K resistor......Why make this mod? Suspected
> panel meter not reading accurately?

> 3. Measured all tube voltages with 50 watts out and IP reading approx 160
> ma.....Cathode voltage and IP do not compute for 5 ohm resistor
>
> Suggested Actions:
> 1. Make sure voltage readings taken in keydown CW mode. Should not get 50 watts
> out if measuring in USB or LSB with mike keyed.
> 2. Re-measure cathode resistors
> 3. Remove meter multiplier mod and install new 2.7K R6 and 4.7K R10 to restore
> meter circuit to factory as-built configuration
> 4. Re tune rig to 225ma IP and report output power to the group
> 5. Sell rig to Mike or Terry for $50.00!
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> Mike--dont you just want to fly over and get your hands on this problem! My
> favorite part of the hobby!
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> 73s Terry
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 8:09:34 AM
> Subject: [TS-520_820_530_830] Re: Transmit has died
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>
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> the IP meter, then the cathode voltage will be approximately 1.125VDC. You can
> determine how the final amplifier is working by monitoring the cathode voltage
> (pins 1 on the final tube sockets).
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> If the cathode resistors increase in value by only "1" ohm resulting in a
> cathode resistance of 6 ohms and the same 220ma is indicated on the IP meter,
> the cathode voltage will be approximately 1.35VDC instead of approximately
> 1.125VDC.
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> Example:
> Cathode resistance is 5 ohms
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> Cathode voltage is 1.125VDC
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> E = I x R
>
> or
>
> .220 x 5 = 1.125VDC
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> Cathode resistance has changed to "6" ohms

> Same final amplifier current, 220ma
> Cathode voltage is now "1.35VDC".
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> Notice the increase in cathode voltage by an increase of only "1" ohm of cathode
> resistance.
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> tolerance, 5 ohms, then the cathode voltage will be approximately .8VDC (.160 x
> 5 = .8VDC).
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> If the IP meter indicates 60ma with no RF output, the cathode resistors are
> within tolerance, 5 ohms, the cathode voltage will be approximately .3VDC (.060
> x 5 = .3VDC).
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> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said
> > you were getting about 50 watts out. Your screen voltage is OK so if your plate
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> > someone else will do the calcs and verify my assessment. I dont think there is
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> > Sent: Wed, May 18, 2011 5:41:33 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
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> >
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> > Chris, ZL1CDP
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> >
> > > Chris,
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> > > You can't tell how good a tube is working by simply feeling the bulb
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> > > 73s
> > > Mike
> > > W5RKL
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> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >wrote:
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> > > > Hi Gordon,
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> > > > I have suspected the tubes were on their way out for a while - A friend of
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> > >mine who helped with a repair said that he thought on one of the tubes was
> > >drawing more current than the other, as one was much hotter than the other.
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> > > > Cheers
> > > > Chris
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> > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
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> > > > > Hi Chris,
> > > > > If one final is lite, the other must be too. The filaments are wired in
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> > > > > Check the resistors on the Rectifier board to see if any have gone up in
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> > > > > value or opened.
> > > > > What sort of IP were you showing at 50W out before nothing?
> > > > >
> > > > > Gordon
> > > > >
> > > > >
> > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > >>
> > > > >> Hi All,
> > > > >>
> > > > >> Had my 830 working nicely until Saturday... for some reason I was
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> > > > >> The HV reading is still there... looking through the final cage, I can
> > > > >> see one of the tube filaments is light, but can't tell if the other
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> > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
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> > > > >> Am I right in thinking the tube(s) are likely EOL?
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> > > > >> Chris, ZL1CDP
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31377. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 14:41:35 UTC
From: Terry Wagoner
Topic: 31320 Message: 31377

Hi Mike--That is why I suggested Chris re-trace his steps. It is kind of running together and I may be confusing with another poster? I thought he said he tried a different wattmeter and different coax jumpers? Also, pretty sure he said he replaced a 6800 ohm with a 10k ohm. Yes -it should be a 4700 ohm according to my schematic and experience. If it was a 6800 ohm someone else had modified the meter multiplier circuit. I am a big believer in putting rig back to factory config and going from there. If he has reasonably accurate watt meter and has 50 watts out now, problem cant be too difficult to diagnose. Sure sounds like cathode resistors are not 20 ohms and he is not tuning rig as hard as he believes he is or modified meter circuit is fooling him. Will be interested to see what he finds.

By the way I worked Russia Vlad R4WB last nite around 1030 on 20 meters with pretty noisy conditions. Was able to break pile up with my barefoot TS-830S and a trapped dipole at 25 feet. Got a 5x9+ report. That is a lot of fun. These old "dip and load" rigs are great! Have great day Mike. Terry

---
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 10:19:22 AM
Subject: [TS-520_820_530_830] Re: Transmit has died

Hi Terry,

If the cathode resistors are open, the cathode current path changes from the normal 4 cathode resistors to R6 and R10 series string. This would result in the IP indication, in transmit, to peg the meter full scale ot the right. There doesn't appear to be any indication of this.

Loss of IP current can be caused by the relay on the AF Unit. When the terminals of the AF Unit relay fail, the final tube's bias voltage remains at the "receive" or "standby" level which results in a "zero" IP current indication. This also causes the HV to remain at the receive or standby level as well, approximately 950VDC or so. If both of these indications are true then loss of IP current in transmit is not caused by bad cathode resistors.

R10 in the 830 is 4700 ohms not 6800, unless I missed something.

As I said in my last response, I would tune up into a dummy load for maximum power output, monitor the cathode voltage, and if the IP indications are 225ma and the cathode voltage is 1.125VDC then the final amplifier is producing maximum input power. If this is true then I suspect the watt meter is at fault not the transceiver. Remember, the same "225ma" of IP current is also flowing through the cathode resistors. Therefore, (E = I x R) .225 x 5 = 1.125VDC of cathode voltage. This is assuming the cathode resistors are within 10% tolerance. A higher cathode voltage at full output displaying the same 225ma IP

current will indicate one or more of the cathode resistors have changed values.

I believe Chris said cathode resistor R3 was open. If that's true than the cathode resistance is no longer 5 ohms but approximately 6.666 ohms. This will result in a increase in cathode voltage to approximately 1.499VDC instead of 1.125VDC when all 4 cathode resistors are within tolerance.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Mike--I hate to sit on the side line! Maybe Chris should retrace his steps?
> Problem/Symptoms:
> 1. 75 watts output with 200ma IP........ normal/ok
> 2. Suddenly 50 watts output with 200ma IP........Driver tube? Plate/Screen
> Voltage low? Cathode Resistors increasing in value?
> 3. Suddenly "0" watts output, "0" ma IP, "0" alc, EP 800+.....Open
> cathode resistors most likely cause (didnt hear them pop)
>
> Actions:
> 1. Replaced Cathode Resistors.......Back to 50 watts out for 200ma IP
> 2. Replaced R10 (6.8k) with a 10K resistor......Why make this mod? Suspected
> panel meter not reading accurately?
> 3. Measured all tube voltages with 50 watts out and IP reading approx 160
> ma.....Cathode voltage and IP do not compute for 5 ohm resistor
>
> Suggested Actions:
> 1. Make sure voltage readings taken in keydown CW mode. Should not get 50 watts
>
> out if measuring in USB or LSB with mike keyed.
> 2. Re-measure cathode resistors
> 3. Remove meter multiplier mod and install new 2.7K R6 and 4.7K R10 to restore

> meter circuit to factory as-built configuration
> 4. Re tune rig to 225ma IP and report output power to the group
> 5. Sell rig to Mike or Terry for $50.00!
>
> Mike--dont you just want to fly over and get your hands on this problem! My
> favorite part of the hobby!
>
> 73s Terry
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 8:09:34 AM

> Subject: [TS-520_820_530_830] Re: Transmit has died
>
>
> I agree with Terry.
>
> If the cathode resistors are 5 ohms and the 830 tunes up with 220ma showing on

> the IP meter, then the cathode voltage will be approximately 1.125VDC. You can

> determine how the final amplifier is working by monitoring the cathode voltage

> (pins 1 on the final tube sockets).
>
> If the cathode resistors increase in value by only "1" ohm resulting in a
> cathode resistance of 6 ohms and the same 220ma is indicated on the IP meter,
> the cathode voltage will be approximately 1.35VDC instead of approximately
> 1.125VDC.
>
> Example:
> Cathode resistance is 5 ohms
> Final amplifier current at max power output is 220ma
> Cathode voltage is 1.125VDC
>
> E = I x R
>
> or
>
> .220 x 5 = 1.125VDC
>
> Cathode resistance has changed to "6" ohms
> Same final amplifier current, 220ma
> Cathode voltage is now "1.35VDC".
>
> Notice the increase in cathode voltage by an increase of only "1" ohm of
>cathode
>
> resistance.
>
> If the final amplifier is showing 160ma and the cathode resistors are within
> tolerance, 5 ohms, then the cathode voltage will be approximately .8VDC (.160 x
>
> 5 = .8VDC).
>
> If the IP meter indicates 60ma with no RF output, the cathode resistors are
> within tolerance, 5 ohms, the cathode voltage will be approximately .3VDC (.060
>
> x 5 = .3VDC).
>
> The cathode voltage will tell you a lot of how the final amplifier is working.
>
> 73s

> Mike
> W5RKL
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what
>you
>
> >
> > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> > current. Is that what your IP reading is on the rig panel meter? 80ma x 820v
>=
>
> >
> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said
>
> > you were getting about 50 watts out. Your screen voltage is OK so if your
>plate
>
> >
> > voltage is good then output power you are seeing is correct for how you have

> >the
> >
> > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > multipliers are not right. I think you said you replaced one of them? I am
>sure
>
> >
> > someone else will do the calcs and verify my assessment. I dont think there
>is
>
>
> > anything wrong with your tubes or power supplies. I would take a look at your
>
> > meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:41:33 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Mike and all..

> >
> > Tonight I have done some voltage measurements on the tubes, as follows:- -
> >
> > Pins 1, 4 and 6 are :
> >
> > 0V in RX and 0.417V in TX
> >
> > Pin 3 RX is 242V and in TX it drops to 228V
> >
> > Pin 5 RX is -94.8V and in TX it is -42.2V
> >
> > These are exactly the same for both tubes.
> >
> >
> > Any comments very welcomed:
> >
> > Thanks
> > Chris, ZL1CDP
> >
> >
> >
> > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> >
> > > Chris,
> > >
> > > Have you measured the final tube's screen voltage and compared the voltages
>
> > >between the two tubes? If not then I recommend you do that.
> > >
> > >
> > > You can't tell how good a tube is working by simply feeling the bulb
> > >temperature. Voltage checks and comparisons between the two final tubes will
>
> > >tell you more about the final tubes than anything else you can do.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >wrote:
> > > >
> > > > Hi Gordon,
> > > >
> > > > Originally... I was getting around 200mA for around 75w... then it
>dropped
>
> >to
> > >
> > >around 50w at 200mA etc.

> > > >
> > > > I have suspected the tubes were on their way out for a while - A friend
>of
>
>
> > > >mine who helped with a repair said that he thought on one of the tubes was
> > > >drawing more current than the other, as one was much hotter than the other.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > >
> > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > >
> > > > > > Hi Chris,
> > > > > > If one final is lite, the other must be too. The filaments are wired in
>
> > > > > > series.
> > > > > > Check the resistors on the Rectifier board to see if any have gone up
>in
>
>
> > > > > > value or opened.
> > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > >
> > > > > > Gordon
> > > > > >
> > > > > >
> > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > >>
> > > > > >> Hi All,
> > > > > >>
> > > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > > > > >> The HV reading is still there... looking through the final cage, I can
>
> > > > > >> see one of the tube filaments is light, but can't tell if the other
> > > > > >> is... I am suspecting not.
> > > > > >>
> > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > > >> movement either.
> > > > > >>
> > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > >>
> > > > > >> Thanks
> > > > > >> Chris, ZL1CDP
> > > > > >>
> > > > > >>
> > > > > > >
> > > > > > >

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31378. Re: [TS-520_820_530_830] service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 16:55:38 UTC
From: Joseph Stiles
Topic: 31340 Message: 31378

Greetings group,

TNX to those who put in their 2 cents. The wording about being "self sufficient" was poor. What I meant by that was....I don't want to beg or borrow equipment. I pretty much have "the basics," just need to really learn how to use them. My home town lost it's only electronic store after 40+ years. Anything above the crap that "Radio Shack" sells either has to be mail ordered or I have to drive to Seattle. I want to make sure that when I adjust/service or, otherwise mess with a rig I am keeping it operating within the regulations and good radio practices. Thanks again.....

73's joe wb7uqu

_____
From: AI4WM Bill <ai4wm@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 17, 2011 4:58 PM
Subject: Re: [TS-520_820_530_830] service equip. question

I've not pulled my service manual so I do not know which procedures are referenced that require an 8 ohm dummy load. Generally any non-inductive resistor of the same resistance can be substituted for a dummy load. The power requirement will need to be met. For example if the dummy load is 8 ohms at 5 watts then an 8 ohm non inductive resistor can be used.

The difference in a VTVM and AF VTVM will be the frequency response and a VTVM may not have a dB scale. Generally an AF-VTVM will have logarithmic voltage scales and a dB scale although some may have linear voltage scales. An AF VTVM would be used for DC and AF since any small amount RF will not affect (or minimally affect) the reading(s).

73,

Bill

AI4WM

--- On Mon, 5/16/11, Joseph Stiles <stilesjoseph@...> wrote:

From: Joseph Stiles <stilesjoseph@...>
Subject: [TS-520_820_530_830] service equip. question
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Date: Monday, May 16, 2011, 5:46 PM

Greetings group,

In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):

What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.

Can a regular VTVM be used in place of an AF VTVM?

I am trying to become self sufficient as much as possible

tnx 73's joe wb7uqu

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31379. Re: service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 17:32:12 UTC
From: w5rkl
Topic: 31340 Message: 31379

Bill,

The 8 ohm dummy load is used as an 8 ohm load to the speaker output when monitoring the audio signal with a VTVM.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> Â Â Â Â TNX to those who put in their 2 cents. The wording about being "self sufficient" was poor. What I meant by that was....I don't want to beg or borrow equipment. I pretty much have "the basics,"Â just need to really learn how to use them. My home town lost it's only electronic store after 40+ years. Anything above the crap that "Radio Shack" sells either has to be mail ordered or I have to drive to Seattle. I want to make sure that when I adjust/service or, otherwise mess with a rig I am keeping it operating within the regulations and good radio practices. Thanks again...................
>
> Â Â 73'sÂ Â Â joeÂ Â wb7uqu
>
>
>
> _____
> From: AI4WM Bill <ai4wm@...>
> To: TS-520_820_530_830@...m
> Sent: Tuesday, May 17, 2011 4:58 PM
> Subject: Re: [TS-520_820_530_830] service equip. question
>
>
> Â
> I've not pulled my service manual so I do not know which procedures are referenced that require an 8 ohm dummy load.Â Generally any non-inductive resistor of the same resistance can be substituted for a dummy load.Â The power requirement will need to be met.Â For example if the dummy load is 8 ohms at 5 watts then an 8 ohm non inductive resistor can be used.
>
> The difference in a VTVM and AF VTVM will be the frequency response and a VTVM may not have a dBÂ scale.Â Generally an AF-VTVM will have logarithmic voltage scales and a dB scale although some may have linear voltage scales.Â An AF VTVM would be used for DC and AF since any small amount RF will not affect (or minimally affect) the reading(s).Â
>
> 73,
>

> Bill
>
> AI4WM
>
> --- On Mon, 5/16/11, Joseph Stiles <stilesjoseph@...> wrote:
>
> From: Joseph Stiles <stilesjoseph@...>
> Subject: [TS-520_820_530_830] service equip. question
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Date: Monday, May 16, 2011, 5:46 PM
>
> Â
>
> Greetings group,
>
> Â Â In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):
>
> Â Â Â Â Â Â Â What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.
>
> Â Â Â Â Â Â Â Â Can a regular VTVM be used in place of an AF VTVM?
>
> Â Â Â Â Â Â Â Â Â I am trying to become self sufficient as much as possible
>
> Â Â Â Â Â Â Â Â Â tnxÂ Â Â Â 73'sÂ Â joeÂ Â wb7uqu
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31380. Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 18:47:43 UTC
From: John Davidson
Topic: 31346 Message: 31380

I never have less than 100 W output when tuned up for 200 mA of plate current on the lower bands. Ten meters is always a bit less.
If you can only get 55-60 W, I would suspect .weak tubes or componant failure somewhhere in the PA section.
I turn the carrier control up until the ALC stops the plate current from increasing and then dip the plate again. Gradually increase the loading until you get the 200-220 Ma of plate current and redip the plate (will be just a slight retuning)...
Good luck.

From: Phillip Legate <philliplegate@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 17, 2011 11:04:48 AM
Subject: Re: [TS-520_820_530_830] Value of R10 in the Final Unit - TS-830s

,

My experience with these hybrids using a good 12BY7A driver and good 6146 finals is that with the CW (constant carrier) output into a dummy load is 55-60 Watts at an Ip reading of 200 mA (using the CARRIER control) and with the plate dipped properly. Pushing the plate current any higher may result in blowing the 6 amp fuse.
 > , May 16, 2011, 10:43 PM
> > >

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31381. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 21:04:07 UTC
From: Chris Parnell
Topic: 31320 Message: 31381

Good call Mike, I will double check later today.

I am pretty certain I was in either Tune or CW though when I measured the voltages, but I may be wrong.

Cheers
Chris

On 18/05/2011, at 11:41 PM, w5rkl wrote:

> Hi Chris,
>
> What position was the MODE switch set to when you measured the voltages in transmit? It appears you have the Mode switch set to either LSB or USB.
>
> If the final tube cathode resistors are within tolerance and the final amplifier is tuned up properly for full output (220ma showing on the IP meter), the cathode voltage on the final tubes (pins 1, 4, or 6) will be approximately 1.125VDC.
>
> The transmit cathode voltage (pins 1, 4, and 6) indicates 60ma of idling current flowing in the final tubes, no RF output.
>
> The final tubes are wired in parallel. That's why the voltages are the same on both tubes.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Mike and all..
> >
> > Tonight I have done some voltage measurements on the tubes, as follows:- -
> >
> > Pins 1, 4 and 6 are :
> >
> > 0V in RX and 0.417V in TX
> >
> > Pin 3 RX is 242V and in TX it drops to 228V
> >
> > Pin 5 RX is -94.8V and in TX it is -42.2V
> >
> > These are exactly the same for both tubes.
> >
> >

> > Any comments very welcomed:
> >
> > Thanks
> > Chris, ZL1CDP
> >
> >
> >
> > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> >
> > > Chris,
> > >
> > > Have you measured the final tube's screen voltage and compared the voltages between the two tubes? If not then I recommend you do that.
> > >
> > > You can't tell how good a tube is working by simply feeling the bulb temperature. Voltage checks and comparisons between the two final tubes will tell you more about the final tubes than anything else you can do.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > > >
> > > > Hi Gordon,
> > > >
> > > > Originally... I was getting around 200mA for around 75w... then it dropped to around 50w at 200mA etc.
> > > >
> > > > I have suspected the tubes were on their way out for a while - A friend of mine who helped with a repair said that he thought on one of the tubes was drawing more current than the other, as one was much hotter than the other.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > >
> > > > > Hi Chris,
> > > > > If one final is lite, the other must be too. The filaments are wired in
> > > > > series.
> > > > > Check the resistors on the Rectifier board to see if any have gone up in
> > > > > value or opened.
> > > > > What sort of IP were you showing at 50W out before nothing?
> > > > >
> > > > > Gordon
> > > > >
> > > > >
> > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:

> > > > >>
> > > > >> Hi All,
> > > > >>
> > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > > > >> The HV reading is still there... looking through the final cage, I can
> > > > >> see one of the tube filaments is light, but can't tell if the other
> > > > >> is... I am suspecting not.
> > > > >>
> > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > >> movement either.
> > > > >>
> > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > >>
> > > > >> Thanks
> > > > >> Chris, ZL1CDP
> > > > >>
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31382. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 21:16:06 UTC
From: Chris Parnell
Topic: 31320 Message: 31382

Hi Terry, -

> The external meter is a watt meter-- correct?
>

Yes the external meter is a Wattmeter.

> The 160 ma is the IP reading on your rig meter-- correct?
>
Correct.

> .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> resistors are not actually 5 ohms.
>
Well that;s what the meter on the 830 is telling me Terry... I will check again, but I only just replaced the cathode resistors as one was open, so I replaced all four to be on the safe side.
Once replaced, I checked and they was reading around 5.4 Ohms when in-line, so that should be good.

> I would go back and read the parallel combination of your 4 -20 ohm resistors.
>

I will do this later.

> Maybe you read the color code wrong
> when you replaced them. It is easy to do.
>

No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm resistors... I also measured them before putting them into the final unit. 20 Ohms (give or take) each.

> Also, my schematic shows R10 to be
> 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my multipliers are approx 2/3 ratio.
>

This (I think), is where the problem may lie. - As i stated in my original post about this, I have two different final unit schematics...one shows R10 as a 4.7K resistor, the other shows R10 as a 10K resistor... which is why I asked what the value of R10 should be.... - The R10 resistor that I removed read around 6.7K - I assumed that it was supposed to be 4.7K and reading high, and was about to swap it for another 4.7K that I have, but then saw the second schematic showing R10 as a 10K resistor... confused, so I asked the question on here.

What I may do, is replace the 10K resistor that is now in the R10 position with a 4.7K resistor and see what the meter reads. - Naturally, this will not alter the power out

problem I have.

Just for reference, I follow the K4EAA tune up procedure to the letter, but since my TX died, I have no more than around 55W out and the IP reads low (around 160mA maximum for the maximum power out that I can obtain.... - 55W)

Cheers
Chris

On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:

> Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> resistors are not actually 5 ohms. I would go back and read the parallel
> combination of your 4 -20 ohm resistors. Maybe you read the color code wrong
> when you replaced them. It is easy to do. Also, my schematic shows R10 to be
> 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my multipliers
> are approx 2/3 ratio. I dont know what the panel meter FS is or the internal
> resistance. I suppose it is possible that Kenwood used different meters for
> different production runs but that would be unusual. The pros on here would know
> if they used different meters that required different meter multipliers. If
> your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode resistor.
> Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Wed, May 18, 2011 7:13:29 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Hi Terry,
>
> I am seeing around 160 mA at the highest power out (on an external Meter).
>
> I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10 on
> the final unit).
>
> Thanks
> Chris
>
> Sent from my iPhone
>
> On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
>
> > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you
> >
> > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> > current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =
>
> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said
> > you were getting about 50 watts out. Your screen voltage is OK so if your plate

> >
> > voltage is good then output power you are seeing is correct for how you have
> >the
> >
> > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > multipliers are not right. I think you said you replaced one of them? I am sure
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> > someone else will do the calcs and verify my assessment. I dont think there is
>
> > anything wrong with your tubes or power supplies. I would take a look at your
> > meter multipliers again. Keep at it you will solve this one. 73s Terry K9TW
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:41:33 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Mike and all..
> >
> > Tonight I have done some voltage measurements on the tubes, as follows:- -
> >
> > Pins 1, 4 and 6 are :
> >
> > 0V in RX and 0.417V in TX
> >
> > Pin 3 RX is 242V and in TX it drops to 228V
> >
> > Pin 5 RX is -94.8V and in TX it is -42.2V
> >
> > These are exactly the same for both tubes.
> >
> > Any comments very welcomed:
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> >
> > > Chris,
> > >
> > > Have you measured the final tube's screen voltage and compared the voltages
> > >between the two tubes? If not then I recommend you do that.
> > >
> > >
> > > You can't tell how good a tube is working by simply feeling the bulb
> > >temperature. Voltage checks and comparisons between the two final tubes will
> > >tell you more about the final tubes than anything else you can do.
> > >
> > > 73s

> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> > >wrote:
> > > >
> > > > Hi Gordon,
> > > >
> > > > Originally... I was getting around 200mA for around 75w... then it dropped
> >to
> > >
> > >around 50w at 200mA etc.
> > > >
> > > > I have suspected the tubes were on their way out for a while - A friend of
> >
> > >mine who helped with a repair said that he thought on one of the tubes was
> > >drawing more current than the other, as one was much hotter than the other.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 16/05/2011, at 9:48 AM, n6wk@... wrote:
> > > >
> > > > > Hi Chris,
> > > > > If one final is lite, the other must be too. The filaments are wired in
> > > > > series.
> > > > > Check the resistors on the Rectifier board to see if any have gone up in
> >
> > > > > value or opened.
> > > > > What sort of IP were you showing at 50W out before nothing?
> > > > >
> > > > > Gordon
> > > > >
> > > > >
> > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > >>
> > > > >> Hi All,
> > > > >>
> > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > > > >> The HV reading is still there... looking through the final cage, I can
> > > > >> see one of the tube filaments is light, but can't tell if the other
> > > > >> is... I am suspecting not.
> > > > >>
> > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > >> movement either.
> > > > >>
> > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > >>

> > > > >> Thanks
> > > > >> Chris, ZL1CDP
> > > > >>
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31383. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 21:20:50 UTC
From: Chris Parnell
Topic: 31320 Message: 31383

Hahaha... Terry, that's genius (both the comedy at the end of the email and the logic).

On 19/05/2011, at 12:44 AM, Terry Wagoner wrote:

> Hi Mike--I hate to sit on the side line! Maybe Chris should retrace his steps?
> Problem/Symptoms:
> 1. 75 watts output with 200ma IP........ normal/ok
> 2. Suddenly 50 watts output with 200ma IP........Driver tube? Plate/Screen
> Voltage low? Cathode Resistors increasing in value?
> 3. Suddenly "0" watts output, "0" ma IP, "0" alc, EP 800+.....Open
> cathode resistors most likely cause (didnt hear them pop)
>
> Actions:
> 1. Replaced Cathode Resistors.......Back to 50 watts out for 200ma IP
> 2. Replaced R10 (6.8k) with a 10K resistor......Why make this mod? Suspected
> panel meter not reading accurately?
> 3. Measured all tube voltages with 50 watts out and IP reading approx 160
> ma.....Cathode voltage and IP do not compute for 5 ohm resistor
>
> Suggested Actions:
> 1. Make sure voltage readings taken in keydown CW mode. Should not get 50 watts
> out if measuring in USB or LSB with mike keyed.
> 2. Re-measure cathode resistors
> 3. Remove meter multiplier mod and install new 2.7K R6 and 4.7K R10 to restore
> meter circuit to factory as-built configuration
> 4. Re tune rig to 225ma IP and report output power to the group
> 5. Sell rig to Mike or Terry for $50.00!
>
> Mike--dont you just want to fly over and get your hands on this problem! My
> favorite part of the hobby!
>
> 73s Terry
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 8:09:34 AM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
> I agree with Terry.
>
> If the cathode resistors are 5 ohms and the 830 tunes up with 220ma showing on
> the IP meter, then the cathode voltage will be approximately 1.125VDC. You can
> determine how the final amplifier is working by monitoring the cathode voltage
> (pins 1 on the final tube sockets).

>
> If the cathode resistors increase in value by only "1" ohm resulting in a
> cathode resistance of 6 ohms and the same 220ma is indicated on the IP meter,
> the cathode voltage will be approximately 1.35VDC instead of approximately
> 1.125VDC.
>
> Example:
> Cathode resistance is 5 ohms
> Final amplifier current at max power output is 220ma
> Cathode voltage is 1.125VDC
>
> E = I x R
>
> or
>
> .220 x 5 = 1.125VDC
>
> Cathode resistance has changed to "6" ohms
> Same final amplifier current, 220ma
> Cathode voltage is now "1.35VDC".
>
> Notice the increase in cathode voltage by an increase of only "1" ohm of cathode
> resistance.
>
> If the final amplifier is showing 160ma and the cathode resistors are within
> tolerance, 5 ohms, then the cathode voltage will be approximately .8VDC (.160 x
> 5 = .8VDC).
>
> If the IP meter indicates 60ma with no RF output, the cathode resistors are
> within tolerance, 5 ohms, the cathode voltage will be approximately .3VDC (.060
> x 5 = .3VDC).
>
> The cathode voltage will tell you a lot of how the final amplifier is working.
>
> 73s
> Mike
> W5RKL
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what you
> >
> > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> > current. Is that what your IP reading is on the rig panel meter? 80ma x 820v =
> >
> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said

> > you were getting about 50 watts out. Your screen voltage is OK so if your plate
> >
> > voltage is good then output power you are seeing is correct for how you have
> >the
> >
> > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > multipliers are not right. I think you said you replaced one of them? I am sure
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> > > You can't tell how good a tube is working by simply feeling the bulb
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31384. Re: service equip. question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 21:54:22 UTC
From: w5rkl
Topic: 31340 Message: 31384

Joe,

An 8 ohm 2 watt resistor connected across the receiver's speaker terminals can serve as an 8 ohm "dummy load" for the receiver's audio output.

Any VTVM that can measure "AC" voltage can be used where an "AF VTVM" is called for.

Audio has an "AC Sine Wave" component where the signal, if viewed on an oscilloscope, will look like a circle cut in half with the bottom half swung to the right. That's "1 cycle" or "1 hertz" (abbreviated "HZ"). There are "1,000" hertz in "1 Kilohertz". "Kilo" is "1,000".

RF has the same AC sine wave component.

AC and RF voltages can pass through a capacitor but DC voltage cannot.

You can perform a simple and safe experiment with a receive, signal generator, and a simple disc capacitor, say .01ufd at 50VDC.

First, connect the capacitor in "series" with "positive" speaker wire and the other speaker wire to the receiver's chassis.

Next, turn the calibrator "ON" and tune the VFO for a beat note. Notice you hear the beat note in the speaker even though there is no "direct" connection to the receiver's "positive" speaker connection and the positive speaker wire.

Next, connect the same capacitor in series with the "positive" lead of your signal generator and the receiver's positive antenna terminal. Connect the signal generator's ground to the receiver's ground.

Now, tune the generator to the receiver's frequency and notice the S meter rises. If the signal generator has a built in tone generator, most do, turn the tone generator ON. Notice you hear the signal generator's tone generator in the receiver's speaker.

These 2 simple and safe experiments show you that an AF and RF signal voltages will pass through a capacitor while a DC voltage will not.

You do another simple and safe experiment with a AA battery, the same capacitor, and a speaker. Connect one lead of the capacitor to the batteries positive terminal. Connect the other lead of the capacitor to one of the speaker terminals. Connect the other speaker terminal to the battery's negative terminal. You didn't hear a thing did you? That's because DC cannot flow through a capacitor like AF and RF voltage can. If DC could flow through a capacitor, the instant you connected the negative battery terminal to the speaker terminal you would hear a "pop" but you didn't and, again, that's because DC voltage cannot flow through a capacitor.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> Â Â Â Â TNX to those who put in their 2 cents. The wording about being "self sufficient" was poor. What I meant by that was....I don't want to beg or borrow equipment. I pretty much have "the basics,"Â just need to really learn how to use them. My home town lost it's only electronic store after 40+ years. Anything above the crap that "Radio Shack" sells either has to be mail ordered or I have to drive to Seattle. I want to make sure that when I adjust/service or, otherwise mess with a rig I am keeping it operating within the regulations and good radio practices. Thanks again...................
>
> Â Â 73'sÂ Â Â joeÂ Â wb7uqu
>
>
>
> _____
> From: AI4WM Bill <ai4wm@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, May 17, 2011 4:58 PM
> Subject: Re: [TS-520_820_530_830] service equip. question
>
>
> Â
> I've not pulled my service manual so I do not know which procedures are referenced that require an 8 ohm dummy load.Â Generally any non-inductive resistor of the same resistance can be substituted for a dummy load.Â The power requirement will need to be met.Â For example if the dummy load is 8 ohms at 5 watts then an 8 ohm non inductive resistor can be used.
>
> The difference in a VTVM and AF VTVM will be the frequency response and a VTVM may not have a dBÂ scale.Â Generally an AF-VTVM will have logarithmic voltage scales and a dB scale although some may have linear voltage scales.Â An AF VTVM would be used for DC and AF since any small amount RF will not affect (or minimally affect) the reading(s).Â
>
> 73,
>
> Bill
>
> AI4WM
>
> --- On Mon, 5/16/11, Joseph Stiles <stilesjoseph@...> wrote:
>
> From: Joseph Stiles <stilesjoseph@...>
> Subject: [TS-520_820_530_830] service equip. question
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Date: Monday, May 16, 2011, 5:46 PM
>
> Â
>
> Greetings group,

>
> Â Â In the furtherance of my knowledge base...I need to ask a couple of questions regarding procedures in the service manuals(several models):
>
> Â Â Â Â Â Â Â What can be used/ substituted for the 8 ohm "dummy load" used for several procedures.
>
> Â Â Â Â Â Â Â Â Can a regular VTVM be used in place of an AF VTVM?
>
> Â Â Â Â Â Â Â Â Â I am trying to become self sufficient as much as possible
>
> Â Â Â Â Â Â Â Â Â tnxÂ Â Â Â 73'sÂ Â joeÂ Â wb7uqu
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31385. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 21:56:52 UTC
From: Terry Wagoner
Topic: 31320 Message: 31385

OK Chris not questioning your competence just trying to cover all bases. It is easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well within tolerance for your new cathode resistors. So if your .417 volts across the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of plate current and not 160 ma. That is Ohms law and would account for your low output power. Unless of course the .417 wasnt read keydown in CW mode. I will back out now as you are getting lots of help and Mike and others are more experienced than I am. I will read with interest as I want to learn from this.
73s Terry

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 5:16:06 PM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Terry, -

> The external meter is a watt meter-- correct?
>

Yes the external meter is a Wattmeter.

> The 160 ma is the IP reading on your rig meter-- correct?
>
Correct.

> .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
>current. Unless your 5 ohm cathode
>
> resistors are not actually 5 ohms.
>
Well that;s what the meter on the 830 is telling me Terry... I will check again, but I only just replaced the cathode resistors as one was open, so I replaced all four to be on the safe side.
Once replaced, I checked and they was reading around 5.4 Ohms when in-line, so that should be good.

> I would go back and read the parallel combination of your 4 -20 ohm resistors.
>

I will do this later.

> Maybe you read the color code wrong
> when you replaced them. It is easy to do.
>

No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm resistors... I also measured them before putting them into the final unit. 20 Ohms (give or take) each.

> Also, my schematic shows R10 to be
> 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my multipliers
>are approx 2/3 ratio.
>

This (I think), is where the problem may lie. - As i stated in my original post about this, I have two different final unit schematics...one shows R10 as a 4.7K resistor, the other shows R10 as a 10K resistor... which is why I asked what the value of R10 should be.... - The R10 resistor that I removed read around 6.7K - I assumed that it was supposed to be 4.7K and reading high, and was about to swap it for another 4.7K that I have, but then saw the second schematic showing R10 as a 10K resistor... confused, so I asked the question on here.

What I may do, is replace the 10K resistor that is now in the R10 position with a 4.7K resistor and see what the meter reads. - Naturally, this will not alter the power out problem I have.

Just for reference, I follow the K4EAA tune up procedure to the letter, but since my TX died, I have no more than around 55W out and the IP reads low (around 160mA maximum for the maximum power out that I can obtain.... - 55W)

Cheers
Chris

On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:

> Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> resistors are not actually 5 ohms. I would go back and read the parallel
> combination of your 4 -20 ohm resistors. Maybe you read the color code wrong
> when you replaced them. It is easy to do. Also, my schematic shows R10 to be
> 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my multipliers

> are approx 2/3 ratio. I dont know what the panel meter FS is or the internal
> resistance. I suppose it is possible that Kenwood used different meters for
> different production runs but that would be unusual. The pros on here would
>know
>
> if they used different meters that required different meter multipliers. If
> your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode resistor.
> Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Wed, May 18, 2011 7:13:29 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>

> Hi Terry,
>
> I am seeing around 160 mA at the highest power out (on an external Meter).
>
> I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10
>on
>
> the final unit).
>
> Thanks
> Chris
>
> Sent from my iPhone
>
> On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
>
> > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what
>you
>
> >
> > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
> > current. Is that what your IP reading is on the rig panel meter? 80ma x 820v
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>
>
> > 68 watts x 65% efficiency = 45 watts key down output power. I think you said

> > you were getting about 50 watts out. Your screen voltage is OK so if your
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> > voltage is good then output power you are seeing is correct for how you have

> >the
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> > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > multipliers are not right. I think you said you replaced one of them? I am
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> > Sent: Wed, May 18, 2011 5:41:33 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
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> > Any comments very welcomed:
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> > Thanks
> > Chris, ZL1CDP
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> > On 16/05/2011, at 10:34 AM, w5rkl wrote:
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> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
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> > > > I have suspected the tubes were on their way out for a while - A friend
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> > >mine who helped with a repair said that he thought on one of the tubes was
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> > > > > Gordon
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> > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
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Yahoo! Groups Links

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31386. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 22:05:14 UTC
From: Chris Parnell
Topic: 31320 Message: 31386

Hi Terry, not reading your comments as a question of my competence at all.!! ;-)

I'm relatively new to the Hybrid scene, so need all of the guidance I can get!! - you are doing a great job of helping, so please don't stop now!.

Cheers
Chris

On 19/05/2011, at 9:56 AM, Terry Wagoner wrote:

> OK Chris not questioning your competence just trying to cover all bases. It is
> easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
> within tolerance for your new cathode resistors. So if your .417 volts across
> the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> plate current and not 160 ma. That is Ohms law and would account for your low
> output power. Unless of course the .417 wasnt read keydown in CW mode. I will
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> experienced than I am. I will read with interest as I want to learn from this.
> 73s Terry
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> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:16:06 PM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
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> Hi Terry, -
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> Correct.
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> Well that;s what the meter on the 830 is telling me Terry... I will check again,
> but I only just replaced the cathode resistors as one was open, so I replaced
> all four to be on the safe side.
> Once replaced, I checked and they was reading around 5.4 Ohms when in-line, so

> that should be good.
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> > I would go back and read the parallel combination of your 4 -20 ohm resistors.
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> > Maybe you read the color code wrong
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> What I may do, is replace the 10K resistor that is now in the R10 position with
> a 4.7K resistor and see what the meter reads. - Naturally, this will not alter
> the power out problem I have.
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> Just for reference, I follow the K4EAA tune up procedure to the letter, but
> since my TX died, I have no more than around 55W out and the IP reads low
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> > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > >
> > > > Chris,
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31387. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-18 22:51:52 UTC
From: w5rkl
Topic: 31320 Message: 31387

Chris and others,

The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K. Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model has "AM" mode which the TS-830S does not have.

Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at full output.

Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within tolerance.

Using ohms law, you can determine the voltage at the junction of R6 and R10 which is fed to the meter when the meter switch is set to IP in transmit mode. The following examples assume the 830 is producing a stable full carrier output in CW mode, not sideband. Sideband will cause the cathode voltage to "vary" because of the variable frequencies in the audio applied to the balance modulator which causes the RF power to vary based on the speech amplifier's output.

So, we first have to determine the current through R6 and R10. We do this because we have 2 of the required values, Resistance and voltage, but we don't have the 3rd, the current. To get the current we use ohms law, I = E / R.

Therefore, with 1.125VDC applied to the series string of R6 and R10, the current through the string will be:

1.125 / 7400 = .000152027

Now to determine the voltage drop across R6 we use ohms law again,

E = I x R

.000152027 x 2700 = .410472VDC

The remaining .714527VDC will be dropped across R10.

.000152027 x 4700 = .714527VDC

I rounded off the last digit "6" to "7" since the next digit after "6" is "9".

Are we sure this is correct? We can determine this by adding both voltage drops, .410472 and .714527 together. If they equal the source voltage of "1.125VDC" then we have done our math right and .410472VDC is the correct voltage drop across R6.

.410472 + .714527 = 1.12499997VDC

Close enough for Government work so our math is right.

Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.

First, we need the total resistance which is 12.7K,

2700 + 10000 = 12700

Next, we need to determine the current through R6 and R10 which is

I = E / R

or

1.125 / 12700 = .0000885826

Next, we determine the voltage drop across R6, which is 2.7K.

E = I x R

.0000885826 x 2700 = .239173

Again, the remaining voltage is dropped across R10 which is now 10K

.0000885826 x 10000 = .885826VDC

Check out math;

.239173 + .885826 = 1.124999VDC

So we are correct in our calculations. But, there is a difference.

Notice the different voltage drop across R6 with R10 being 10K. That's a difference of

.410472 - .239173 = .171254VDC

That may not seem like a lot but it can result in an erroneous IP meter indication.

If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be 2700, the meter would be looking at a different voltage drop across R6. Try it to see what you get.

Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt, both within tolerance of 10%. This will make the IP meter display the correct cathode current.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> OK Chris not questioning your competence just trying to cover all bases. It is
> easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
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> > > > > > >
> > > > > > >
> > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > >>
> > > > > > >> Hi All,
> > > > > > >>
> > > > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > > > >> struggling to get above 50W on tune up and then suddenly nothing out.
> > > > > > >> The HV reading is still there... looking through the final cage, I can
> >
> > > > > > >> see one of the tube filaments is light, but can't tell if the other
> > > > > > >> is... I am suspecting not.
> > > > > > >>
> > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > > > >> movement either.
> > > > > > >>
> > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > >>
> > > > > > >> Thanks
> > > > > > >> Chris, ZL1CDP
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31388. ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 00:16:37 UTC
From: BIII
Topic: 15524 Message: 31388

Hello to all,
Just received my 820 today and overall I like the radio...sounds good looks good and man its heavy...I have been using a pair of drake twins R4,T4x...which are really nice. just wanted to get a kenwood to use everyday....
my only problem so far is with the plate tuning...mine doesn't seem to line up with the band I am on..ie..when I dip the plate on 7mhz the plate tuning
indicated 3.5mhz...when I dip 14mhz its showing the 7mhz section...is this just an adjustment??? (I am tuning into a dummy load)
73
Bill

31389. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 00:37:15 UTC
From: Terry Wagoner
Topic: 31320 Message: 31389

Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop across R10 for full scale deflection. That equates to approx .0286 vdc per meter division across R10. The more useful measure would be the drop across the cathode resistors. With 350 ma being indicated full scale reading that equates to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter. So if you want to know how much drop you should see across your 5 ohm cathode resistors just multiply the indicated number of graduations x .05v. For example: 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I cant work with all the decimal points that you can! Thanks for explaining that the different schematic and meter multipliers is for the 830M. Havent used ohms law this much since I told my professor I would rather take a sharp stick in the eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 6:51:52 PM
Subject: [TS-520_820_530_830] Re: Transmit has died

Chris and others,

The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K. Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model has "AM" mode which the TS-830S does not have.

Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at full output.

Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within tolerance.

Using ohms law, you can determine the voltage at the junction of R6 and R10 which is fed to the meter when the meter switch is set to IP in transmit mode. The following examples assume the 830 is producing a stable full carrier output in CW mode, not sideband. Sideband will cause the cathode voltage to "vary" because of the variable frequencies in the audio applied to the balance modulator which causes the RF power to vary based on the speech amplifier's output.

So, we first have to determine the current through R6 and R10. We do this because we have 2 of the required values, Resistance and voltage, but we don't have the 3rd, the current. To get the current we use ohms law, I = E / R.

Therefore, with 1.125VDC applied to the series string of R6 and R10, the current through the string will be:

1.125 / 7400 = .000152027

Now to determine the voltage drop across R6 we use ohms law again,

E = I x R

.000152027 x 2700 = .410472VDC

The remaining .714527VDC will be dropped across R10.

.000152027 x 4700 = .714527VDC

I rounded off the last digit "6" to "7" since the next digit after "6" is "9".

Are we sure this is correct? We can determine this by adding both voltage drops, .410472 and .714527 together. If they equal the source voltage of "1.125VDC" then we have done our math right and .410472VDC is the correct voltage drop across R6.

.410472 + .714527 = 1.12499997VDC

Close enough for Government work so our math is right.

Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.

First, we need the total resistance which is 12.7K,

2700 + 10000 = 12700

Next, we need to determine the current through R6 and R10 which is

I = E / R

or

1.125 / 12700 = .0000885826

Next, we determine the voltage drop across R6, which is 2.7K.

E = I x R

.0000885826 x 2700 = .239173

Again, the remaining voltage is dropped across R10 which is now 10K

.0000885826 x 10000 = .885826VDC

Check out math;

.239173 + .885826 = 1.124999VDC

So we are correct in our calculations. But, there is a difference.

Notice the different voltage drop across R6 with R10 being 10K. That's a difference of

.410472 - .239173 = .171254VDC

That may not seem like a lot but it can result in an erroneous IP meter indication.

If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be 2700, the meter would be looking at a different voltage drop across R6. Try it to see what you get.

Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt, both within tolerance of 10%. This will make the IP meter display the correct cathode current.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> OK Chris not questioning your competence just trying to cover all bases. It is
>
> easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
> within tolerance for your new cathode resistors. So if your .417 volts across
> the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> plate current and not 160 ma. That is Ohms law and would account for your low
> output power. Unless of course the .417 wasnt read keydown in CW mode. I will
> back out now as you are getting lots of help and Mike and others are more
> experienced than I am. I will read with interest as I want to learn from this.

> 73s Terry
>
>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:16:06 PM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Hi Terry, -
>
> > The external meter is a watt meter-- correct?
> >
>
> Yes the external meter is a Wattmeter.
>
> > The 160 ma is the IP reading on your rig meter-- correct?
> >
> Correct.
>
> > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
> >current. Unless your 5 ohm cathode
> >
> > resistors are not actually 5 ohms.

> >
> Well that;s what the meter on the 830 is telling me Terry... I will check
>again,
>
> but I only just replaced the cathode resistors as one was open, so I replaced
> all four to be on the safe side.
> Once replaced, I checked and they was reading around 5.4 Ohms when in-line, so

> that should be good.
>
> > I would go back and read the parallel combination of your 4 -20 ohm
>resistors.
> >
>
> I will do this later.
>
> > Maybe you read the color code wrong
> > when you replaced them. It is easy to do.
> >
>
> No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm
> resistors... I also measured them before putting them into the final unit. 20
> Ohms (give or take) each.
>
> > Also, my schematic shows R10 to be
> > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
>multipliers
>
> >are approx 2/3 ratio.
> >
>
> This (I think), is where the problem may lie. - As i stated in my original post
>
> about this, I have two different final unit schematics...one shows R10 as a
>4.7K
>
> resistor, the other shows R10 as a 10K resistor... which is why I asked what
>the
>
> value of R10 should be.... - The R10 resistor that I removed read around 6.7K -
>
> I assumed that it was supposed to be 4.7K and reading high, and was about to
> swap it for another 4.7K that I have, but then saw the second schematic showing
>
> R10 as a 10K resistor... confused, so I asked the question on here.
>
> What I may do, is replace the 10K resistor that is now in the R10 position with
>
> a 4.7K resistor and see what the meter reads. - Naturally, this will not alter

> the power out problem I have.
>
> Just for reference, I follow the K4EAA tune up procedure to the letter, but
> since my TX died, I have no more than around 55W out and the IP reads low
> (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
>
>
> Cheers
> Chris
>
>
> On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
>
> > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > resistors are not actually 5 ohms. I would go back and read the parallel
> > combination of your 4 -20 ohm resistors. Maybe you read the color code wrong

> > when you replaced them. It is easy to do. Also, my schematic shows R10 to be

> > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
>multipliers
>
>
> > are approx 2/3 ratio. I dont know what the panel meter FS is or the internal

> > resistance. I suppose it is possible that Kenwood used different meters for
> > different production runs but that would be unusual. The pros on here would
> >know
> >
> > if they used different meters that required different meter multipliers. If
> > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode resistor.
>
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Sent: Wed, May 18, 2011 7:13:29 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Terry,
> >
> > I am seeing around 160 mA at the highest power out (on an external Meter).
> >
> > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10
>
> >on
> >
> > the final unit).

> >
> > Thanks
> > Chris
> >
> > Sent from my iPhone
> >
> > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
> >
> > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what
>
> >you
> >
> > >
> > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate

> > > current. Is that what your IP reading is on the rig panel meter? 80ma x
>820v
>
> >=
> >
> >
> > > 68 watts x 65% efficiency = 45 watts key down output power. I think you
>said
>
>
> > > you were getting about 50 watts out. Your screen voltage is OK so if your
> >plate
> >
> > >
> > > voltage is good then output power you are seeing is correct for how you
>have
>
>
> > >the
> > >
> > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > multipliers are not right. I think you said you replaced one of them? I am

> >sure
> >
> > >
> > > someone else will do the calcs and verify my assessment. I dont think there
>
> >is
> >
> >
> > > anything wrong with your tubes or power supplies. I would take a look at
>your
>
> >
> > > meter multipliers again. Keep at it you will solve this one. 73s Terry

K9TW
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Hi Mike and all..
> > >
> > > Tonight I have done some voltage measurements on the tubes, as follows:- -

> > >
> > > Pins 1, 4 and 6 are :
> > >
> > > 0V in RX and 0.417V in TX
> > >
> > > Pin 3 RX is 242V and in TX it drops to 228V
> > >
> > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > >
> > > These are exactly the same for both tubes.
> > >
> > > Any comments very welcomed:
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > >
> > > > Chris,
> > > >
> > > > Have you measured the final tube's screen voltage and compared the
>voltages
>
> >
> > > > >between the two tubes? If not then I recommend you do that.
> > > > >
> > > > >
> > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > >temperature. Voltage checks and comparisons between the two final tubes
>will
>
> >
> > > > >tell you more about the final tubes than anything else you can do.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >

> > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >
> > > >wrote:
> > > > >
> > > > > Hi Gordon,
> > > > >
> > > > > Originally... I was getting around 200mA for around 75w... then it
> >dropped
> >
> > >to
> > >
> > > >around 50w at 200mA etc.
> > > > >
> > > > > I have suspected the tubes were on their way out for a while - A friend
> >
> >of
> >
> >
> > > >mine who helped with a repair said that he thought on one of the tubes was
> >
> > > >drawing more current than the other, as one was much hotter than the
>other.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > >
> > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > >
> > > > > > Hi Chris,
> > > > > > If one final is lite, the other must be too. The filaments are wired
>in
> >
> >
> > > > > > series.
> > > > > > Check the resistors on the Rectifier board to see if any have gone up
> >
> >in
> >
> >
> > > > > > value or opened.
> > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > >
> > > > > > Gordon
> > > > > >
> > > > > >
> > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > >>
> > > > > > Hi All,

> > > > > >>
> > > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > > >> struggling to get above 50W on tune up and then suddenly nothing
>out.
> > > > > >> The HV reading is still there... looking through the final cage, I
>can
>
> >
> > > > > > >> see one of the tube filaments is light, but can't tell if the other

> > > > > > >> is... I am suspecting not.
> > > > > > >>
> > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > > > >> movement either.
> > > > > > >>
> > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > >>
> > > > > > >> Thanks
> > > > > > >> Chris, ZL1CDP
> > > > > > >>
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31390. RE: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 01:24:16 UTC
From: Rick Hicks
Topic: 15524 Message: 31390

I have the same experience with mine and looked carefully at the band indicators on the plate dial. I have concluded the indicators refer to range bands around the dial, rather than precious points. The 80 meter range for example usually tunes so that the point on the range is closer to the straight up (12 O'clock) position than the tune point for the 40 meter band (which is not the same range indicator.) I hope this makes some sense to you. It took me a while to figure it out on my TS 540 SP.

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of BIll
Sent: Wednesday, May 18, 2011 5:17 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] ts 820s

Hello to all,
Just received my 820 today and overall I like the radio...sounds good looks good and man its heavy...I have been using a pair of drake twins R4,T4x...which are really nice. just wanted to get a kenwood to use everyday....
my only problem so far is with the plate tuning...mine doesn't seem to line up with the band I am on..ie..when I dip the plate on 7mhz the plate tuning
indicated 3.5mhz...when I dip 14mhz its showing the 7mhz section...is this just an adjustment??? (I am tuning into a dummy load)
73
Bill

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11

[Non-text portions of this message have been removed]

31391. RE: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 01:31:51 UTC
From: Rick Hicks
Topic: 15524 Message: 31391

(or precise points if you prefer.you choose.)

I have the same experience with mine and looked carefully at the band indicators on the plate dial. I have concluded the indicators refer to range bands around the dial, rather than precious points. The 80 meter range for example usually tunes so that the point on the range is closer to the straight up (12 O'clock) position than the tune point for the 40 meter band (which is not the same range indicator.) I hope this makes some sense to you. It took me a while to figure it out on my TS 540 SP.

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of BIll
Sent: Wednesday, May 18, 2011 5:17 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] ts 820s

Hello to all,
Just received my 820 today and overall I like the radio...sounds good looks good and man its heavy...I have been using a pair of drake twins R4,T4x...which are really nice. just wanted to get a kenwood to use everyday....
my only problem so far is with the plate tuning...mine doesn't seem to line up with the band I am on..ie..when I dip the plate on 7mhz the plate tuning
indicated 3.5mhz...when I dip 14mhz its showing the 7mhz section...is this just an adjustment??? (I am tuning into a dummy load)
73
Bill

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11

[Non-text portions of this message have been removed]

31392. Re: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 01:27:40 UTC
From: BIll
Topic: 15524 Message: 31392

Rick, yes it sort of makes sense, but it would seem like it should show
an indication of around 7mhz when tuning in the 7 mhz band...
Bill
On 5/18/2011 9:24 PM, Rick Hicks wrote:
>
> I have the same experience with mine and looked carefully at the band
> indicators on the plate dial. I have concluded the indicators refer to
> range bands around the dial, rather than precious points. The 80 meter
> range for example usually tunes so that the point on the range is
> closer to
> the straight up (12 O'clock) position than the tune point for the 40 meter
> band (which is not the same range indicator.) I hope this makes some sense
> to you. It took me a while to figure it out on my TS 540 SP.
>
> Rick KF7JFU
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of BIll
> Sent: Wednesday, May 18, 2011 5:17 PM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] ts 820s
>
> Hello to all,
> Just received my 820 today and overall I like the radio...sounds good
> looks good and man its heavy...I have been using a pair of drake twins
> R4,T4x...which are really nice. just wanted to get a kenwood to use
> everyday....
> my only problem so far is with the plate tuning...mine doesn't seem to
> line up with the band I am on..ie..when I dip the plate on 7mhz the
> plate tuning
> indicated 3.5mhz...when I dip 14mhz its showing the 7mhz section...is
> this just an adjustment??? (I am tuning into a dummy load)
> 73
> Bill
>
> _____
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11
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31393. Re: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 01:37:46 UTC
From: mac.haszard
Topic: 31206 Message: 31393

Please keep me appraised of where and when too.

My 520s yearns to converse with its kin...

Mac / K6OVI

On 12 May 2011, at 11:49 PM, Garrett, Russ wrote:

> I'm in too.
> Russ
> Kd7mpk
> ------------------------------
> Sent from my BlackBerry Wireless Handheld
>
>
>
> Russ Garrett | Attorney
> Bullivant Houser Bailey PC | 805 Broadway St. | Suite 400 |
> Vancouver, WA 98660-3310
> T 360.737.3363 | F 360.395.8504 | russ.garrett@bullivant.com
> Seattle . Vancouver . Portland . San Francisco . Las Vegas
>
>
> _____
>
> From: TS-520_820_530_830@...m <TS-520_820_530_830@yahoogroups.com
> >
> To: TS-520_820_530_830@yahoogroups.com <TS-520_820_530_830@yahoogroups.com
> >
> Sent: Thu May 12 20:45:19 2011
> Subject: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?
>
>
>
>
>
> Well, it looks like we got a pretty good number of folks that are in
> for the Hybrid Net, just need to determine where and when...unless
> that's already been determined and I missed that info.
> Bob, KD5MHQ
>
> --- On Wed, 5/11/11, churchguy_12901 <churchguy_12901@...
<mailto:churchguy_12901%40yahoo.com
> > > wrote:
>
> From: churchguy_12901 <churchguy_12901@... <mailto:churchguy_12901%40yahoo.com
> > >

> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com
> >
> Date: Wednesday, May 11, 2011, 5:17 PM
>
>
>
> COUNT ME IN, Mike w2waw
>
> --- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com
> > , "roberteleazer@..." <roberteleazer@...> wrote:
>
> >
>
> > Do any of y'all know if there is a Kenwood Hybrids Net that meets
> regularly on the HF bands?
>
> >
>
> > If not, maybe we ought to start one.
>
> >
>
> > Robert
>
> > WB5WSV
>
> >
>
> [Non-text portions of this message have been removed]
>
>
>
>
>
> mail.bullivant.com made the following annotations
> ---
> Please be advised that, unless expressly stated otherwise, any U.S.
> federal tax advice contained in this e-mail, including attachments,
> is not intended to be used by any person for the purpose of avoiding
> any penalties that may be imposed by the Internal Revenue Service.
>
> ---
>
>
> [Non-text portions of this message have been removed]
>
>
>

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31394. Re: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 01:54:04 UTC
From: David Rust
Topic: 15524 Message: 31394

Rick, yes it sort of makes sense, but it would seem like it should show
an indication of around 7mhz when tuning in the 7 mhz band...
Bill

None of mine were ever real close. Tune for the peak with the grid drive and the dip with the plate tuning, and don't worry about what the dial says. If it makes you feel better you can slip the pointer around to the proper position, but it doesn't change anything.
Dave

[Non-text portions of this message have been removed]

31395. RE: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 02:11:38 UTC
From: Phillip Legate
Topic: 15524 Message: 31395

The plate Tune is only a guide and wasn't intended to point to a specific frequencies.

Much depends on the condition of the finals and the impedance of the load you are tuning into.

Also, there may be some interaction between the Load control and the plate pointer.

Dip the plate when tuning up on a dummy load at a specific frequencie at around 100 mA Ip. And then retune at low power (Carrier control 10 to 25%) to your antenna. Use short key-downs when tuning. Always monitor Ip when tuning to save your finals.

The 820 is great rig. --- On Wed, 5/18/11, Rick Hicks <rick@...> wrote:

From: Rick Hicks <rick@...>
Subject: RE: [TS-520_820_530_830] ts 820s
To: TS-520_820_530_830@yahoogroups.com
Date: Wednesday, May 18, 2011, 8:31 PM

(or precise points if you prefer.you choose.)

I have the same experience with mine and looked carefully at the band indicators on the plate dial. I have concluded the indicators refer to range bands around the dial, rather than precious points. The 80 meter range for example usually tunes so that the point on the range is closer to the straight up (12 O'clock) position than the tune point for the 40 meter band (which is not the same range indicator.) I hope this makes some sense to you. It took me a while to figure it out on my TS 540 SP.

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
[mailto:TS-520_820_530_830@...m
<mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of BIll
Sent: Wednesday, May 18, 2011 5:17 PM
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: [TS-520_820_530_830] ts 820s

Hello to all,
Just received my 820 today and overall I like the radio...sounds good looks good and man its heavy...I have been using a pair of drake twins R4,T4x...which are really nice. just wanted to get a kenwood to use everyday....
my only problem so far is with the plate tuning...mine doesn't seem to line up with the band I am on..ie..when I dip the plate on 7mhz the plate tuning

indicated 3.5mhz...when I dip 14mhz its showing the 7mhz section...is
this just an adjustment??? (I am tuning into a dummy load)
73
Bill

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11

[Non-text portions of this message have been removed]

No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3645 - Release Date: 05/18/11

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31396. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 04:00:38 UTC
From: Chris Parnell
Topic: 31320 Message: 31396

Hi Terry & Mike... thanks for all of the info

Well, I am not sure what is happening with my 830s. - I went home at lunch today and changed the 10K resistor for a 4.7K as recommended.
I tested the cathode resistance and it is 5.3Ohms

I really am wondering if there is an alignment or tube / driver issue.. I am getting VERY ODD intermittent results... i.e

Tune up procedure:
? USB, IP - Key rig and Meter shows IP of 60mA , which we know is good.

? Flick to Tune position
? Set the load control to minimum - adjust plate control for band

? Set to ALC, turn carrier to around 1/2 to 3/4 control
? Flick SEND switch and peak drive control

Symptom:
OK - here is where I start to see problems - Sometimes I get the meter pegging (even when I reduce the carrier to zero it doesn't alter).... other times the ALC goes up to around half of the meter reading (which is just above the ALC deflection scale)... one thing that I did notice is that altering the Drive control makes no difference at all to the reading.

? Switch meter to IP, Flick Send Switch and use the Plate control to dip the meter

Symptom:
Again I appear to be having intermittent issues here where IF I HAVE enough IP reading, I can dip the meter with the Plate control, but often I have such a low IP reading at this point in time it's hard to see.

etc etc...

As a very quick test I tuned for maximum Power out on my external meter (which is fine by the way, I tested it on another radio), and again it will give me around 55W (when lucky)... the IP reading around 80mA - 110mA now (which is more in line having swapped the 10K resistor for 4.7K).

When I get time later tonight, I will have to do some voltage readings (Again) :(- Any other suggestions?

Thanks
Chris Parnell

On 19/05/2011, at 12:37 PM, Terry Wagoner wrote:

> Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop
> across R10 for full scale deflection. That equates to approx .0286 vdc per meter

> division across R10. The more useful measure would be the drop across the
> cathode resistors. With 350 ma being indicated full scale reading that equates
> to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter.
> So if you want to know how much drop you should see across your 5 ohm cathode
> resistors just multiply the indicated number of graduations x .05v. For example:
> 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I
> cant work with all the decimal points that you can! Thanks for explaining that
> the different schematic and meter multipliers is for the 830M. Havent used ohms
> law this much since I told my professor I would rather take a sharp stick in the
> eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry
>
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 6:51:52 PM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
> Chris and others,
>
> The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K.
> Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model
> has "AM" mode which the TS-830S does not have.
>
> Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at
> full output.
>
> Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within
> tolerance.
>
> Using ohms law, you can determine the voltage at the junction of R6 and R10
> which is fed to the meter when the meter switch is set to IP in transmit mode.
> The following examples assume the 830 is producing a stable full carrier output
> in CW mode, not sideband. Sideband will cause the cathode voltage to "vary"
> because of the variable frequencies in the audio applied to the balance
> modulator which causes the RF power to vary based on the speech amplifier's
> output.
>
> So, we first have to determine the current through R6 and R10. We do this
> because we have 2 of the required values, Resistance and voltage, but we don't
> have the 3rd, the current. To get the current we use ohms law, I = E / R.
>
> Therefore, with 1.125VDC applied to the series string of R6 and R10, the current
> through the string will be:
>
> 1.125 / 7400 = .000152027
>
> Now to determine the voltage drop across R6 we use ohms law again,
>
> E = I x R
>
> .000152027 x 2700 = .410472VDC

>
> The remaining .714527VDC will be dropped across R10.
>
> .000152027 x 4700 = .714527VDC
>
> I rounded off the last digit "6" to "7" since the next digit after "6" is "9".
>
> Are we sure this is correct? We can determine this by adding both voltage drops,
> .410472 and .714527 together. If they equal the source voltage of "1.125VDC"
> then we have done our math right and .410472VDC is the correct voltage drop
> across R6.
>
> .410472 + .714527 = 1.12499997VDC
>
> Close enough for Government work so our math is right.
>
> Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.
>
> First, we need the total resistance which is 12.7K,
>
> 2700 + 10000 = 12700
>
> Next, we need to determine the current through R6 and R10 which is
>
> I = E / R
>
> or
>
> 1.125 / 12700 = .0000885826
>
> Next, we determine the voltage drop across R6, which is 2.7K.
>
> E = I x R
>
> .0000885826 x 2700 = .239173
>
> Again, the remaining voltage is dropped across R10 which is now 10K
>
> .0000885826 x 10000 = .885826VDC
>
> Check out math;
>
> .239173 + .885826 = 1.124999VDC
>
> So we are correct in our calculations. But, there is a difference.
>
> Notice the different voltage drop across R6 with R10 being 10K. That's a
> difference of
>
> .410472 - .239173 = .171254VDC

>
> That may not seem like a lot but it can result in an erroneous IP meter
> indication.
>
> If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be
> 2700, the meter would be looking at a different voltage drop across R6. Try it
> to see what you get.
>
> Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt, both
> within tolerance of 10%. This will make the IP meter display the correct cathode
> current.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > OK Chris not questioning your competence just trying to cover all bases. It is
> >
> > easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
> > within tolerance for your new cathode resistors. So if your .417 volts across
> > the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> > plate current and not 160 ma. That is Ohms law and would account for your low
> > output power. Unless of course the .417 wasnt read keydown in CW mode. I will
> > back out now as you are getting lots of help and Mike and others are more
> > experienced than I am. I will read with interest as I want to learn from this.
>
> > 73s Terry
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:16:06 PM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Terry, -
> >
> > > The external meter is a watt meter-- correct?
> > >
> >
> > Yes the external meter is a Wattmeter.
> >
> > > The 160 ma is the IP reading on your rig meter-- correct?
> > >
> > Correct.
> >
> > > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate

> > >current. Unless your 5 ohm cathode
> > >
> > > resistors are not actually 5 ohms.
> > >
> > Well that;s what the meter on the 830 is telling me Terry... I will check
> >again,
> >
> > but I only just replaced the cathode resistors as one was open, so I replaced
> > all four to be on the safe side.
> > Once replaced, I checked and they was reading around 5.4 Ohms when in-line, so
>
> > that should be good.
> >
> > > I would go back and read the parallel combination of your 4 -20 ohm
> >resistors.
> > >
> >
> > I will do this later.
> >
> > > Maybe you read the color code wrong
> > > when you replaced them. It is easy to do.
> > >
> >
> > No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm
> > resistors... I also measured them before putting them into the final unit. 20
> > Ohms (give or take) each.
> >
> > > Also, my schematic shows R10 to be
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >
> > >are approx 2/3 ratio.
> > >
> >
> > This (I think), is where the problem may lie. - As i stated in my original post
> >
> > about this, I have two different final unit schematics...one shows R10 as a
> >4.7K
> >
> > resistor, the other shows R10 as a 10K resistor... which is why I asked what
> >the
> >
> > value of R10 should be.... - The R10 resistor that I removed read around 6.7K -
> >
> > I assumed that it was supposed to be 4.7K and reading high, and was about to
> > swap it for another 4.7K that I have, but then saw the second schematic showing
> >
> > R10 as a 10K resistor... confused, so I asked the question on here.
> >
> > What I may do, is replace the 10K resistor that is now in the R10 position with

> >
> > a 4.7K resistor and see what the meter reads. - Naturally, this will not alter
>
> > the power out problem I have.
> >
> > Just for reference, I follow the K4EAA tune up procedure to the letter, but
> > since my TX died, I have no more than around 55W out and the IP reads low
> > (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
> >
> >
> > Cheers
> > Chris
> >
> >
> > On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
> >
> > > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> > > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> > > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > > resistors are not actually 5 ohms. I would go back and read the parallel
> > > combination of your 4 -20 ohm resistors. Maybe you read the color code wrong
>
> > > when you replaced them. It is easy to do. Also, my schematic shows R10 to be
>
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >
> >
> > > are approx 2/3 ratio. I dont know what the panel meter FS is or the internal
>
> > > resistance. I suppose it is possible that Kenwood used different meters for
> > > different production runs but that would be unusual. The pros on here would
> > >know
> > >
> > > if they used different meters that required different meter multipliers. If
> > > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode resistor.
> >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, May 18, 2011 7:13:29 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Hi Terry,
> > >
> > > I am seeing around 160 mA at the highest power out (on an external Meter).
> > >

> > > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers (R10
> >
> > >on
> > >
> > > the final unit).
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of what
> >
> > >you
> > >
> > > >
> > > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma plate
>
> > > > current. Is that what your IP reading is on the rig panel meter? 80ma x
> >820v
> >
> > >=
> > >
> > >
> > > > 68 watts x 65% efficiency = 45 watts key down output power. I think you
> >said
> >
> >
> > > > you were getting about 50 watts out. Your screen voltage is OK so if your
> > >plate
> > >
> > > >
> > > > voltage is good then output power you are seeing is correct for how you
> >have
> >
> >
> > >the
> > > >
> > > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > > multipliers are not right. I think you said you replaced one of them? I am
>
> > >sure
> > >
> > > >
> > > > someone else will do the calcs and verify my assessment. I dont think there
> >
> > >is
> > >

> > >
> > > > anything wrong with your tubes or power supplies. I would take a look at
> >your
> > >
> > > >
> > > > meter multipliers again. Keep at it you will solve this one. 73s Terry
> K9TW
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > >
> > > > > Hi Mike and all..
> > > > >
> > > > > Tonight I have done some voltage measurements on the tubes, as follows:- -
> >
> > > > >
> > > > > Pins 1, 4 and 6 are :
> > > > >
> > > > > 0V in RX and 0.417V in TX
> > > > >
> > > > > Pin 3 RX is 242V and in TX it drops to 228V
> > > > >
> > > > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > > > >
> > > > > These are exactly the same for both tubes.
> > > > >
> > > > > Any comments very welcomed:
> > > > >
> > > > > Thanks
> > > > > Chris, ZL1CDP
> > > > >
> > > > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > > > >
> > > > > > Chris,
> > > > > >
> > > > > > Have you measured the final tube's screen voltage and compared the
> >voltages
> > >
> > > >
> > > > >between the two tubes? If not then I recommend you do that.
> > > > > >
> > > > > >
> > > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > >temperature. Voltage checks and comparisons between the two final tubes
> >will
> > >
> > > >

> > > > >tell you more about the final tubes than anything else you can do.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>
> > >
> > > > >wrote:
> > > > > >
> > > > > > Hi Gordon,
> > > > > >
> > > > > > Originally... I was getting around 200mA for around 75w... then it
> > >dropped
> > >
> > >to
> > > > >
> > > > >around 50w at 200mA etc.
> > > > > >
> > > > > > I have suspected the tubes were on their way out for a while - A friend
> >
> > >of
> > >
> > >
> > > > >mine who helped with a repair said that he thought on one of the tubes was
> >
> > > > >drawing more current than the other, as one was much hotter than the
> >other.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > > >
> > > > > > > Hi Chris,
> > > > > > > If one final is lite, the other must be too. The filaments are wired
> >in
> >
> >
> > > > > > series.
> > > > > > > Check the resistors on the Rectifier board to see if any have gone up
> >
> > >in
> > >
> > >
> > > > > > value or opened.
> > > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > > >

> > > > > > > Gordon
> > > > > > >
> > > > > > >
> > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > >>
> > > > > > >> Hi All,
> > > > > > >>
> > > > > > >> Had my 830 working nicely until Saturday... for some reason I was
> > > > > > >> struggling to get above 50W on tune up and then suddenly nothing
> >out.
> > > > > > >> The HV reading is still there... looking through the final cage, I
> >can
> >
> > >
> > > > > > >> see one of the tube filaments is light, but can't tell if the other
>
> > > > > > >> is... I am suspecting not.
> > > > > > >>
> > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> > > > > > >> movement either.
> > > > > > >>
> > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > >>
> > > > > > >> Thanks
> > > > > > >> Chris, ZL1CDP
> > > > > > >>
> > > > > > >>
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
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31397. Re: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 05:44:13 UTC
From: Bob
Topic: 31206 Message: 31397

Me too! So was there a decision about the Hybrids net? Sorry, I wasn't able to follow all the discussions about it.

Bob, KD5MHQ

--- On Wed, 5/18/11, mac.haszard <mac.haszard@...> wrote:

Please keep me appraised of where and when too.
My 520s yearns to converse with its kin...
Mac / K6OVI

31398. Re: [TS-520_820_530_830] ts 820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 02:08:13 UTC
From: BIII
Topic: 15524 Message: 31398

that is what I thought...works great though..get good dips and great
output...no worries...thanks all
Bill

On 5/18/2011 9:54 PM, David Rust wrote:
>
> Rick, yes it sort of makes sense, but it would seem like it should show
> an indication of around 7mhz when tuning in the 7 mhz band...
> Bill
>
> None of mine were ever real close. Tune for the peak with the grid
> drive and the dip with the plate tuning, and don't worry about what
> the dial says. If it makes you feel better you can slip the pointer
> around to the proper position, but it doesn't change anything.
> Dave
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31399. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 11:17:45 UTC
From: Terry Wagoner
Topic: 31320 Message: 31399

Hi Chris--Your tune up procedure sounds OK to me. I have a new driver tube in as my 830 as the drive had started to slowly drift off during tune. I generally never have to have carrier control much above about 9:00 for 3/4+ meter deflection. In fact almost always have to turn carrier control down to keep it from pegging. When you are varying the drive control (you are driving the chains and varying the variable caps on the RF board) do you get a point where you see a peak on your wattmeter? I will let Mike address this as he is truly an expert. I know there are issues with the Omron relay on bottom of rig on the Audio board. Some folks carefully pop the plastic cover off and clean the contacts with paper wetted with de-oxit. Ken K4EAA sells and exact replacement. I bought one from him as a spare for future. Terry

---
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 19, 2011 12:00:38 AM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Terry & Mike... thanks for all of the info

Well, I am not sure what is happening with my 830s. - I went home at lunch today and changed the 10K resistor for a 4.7K as recommended.
I tested the cathode resistance and it is 5.3Ohms

I really am wondering if there is an alignment or tube / driver issue.. I am getting VERY ODD intermittent results... i.e

Tune up procedure:
• USB, IP - Key rig and Meter shows IP of 60mA , which we know is good.

• Flick to Tune position
• Set the load control to minimum - adjust plate control for band

• Set to ALC, turn carrier to around 1/2 to 3/4 control
• Flick SEND switch and peak drive control

Symptom:
OK - here is where I start to see problems - Sometimes I get the meter pegging (even when I reduce the carrier to zero it doesn't alter).... other times the ALC goes up to around half of the meter reading (which is just above the ALC deflection scale)... one thing that I did notice is that altering the Drive control makes no difference at all to the reading.

• Switch meter to IP, Flick Send Switch and use the Plate control to dip the meter

Symptom:
Again I appear to be having intermittent issues here where IF I HAVE enough IP reading, I can dip the meter with the Plate control, but often I have such a low IP reading at this point in time it's hard to see.

etc etc...

As a very quick test I tuned for maximum Power out on my external meter (which is fine by the way, I tested it on another radio), and again it will give me around 55W (when lucky)... the IP reading around 80mA - 110mA now (which is more in line having swapped the 10K resistor for 4.7K).

When I get time later tonight, I will have to do some voltage readings (Again) :(- Any other suggestions?

Thanks
Chris Parnell

On 19/05/2011, at 12:37 PM, Terry Wagoner wrote:

> Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop

> across R10 for full scale deflection. That equates to approx .0286 vdc per
>meter
>
> division across R10. The more useful measure would be the drop across the
> cathode resistors. With 350 ma being indicated full scale reading that equates

> to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter.
>
> So if you want to know how much drop you should see across your 5 ohm cathode
> resistors just multiply the indicated number of graduations x .05v. For
>example:
>
> 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I
>
> cant work with all the decimal points that you can! Thanks for explaining that

> the different schematic and meter multipliers is for the 830M. Havent used ohms
>
> law this much since I told my professor I would rather take a sharp stick in
>the
>
> eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry
>
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 6:51:52 PM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
> Chris and others,
>
> The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K.

> Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model

> has "AM" mode which the TS-830S does not have.
>
> Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at
> full output.
>
> Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within
> tolerance.
>
> Using ohms law, you can determine the voltage at the junction of R6 and R10
> which is fed to the meter when the meter switch is set to IP in transmit mode.

> The following examples assume the 830 is producing a stable full carrier output
>
> in CW mode, not sideband. Sideband will cause the cathode voltage to "vary"
> because of the variable frequencies in the audio applied to the balance
> modulator which causes the RF power to vary based on the speech amplifier's
> output.
>
> So, we first have to determine the current through R6 and R10. We do this
> because we have 2 of the required values, Resistance and voltage, but we don't

> have the 3rd, the current. To get the current we use ohms law, I = E / R.
>
> Therefore, with 1.125VDC applied to the series string of R6 and R10, the
>current
>
> through the string will be:
>
> 1.125 / 7400 = .000152027
>
> Now to determine the voltage drop across R6 we use ohms law again,
>
> E = I x R
>
> .000152027 x 2700 = .410472VDC
>
> The remaining .714527VDC will be dropped across R10.
>
> .000152027 x 4700 = .714527VDC
>
> I rounded off the last digit "6" to "7" since the next digit after "6" is "9".

>
> Are we sure this is correct? We can determine this by adding both voltage
>drops,
>
> .410472 and .714527 together. If they equal the source voltage of "1.125VDC"
> then we have done our math right and .410472VDC is the correct voltage drop
> across R6.

>
> .410472 + .714527 = 1.12499997VDC
>
> Close enough for Government work so our math is right.
>
> Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.
>
> First, we need the total resistance which is 12.7K,
>
> 2700 + 10000 = 12700
>
> Next, we need to determine the current through R6 and R10 which is
>
> I = E / R
>
> or
>
> 1.125 / 12700 = .0000885826
>
> Next, we determine the voltage drop across R6, which is 2.7K.
>
> E = I x R
>
> .0000885826 x 2700 = .239173
>
> Again, the remaining voltage is dropped across R10 which is now 10K
>
> .0000885826 x 10000 = .885826VDC
>
> Check out math;
>
> .239173 + .885826 = 1.124999VDC
>
> So we are correct in our calculations. But, there is a difference.
>
> Notice the different voltage drop across R6 with R10 being 10K. That's a
> difference of
>
> .410472 - .239173 = .171254VDC
>
> That may not seem like a lot but it can result in an erroneous IP meter
> indication.
>
> If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be
> 2700, the meter would be looking at a different voltage drop across R6. Try it

> to see what you get.
>
> Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt,
>both

>
> within tolerance of 10%. This will make the IP meter display the correct
>cathode
>
> current.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > OK Chris not questioning your competence just trying to cover all bases. It
>is
>
> >
> > easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
>
> > within tolerance for your new cathode resistors. So if your .417 volts across
>
> > the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> > plate current and not 160 ma. That is Ohms law and would account for your low
>
> > output power. Unless of course the .417 wasnt read keydown in CW mode. I will
>
> > back out now as you are getting lots of help and Mike and others are more
> > experienced than I am. I will read with interest as I want to learn from
>this.
>
>
> > 73s Terry
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:16:06 PM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Terry, -
> >
> > > The external meter is a watt meter-- correct?
> > >
> >
> > Yes the external meter is a Wattmeter.
> >
> > > The 160 ma is the IP reading on your rig meter-- correct?
> > >
> > Correct.

> >
> > > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
> > >current. Unless your 5 ohm cathode
> > >
> > > resistors are not actually 5 ohms.
> > >
> > Well that;s what the meter on the 830 is telling me Terry... I will check
> >again,
> >
> > but I only just replaced the cathode resistors as one was open, so I replaced
>
> > all four to be on the safe side.
> > Once replaced, I checked and they was reading around 5.4 Ohms when in-line,
>so
>
>
> > that should be good.
> >
> > > I would go back and read the parallel combination of your 4 -20 ohm
> >resistors.
> > >
> >
> > I will do this later.
> >
> > > Maybe you read the color code wrong
> > > when you replaced them. It is easy to do.
> > >
> >
> > No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm

> > resistors... I also measured them before putting them into the final unit. 20
>
> > Ohms (give or take) each.
> >
> > > Also, my schematic shows R10 to be
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >
> > >are approx 2/3 ratio.
> > >
> >
> > This (I think), is where the problem may lie. - As i stated in my original
>post
>
> >
> > about this, I have two different final unit schematics...one shows R10 as a
> >4.7K
> >
> > resistor, the other shows R10 as a 10K resistor... which is why I asked what

> >the
> >
> > value of R10 should be.... - The R10 resistor that I removed read around 6.7K
>-
>
> >
> > I assumed that it was supposed to be 4.7K and reading high, and was about to
> > swap it for another 4.7K that I have, but then saw the second schematic
>showing
>
> >
> > R10 as a 10K resistor... confused, so I asked the question on here.
> >
> > What I may do, is replace the 10K resistor that is now in the R10 position
>with
>
> >
> > a 4.7K resistor and see what the meter reads. - Naturally, this will not
>alter
>
>
> > the power out problem I have.
> >
> > Just for reference, I follow the K4EAA tune up procedure to the letter, but
> > since my TX died, I have no more than around 55W out and the IP reads low
> > (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
> >
> >
> > Cheers
> > Chris
> >
> >
> > On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
> >
> > > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> > > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
>
> > > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > > resistors are not actually 5 ohms. I would go back and read the parallel
> > > combination of your 4 -20 ohm resistors. Maybe you read the color code
>wrong
>
>
> > > when you replaced them. It is easy to do. Also, my schematic shows R10 to
>be
>
>
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >

> >
> > > are approx 2/3 ratio. I dont know what the panel meter FS is or the
>internal
>
>
> > > resistance. I suppose it is possible that Kenwood used different meters for
>
> > > different production runs but that would be unusual. The pros on here would
>
> > >know
> > >
> > > if they used different meters that required different meter multipliers. If
>
> > > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode
>resistor.
>
> >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, May 18, 2011 7:13:29 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Hi Terry,
> > >
> > > I am seeing around 160 mA at the highest power out (on an external Meter).
> > >
> > > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers
>(R10
>
> >
> > >on
> > >
> > > the final unit).
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of
>what
>
> >
> > >you

> > >
> > > >
> > > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma
>plate
>
>
> > > > current. Is that what your IP reading is on the rig panel meter? 80ma x
> >820v
> >
> > >=
> > >
> > >
> > > > 68 watts x 65% efficiency = 45 watts key down output power. I think you
> >said
> >
> >
> > > > you were getting about 50 watts out. Your screen voltage is OK so if your
>
> > >plate
> > >
> > > >
> > > > voltage is good then output power you are seeing is correct for how you
> >have
> >
> >
> > > >the
> > > >
> > > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > > multipliers are not right. I think you said you replaced one of them? I
>am
>
>
> > >sure
> > >
> > > >
> > > > someone else will do the calcs and verify my assessment. I dont think
>there
>
> >
> > >is
> > >
> > >
> > > > anything wrong with your tubes or power supplies. I would take a look at

> >your
> >
> > >
> > > > meter multipliers again. Keep at it you will solve this one. 73s Terry
> K9TW
> > > > >

> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > >
> > > > Hi Mike and all..
> > > >
> > > > Tonight I have done some voltage measurements on the tubes, as follows:-
>-
>
>
> > > >
> > > > Pins 1, 4 and 6 are :
> > > >
> > > > 0V in RX and 0.417V in TX
> > > >
> > > > Pin 3 RX is 242V and in TX it drops to 228V
> > > >
> > > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > > >
> > > > These are exactly the same for both tubes.
> > > >
> > > > Any comments very welcomed:
> > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > >
> > > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > > >
> > > > > Chris,
> > > > >
> > > > > Have you measured the final tube's screen voltage and compared the
> >voltages
> >
> > >
> > > > >between the two tubes? If not then I recommend you do that.
> > > > > >
> > > > > >
> > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > >temperature. Voltage checks and comparisons between the two final tubes

> >will
> >
> > >
> > > > >tell you more about the final tubes than anything else you can do.
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL

> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
>
> > >
> > > > >wrote:
> > > > > > >
> > > > > > > Hi Gordon,
> > > > > > > >
> > > > > > > Originally... I was getting around 200mA for around 75w... then it
> > >dropped
> > >
> > > >to
> > > >
> > > >around 50w at 200mA etc.
> > > > > > >
> > > > > > > I have suspected the tubes were on their way out for a while - A
>friend
>
> >
> > >of
> > >
> > >
> > > >mine who helped with a repair said that he thought on one of the tubes
>was
>
> >
> > >drawing more current than the other, as one was much hotter than the
> >other.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > > > > >
> > > > > > > > Hi Chris,
> > > > > > > > If one final is lite, the other must be too. The filaments are
>wired
>
> >in
> > >
> > >
> > > > > > > > series.
> > > > > > > > Check the resistors on the Rectifier board to see if any have gone
>up
>
> >
> > >in

> > >
> > >
> > > > > > > value or opened.
> > > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > > >
> > > > > > > Gordon
> > > > > > >
> > > > > > >
> > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > >>
> > > > > > >> Hi All,
> > > > > > >>
> > > > > > >> Had my 830 working nicely until Saturday... for some reason I was

> > > > > > >> struggling to get above 50W on tune up and then suddenly nothing
> >out.
> > > > > > >> The HV reading is still there... looking through the final cage, I
>
> >can
> >
> > >
> > > > > > >> see one of the tube filaments is light, but can't tell if the
>other
>
>
> > > > > > >> is... I am suspecting not.
> > > > > > >>
> > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter

> > > > > > >> movement either.
> > > > > > >>
> > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > >>
> > > > > > >> Thanks
> > > > > > >> Chris, ZL1CDP
> > > > > > >>
> > > > > > >>
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
> > > > > > >
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> > > > [Non-text portions of this message have been removed]

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> > > > Yahoo! Groups Links
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Yahoo! Groups Links

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31400. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 12:09:32 UTC
From: Terry Wagoner
Topic: 31320 Message: 31400

Chris--I forgot to mention some folks have some success with a "tap" test on RL1 relay. You need the rig on its side and while tuning and experiencing the intermittent ALC you can take an insulated tool and gently tap on the plastic case while watching the ALC reading. If this makes a difference you can try to clean the contacts. It is not easy to pop the cover and you can easily damage the relay. Maybe Mike or Gordon have a tool or tip for popping the cover? Terry

---

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 19, 2011 7:17:45 AM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Chris--Your tune up procedure sounds OK to me. I have a new driver tube in as

my 830 as the drive had started to slowly drift off during tune. I generally never have to have carrier control much above about 9:00 for 3/4+ meter deflection. In fact almost always have to turn carrier control down to keep it from pegging. When you are varying the drive control (you are driving the chains and varying the variable caps on the RF board) do you get a point where you see a peak on your wattmeter? I will let Mike address this as he is truly an

expert. I know there are issues with the Omron relay on bottom of rig on the Audio board. Some folks carefully pop the plastic cover off and clean the contacts with paper wetted with de-oxit. Ken K4EAA sells and exact replacement. I bought one from him as a spare for future. Terry

---

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 19, 2011 12:00:38 AM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Hi Terry & Mike... thanks for all of the info

Well, I am not sure what is happening with my 830s. - I went home at lunch today

and changed the 10K resistor for a 4.7K as recommended.
I tested the cathode resistance and it is 5.3Ohms

I really am wondering if there is an alignment or tube / driver issue.. I am getting VERY ODD intermittent results... i.e

Tune up procedure:
• USB, IP - Key rig and Meter shows IP of 60mA , which we know is good.

• Flick to Tune position
• Set the load control to minimum - adjust plate control for band

• Set to ALC, turn carrier to around 1/2 to 3/4 control
• Flick SEND switch and peak drive control

Symptom:
OK - here is where I start to see problems - Sometimes I get the meter pegging (even when I reduce the carrier to zero it doesn't alter).... other times the ALC goes up to around half of the meter reading (which is just above the ALC deflection scale)... one thing that I did notice is that altering the Drive control makes no difference at all to the reading.

• Switch meter to IP, Flick Send Switch and use the Plate control to dip the meter

Symptom:
Again I appear to be having intermittent issues here where IF I HAVE enough IP reading, I can dip the meter with the Plate control, but often I have such a low

IP reading at this point in time it's hard to see.

etc etc...

As a very quick test I tuned for maximum Power out on my external meter (which is fine by the way, I tested it on another radio), and again it will give me around 55W (when lucky)... the IP reading around 80mA - 110mA now (which is more

in line having swapped the 10K resistor for 4.7K).

When I get time later tonight, I will have to do some voltage readings (Again) :(- Any other suggestions?

Thanks
Chris Parnell

On 19/05/2011, at 12:37 PM, Terry Wagoner wrote:

> Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop

> across R10 for full scale deflection. That equates to approx .0286 vdc per
>meter
>
> division across R10. The more useful measure would be the drop across the
> cathode resistors. With 350 ma being indicated full scale reading that equates

> to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter.
>
>
> So if you want to know how much drop you should see across your 5 ohm cathode
> resistors just multiply the indicated number of graduations x .05v. For
>example:
>
> 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I
>
>
> cant work with all the decimal points that you can! Thanks for explaining that

> the different schematic and meter multipliers is for the 830M. Havent used ohms
>
>
> law this much since I told my professor I would rather take a sharp stick in
>the
>
> eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry
>
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 6:51:52 PM
> Subject: [TS-520_820_530_830] Re: Transmit has died
>
> Chris and others,
>
> The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K.
> Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model

> has "AM" mode which the TS-830S does not have.
>
> Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at
> full output.
>
> Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within
> tolerance.
>
> Using ohms law, you can determine the voltage at the junction of R6 and R10
> which is fed to the meter when the meter switch is set to IP in transmit mode.

> The following examples assume the 830 is producing a stable full carrier output
>
>
> in CW mode, not sideband. Sideband will cause the cathode voltage to "vary"
> because of the variable frequencies in the audio applied to the balance
> modulator which causes the RF power to vary based on the speech amplifier's
> output.
>
> So, we first have to determine the current through R6 and R10. We do this
> because we have 2 of the required values, Resistance and voltage, but we don't

> have the 3rd, the current. To get the current we use ohms law, I = E / R.
>
> Therefore, with 1.125VDC applied to the series string of R6 and R10, the
>current
>
> through the string will be:
>
> 1.125 / 7400 = .000152027
>
> Now to determine the voltage drop across R6 we use ohms law again,
>
> E = I x R

>
> .000152027 x 2700 = .410472VDC
>
> The remaining .714527VDC will be dropped across R10.
>
> .000152027 x 4700 = .714527VDC
>
> I rounded off the last digit "6" to "7" since the next digit after "6" is "9".

>
> Are we sure this is correct? We can determine this by adding both voltage
>drops,
>
> .410472 and .714527 together. If they equal the source voltage of "1.125VDC"
> then we have done our math right and .410472VDC is the correct voltage drop
> across R6.
>
> .410472 + .714527 = 1.12499997VDC
>
> Close enough for Government work so our math is right.
>
> Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.
>
> First, we need the total resistance which is 12.7K,
>
> 2700 + 10000 = 12700
>
> Next, we need to determine the current through R6 and R10 which is
>
> I = E / R
>
> or
>
> 1.125 / 12700 = .0000885826
>
> Next, we determine the voltage drop across R6, which is 2.7K.
>
> E = I x R
>
> .0000885826 x 2700 = .239173
>
> Again, the remaining voltage is dropped across R10 which is now 10K
>
> .0000885826 x 10000 = .885826VDC
>
> Check out math;
>
> .239173 + .885826 = 1.124999VDC
>
> So we are correct in our calculations. But, there is a difference.

>
> Notice the different voltage drop across R6 with R10 being 10K. That's a
> difference of
>
> .410472 - .239173 = .171254VDC
>
> That may not seem like a lot but it can result in an erroneous IP meter
> indication.
>
> If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be
> 2700, the meter would be looking at a different voltage drop across R6. Try it

> to see what you get.
>
> Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt,
>both
>
> within tolerance of 10%. This will make the IP meter display the correct
>cathode
>
> current.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > OK Chris not questioning your competence just trying to cover all bases. It
>is
>
> >
> > easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
>
>
> > within tolerance for your new cathode resistors. So if your .417 volts across
>
>
> > the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> > plate current and not 160 ma. That is Ohms law and would account for your low
>
>
> > output power. Unless of course the .417 wasnt read keydown in CW mode. I will
>
>
> > back out now as you are getting lots of help and Mike and others are more
> > experienced than I am. I will read with interest as I want to learn from
>this.
>
>

> > 73s Terry
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, May 18, 2011 5:16:06 PM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Terry, -
> >
> > > The external meter is a watt meter-- correct?
> > >
> >
> > Yes the external meter is a Wattmeter.
> >
> > > The 160 ma is the IP reading on your rig meter-- correct?
> > >
> > Correct.
> >
> > > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
> > >current. Unless your 5 ohm cathode
> > >
> > > resistors are not actually 5 ohms.
> > >
> > Well that;s what the meter on the 830 is telling me Terry... I will check
> >again,
> >
> > but I only just replaced the cathode resistors as one was open, so I replaced
>
>
> > all four to be on the safe side.
> > Once replaced, I checked and they was reading around 5.4 Ohms when in-line,
>so
>
>
> > that should be good.
> >
> > > I would go back and read the parallel combination of your 4 -20 ohm
> >resistors.
> > >
> >
> > I will do this later.
> >
> > > Maybe you read the color code wrong
> > > when you replaced them. It is easy to do.
> > >
> >
> > No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm

> > resistors... I also measured them before putting them into the final unit. 20
>
>
> > Ohms (give or take) each.
> >
> > > Also, my schematic shows R10 to be
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >
> > >are approx 2/3 ratio.
> > >
> >
> > This (I think), is where the problem may lie. - As i stated in my original
>post
>
> >
> > about this, I have two different final unit schematics...one shows R10 as a
> >4.7K
> >
> > resistor, the other shows R10 as a 10K resistor... which is why I asked what

> >the
> >
> > value of R10 should be.... - The R10 resistor that I removed read around 6.7K
>
>-
>
> >
> > I assumed that it was supposed to be 4.7K and reading high, and was about to

> > swap it for another 4.7K that I have, but then saw the second schematic
>showing
>
> >
> > R10 as a 10K resistor... confused, so I asked the question on here.
> >
> > What I may do, is replace the 10K resistor that is now in the R10 position
>with
>
> >
> > a 4.7K resistor and see what the meter reads. - Naturally, this will not
>alter
>
>
> > the power out problem I have.
> >
> > Just for reference, I follow the K4EAA tune up procedure to the letter, but
> > since my TX died, I have no more than around 55W out and the IP reads low
> > (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
> >
> >
> > Cheers

> > Chris
> >
> >
> > On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
> >
> > > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> > > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
>
>
> > > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > > resistors are not actually 5 ohms. I would go back and read the parallel
> > > combination of your 4 -20 ohm resistors. Maybe you read the color code
>wrong
>
>
> > > when you replaced them. It is easy to do. Also, my schematic shows R10 to
>be
>
>
> > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> >multipliers
> >
> >
> > > are approx 2/3 ratio. I dont know what the panel meter FS is or the
>internal
>
>
> > > resistance. I suppose it is possible that Kenwood used different meters for
>
>
> > > different production runs but that would be unusual. The pros on here would
>
>
> > >know
> > >
> > > if they used different meters that required different meter multipliers. If
>
>
> > > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode
>resistor.
>
> >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, May 18, 2011 7:13:29 AM

> > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Hi Terry,
> > >
> > > I am seeing around 160 mA at the highest power out (on an external Meter).
> > >
> > > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers
>(R10
>
> >
> > >on
> > >
> > > the final unit).
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of
>what
>
> >
> > >you
> > >
> > > >
> > > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma
>plate
>
>
> > > > current. Is that what your IP reading is on the rig panel meter? 80ma x
> >820v
> >
> > >=
> > >
> > >
> > > > 68 watts x 65% efficiency = 45 watts key down output power. I think you
> >said
> >
> >
> > > > you were getting about 50 watts out. Your screen voltage is OK so if your
>
>
> > >plate
> > >
> > >
> > > > voltage is good then output power you are seeing is correct for how you
> >have

> >
> >
> > > >the
> > > >
> > > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > > multipliers are not right. I think you said you replaced one of them? I
>am
>
>
> > >sure
> > >
> > > >
> > > > someone else will do the calcs and verify my assessment. I dont think
>there
>
> >
> > >is
> > >
> > >
> > > > anything wrong with your tubes or power supplies. I would take a look at

> >your
> >
> > >
> > > > meter multipliers again. Keep at it you will solve this one. 73s Terry
> K9TW
> > > > >
> > > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > >
> > > > Hi Mike and all..
> > > > >
> > > > Tonight I have done some voltage measurements on the tubes, as follows:-

>-
>
>
> > > > >
> > > > Pins 1, 4 and 6 are :
> > > > >
> > > > 0V in RX and 0.417V in TX
> > > > >
> > > > Pin 3 RX is 242V and in TX it drops to 228V
> > > > >
> > > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > > > >
> > > > These are exactly the same for both tubes.
> > > > >

> > > > Any comments very welcomed:
> > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > >
> > > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > > >
> > > > > Chris,
> > > > >
> > > > > Have you measured the final tube's screen voltage and compared the
> >voltages
> >
> > >
> > > > >between the two tubes? If not then I recommend you do that.
> > > > >
> > > > >
> > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > >temperature. Voltage checks and comparisons between the two final tubes

> >will
> >
> > >
> > > > >tell you more about the final tubes than anything else you can do.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
>
> > >
> > > >wrote:
> > > > > >
> > > > > Hi Gordon,
> > > > > >
> > > > > Originally... I was getting around 200mA for around 75w... then it
> > >dropped
> > >
> > > >to
> > > >
> > > >around 50w at 200mA etc.
> > > > > >
> > > > > I have suspected the tubes were on their way out for a while - A
>friend
>
> >
> > >of
> > >

> > >
> > > > >mine who helped with a repair said that he thought on one of the tubes
>was
>
> >
> > > > >drawing more current than the other, as one was much hotter than the
> >other.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > > > > >
> > > > > > > > Hi Chris,
> > > > > > > > If one final is lite, the other must be too. The filaments are
>wired
>
> >in
> > >
> > > >
> > > > > > > > series.
> > > > > > > > Check the resistors on the Rectifier board to see if any have gone

>up
>
> >
> > >in
> > > >
> > > >
> > > > > > > > value or opened.
> > > > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > > > > >
> > > > > > > > Gordon
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > > > >>
> > > > > > > > >> Hi All,
> > > > > > > > >>
> > > > > > > > >> Had my 830 working nicely until Saturday... for some reason I was

> > > > > > > > >> struggling to get above 50W on tune up and then suddenly nothing
> >out.
> > > > > > > > >> The HV reading is still there... looking through the final cage, I
> >
> >
> >can
> > >
> > > >
> > > > > > > > >> see one of the tube filaments is light, but can't tell if the

>other
>
>
> > > > > > >> is... I am suspecting not.
> > > > > > > >>
> > > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter

> > > > > > > >> movement either.
> > > > > > > >>
> > > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > > >>
> > > > > > > >> Thanks
> > > > > > > >> Chris, ZL1CDP
> > > > > > > >>
> > > > > > > >>
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > ------------------------------------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
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Yahoo! Groups Links

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31401. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 13:21:25 UTC
From: w5rkl
Topic: 31320 Message: 31401

The relay Terry is referring to is on the AF Unit board. This relay controls quite a few circuits when switching between receive and transmit. This is the same relay used in the TS-530 on the IF Unit board plus the TS-120 (there are 2 of them), TS-130 (also 2 of them), and other Kenwood transceivers.

While "very carefully" cleaning this relay may "appear" to fix any problems the relay has caused, the fix is quite often short lived. Therefore, if you suspect this relay is bad, replace it, don't waste your time cleaning it.

A few of the circuits the AF Unit relay controls/switches (receive to transmit and vice verse) are:

Meter from displaying S Units in receive to displaying what ever the meter switch is set to.

Bias levels to the driver tube (DRB), Transmit Bias (TB) to the IF Unit, and bias voltage level to both final tubes.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--I forgot to mention some folks have some success with a "tap" test on RL1
> relay. You need the rig on its side and while tuning and experiencing the
> intermittent ALC you can take an insulated tool and gently tap on the plastic
> case while watching the ALC reading. If this makes a difference you can try to
> clean the contacts. It is not easy to pop the cover and you can easily damage
> the relay. Maybe Mike or Gordon have a tool or tip for popping the cover? Terry
>
>
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, May 19, 2011 7:17:45 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
>
> Hi Chris--Your tune up procedure sounds OK to me. I have a new driver tube in as
>
> my 830 as the drive had started to slowly drift off during tune. I generally
> never have to have carrier control much above about 9:00 for 3/4+ meter
> deflection. In fact almost always have to turn carrier control down to keep it
> from pegging. When you are varying the drive control (you are driving the

> chains and varying the variable caps on the RF board) do you get a point where
> you see a peak on your wattmeter? I will let Mike address this as he is truly an
>
> expert. I know there are issues with the Omron relay on bottom of rig on the
> Audio board. Some folks carefully pop the plastic cover off and clean the
> contacts with paper wetted with de-oxit. Ken K4EAA sells and exact replacement.
> I bought one from him as a spare for future. Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, May 19, 2011 12:00:38 AM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Hi Terry & Mike... thanks for all of the info
>
> Well, I am not sure what is happening with my 830s. - I went home at lunch today
>
> and changed the 10K resistor for a 4.7K as recommended.
> I tested the cathode resistance and it is 5.3Ohms
>
> I really am wondering if there is an alignment or tube / driver issue.. I am
> getting VERY ODD intermittent results... i.e
>
> Tune up procedure:
> â□¢ USB, IP - Key rig and Meter shows IP of 60mA , which we know is good.
>
> â□¢ Flick to Tune position
> â□¢ Set the load control to minimum - adjust plate control for band
>
> â□¢ Set to ALC, turn carrier to around 1/2 to 3/4 control
> â□¢ Flick SEND switch and peak drive control
>
> Symptom:
> OK - here is where I start to see problems - Sometimes I get the meter pegging
> (even when I reduce the carrier to zero it doesn't alter).... other times the
> ALC goes up to around half of the meter reading (which is just above the ALC
> deflection scale)... one thing that I did notice is that altering the Drive
> control makes no difference at all to the reading.
>
> â□¢ Switch meter to IP, Flick Send Switch and use the Plate control to dip the
> meter
>
> Symptom:
> Again I appear to be having intermittent issues here where IF I HAVE enough IP
> reading, I can dip the meter with the Plate control, but often I have such a low
>
> IP reading at this point in time it's hard to see.
>

> etc etc...
>
> As a very quick test I tuned for maximum Power out on my external meter (which
> is fine by the way, I tested it on another radio), and again it will give me
> around 55W (when lucky)... the IP reading around 80mA - 110mA now (which is more
>
> in line having swapped the 10K resistor for 4.7K).
>
> When I get time later tonight, I will have to do some voltage readings (Again)
> :(- Any other suggestions?
>
> Thanks
> Chris Parnell
>
> On 19/05/2011, at 12:37 PM, Terry Wagoner wrote:
>
> > Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop
>
>
> > across R10 for full scale deflection. That equates to approx .0286 vdc per
> >meter
> >
> > division across R10. The more useful measure would be the drop across the
> > cathode resistors. With 350 ma being indicated full scale reading that equates
>
>
> > to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter.
> >
> >
> > So if you want to know how much drop you should see across your 5 ohm cathode
> > resistors just multiply the indicated number of graduations x .05v. For
> >example:
> >
> > 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I
> >
> >
> > cant work with all the decimal points that you can! Thanks for explaining that
>
>
> > the different schematic and meter multipliers is for the 830M. Havent used ohms
> >
> >
> > law this much since I told my professor I would rather take a sharp stick in
> >the
> >
> > eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry
> >
> > From: w5rkl <w5rkl@...>
> > To: TS-520_820_530_830@yahoogroups.com

> > Sent: Wed, May 18, 2011 6:51:52 PM
> > Subject: [TS-520_820_530_830] Re: Transmit has died
> >
> > Chris and others,
> >
> > The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K.
> > Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model
>
>
> > has "AM" mode which the TS-830S does not have.
> >
> > Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at
> > full output.
> >
> > Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within
> > tolerance.
> >
> > Using ohms law, you can determine the voltage at the junction of R6 and R10
> > which is fed to the meter when the meter switch is set to IP in transmit mode.
>
>
> > The following examples assume the 830 is producing a stable full carrier output
> >
> >
> > in CW mode, not sideband. Sideband will cause the cathode voltage to "vary"
> > because of the variable frequencies in the audio applied to the balance
> > modulator which causes the RF power to vary based on the speech amplifier's
> > output.
> >
> > So, we first have to determine the current through R6 and R10. We do this
> > because we have 2 of the required values, Resistance and voltage, but we don't
>
>
> > have the 3rd, the current. To get the current we use ohms law, I = E / R.
> >
> > Therefore, with 1.125VDC applied to the series string of R6 and R10, the
> >current
> >
> > through the string will be:
> >
> > 1.125 / 7400 = .000152027
> >
> > Now to determine the voltage drop across R6 we use ohms law again,
> >
> > E = I x R
> >
> > .000152027 x 2700 = .410472VDC
> >
> > The remaining .714527VDC will be dropped across R10.

> >
> > .000152027 x 4700 = .714527VDC
> >
> > I rounded off the last digit "6" to "7" since the next digit after "6" is "9".
>
>
> >
> > Are we sure this is correct? We can determine this by adding both voltage
> >drops,
> >
> > .410472 and .714527 together. If they equal the source voltage of "1.125VDC"
> > then we have done our math right and .410472VDC is the correct voltage drop
> > across R6.
> >
> > .410472 + .714527 = 1.12499997VDC
> >
> > Close enough for Government work so our math is right.
> >
> > Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.
> >
> > First, we need the total resistance which is 12.7K,
> >
> > 2700 + 10000 = 12700
> >
> > Next, we need to determine the current through R6 and R10 which is
> >
> > I = E / R
> >
> > or
> >
> > 1.125 / 12700 = .0000885826
> >
> > Next, we determine the voltage drop across R6, which is 2.7K.
> >
> > E = I x R
> >
> > .0000885826 x 2700 = .239173
> >
> > Again, the remaining voltage is dropped across R10 which is now 10K
> >
> > .0000885826 x 10000 = .885826VDC
> >
> > Check out math;
> >
> > .239173 + .885826 = 1.124999VDC
> >
> > So we are correct in our calculations. But, there is a difference.
> >
> > Notice the different voltage drop across R6 with R10 being 10K. That's a

> > difference of
> >
> > .410472 - .239173 = .171254VDC
> >
> > That may not seem like a lot but it can result in an erroneous IP meter
> > indication.
> >
> > If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be
> > 2700, the meter would be looking at a different voltage drop across R6. Try it
>
>
> > to see what you get.
> >
> > Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt,
> >both
> >
> > within tolerance of 10%. This will make the IP meter display the correct
> >cathode
> >
> > current.
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> > >
> > > OK Chris not questioning your competence just trying to cover all bases. It
> >is
> >
> > >
> > > easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
> >
> >
> > > within tolerance for your new cathode resistors. So if your .417 volts across
> >
> >
> > > the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> > > plate current and not 160 ma. That is Ohms law and would account for your low
> >
> >
> > > output power. Unless of course the .417 wasnt read keydown in CW mode. I will
> >
> >
> > > back out now as you are getting lots of help and Mike and others are more
> > > experienced than I am. I will read with interest as I want to learn from
> >this.
> >
> >

> > > 73s Terry
> > >
> > >
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wed, May 18, 2011 5:16:06 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Hi Terry, -
> > >
> > > > The external meter is a watt meter-- correct?
> > > >
> > >
> > > Yes the external meter is a Wattmeter.
> > >
> > > > The 160 ma is the IP reading on your rig meter-- correct?
> > > >
> > > Correct.
> > >
> > > > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
> > > >current. Unless your 5 ohm cathode
> > > >
> > > > resistors are not actually 5 ohms.
> > > >
> > > Well that;s what the meter on the 830 is telling me Terry... I will check
> > >again,
> > >
> > > but I only just replaced the cathode resistors as one was open, so I replaced
> > >
> > >
> > > all four to be on the safe side.
> > > Once replaced, I checked and they was reading around 5.4 Ohms when in-line,
> > >so
> > >
> > >
> > > that should be good.
> > >
> > > > I would go back and read the parallel combination of your 4 -20 ohm
> > >resistors.
> > > >
> > >
> > > I will do this later.
> > >
> > > > Maybe you read the color code wrong
> > > > when you replaced them. It is easy to do.
> > > >
> > >

> > > No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm
>
>
> > > resistors... I also measured them before putting them into the final unit. 20
> >
> >
> > > Ohms (give or take) each.
> > >
> > > > Also, my schematic shows R10 to be
> > > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> > >multipliers
> > >
> > > >are approx 2/3 ratio.
> > > >
> > >
> > > This (I think), is where the problem may lie. - As i stated in my original
> >post
> >
> > >
> > > about this, I have two different final unit schematics...one shows R10 as a
> > >4.7K
> > >
> > > resistor, the other shows R10 as a 10K resistor... which is why I asked what
>
>
> > >the
> > >
> > > value of R10 should be.... - The R10 resistor that I removed read around 6.7K
> >
> >-
> >
> > >
> > > I assumed that it was supposed to be 4.7K and reading high, and was about to
>
>
> > > swap it for another 4.7K that I have, but then saw the second schematic
> >showing
> >
> > >
> > > R10 as a 10K resistor... confused, so I asked the question on here.
> > >
> > > What I may do, is replace the 10K resistor that is now in the R10 position
> >with
> >
> > >
> > > a 4.7K resistor and see what the meter reads. - Naturally, this will not
> >alter
> >
> >

> > > the power out problem I have.
> > >
> > > Just for reference, I follow the K4EAA tune up procedure to the letter, but
> > > since my TX died, I have no more than around 55W out and the IP reads low
> > > (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
> > >
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > > On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
> > >
> > > > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
>
>
> > > > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> >
> >
> > > > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > > > resistors are not actually 5 ohms. I would go back and read the parallel
> > > > combination of your 4 -20 ohm resistors. Maybe you read the color code
> >wrong
> >
> >
> > > > when you replaced them. It is easy to do. Also, my schematic shows R10 to
> >be
> >
> >
> > > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> > >multipliers
> > >
> > >
> > > > are approx 2/3 ratio. I dont know what the panel meter FS is or the
> >internal
> >
> >
> > > > resistance. I suppose it is possible that Kenwood used different meters for
> >
> >
> > > > different production runs but that would be unusual. The pros on here would
> >
> >
> > >know
> > >
> > > > if they used different meters that required different meter multipliers. If
> >
> >
> > > > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode

> >resistor.
> >
> > >
> > > > Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Wed, May 18, 2011 7:13:29 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > > >
> > > > > > Hi Terry,
> > > > > >
> > > > > > I am seeing around 160 mA at the highest power out (on an external Meter).
> > > > > >
> > > > > > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers
> > >(R10
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > the final unit).
> > > > > >
> > > > > > Thanks
> > > > > > Chris
> > > > > >
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@> wrote:
> > > > > >
> > > > > > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of
> > >what
> > > > >
> > > > > >
> > > > > > >you
> > > > > > >
> > > > > > > >
> > > > > > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma
> > >plate
> > > > >
> > > > >
> > > > > > current. Is that what your IP reading is on the rig panel meter? 80ma x
> > > > >820v
> > > > > >
> > > > > >=
> > > > > > >
> > > > > >
> > > > > > 68 watts x 65% efficiency = 45 watts key down output power. I think you

> > >said
> > >
> > >
> > > > > you were getting about 50 watts out. Your screen voltage is OK so if your
> > >
> > >
> > > > >plate
> > > > >
> > > > > >
> > > > > > voltage is good then output power you are seeing is correct for how you
> > >have
> > > >
> > > >
> > > > > >the
> > > > > >
> > > > > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > > > > multipliers are not right. I think you said you replaced one of them? I
> >am
> > >
> > >
> > > > >sure
> > > > >
> > > > > >
> > > > > > someone else will do the calcs and verify my assessment. I dont think
> >there
> > >
> > > >
> > > > >is
> > > > >
> > > > >
> > > > > > anything wrong with your tubes or power supplies. I would take a look at
>
>
> > >your
> > > >
> > > > >
> > > > > > meter multipliers again. Keep at it you will solve this one. 73s Terry
> > K9TW
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > > >
> > > > > > Hi Mike and all..
> > > > > >
> > > > > > Tonight I have done some voltage measurements on the tubes, as follows:-
>

> >-
> >
> >
> > > > >
> > > > > Pins 1, 4 and 6 are :
> > > > >
> > > > > 0V in RX and 0.417V in TX
> > > > >
> > > > > Pin 3 RX is 242V and in TX it drops to 228V
> > > > >
> > > > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > > > >
> > > > > These are exactly the same for both tubes.
> > > > >
> > > > > Any comments very welcomed:
> > > > >
> > > > > Thanks
> > > > > Chris, ZL1CDP
> > > > >
> > > > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > > > >
> > > > > > Chris,
> > > > > >
> > > > > > Have you measured the final tube's screen voltage and compared the
> > >voltages
> > >
> > >
> > > >between the two tubes? If not then I recommend you do that.
> > > > > >
> > > > > >
> > > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > >temperature. Voltage checks and comparisons between the two final tubes
>
>
> > >will
> > >
> > >
> > > >tell you more about the final tubes than anything else you can do.
> > > > > >
> > > > > > 73s
> > > > > > Mike
> > > > > > W5RKL
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> >
> > > > >
> > > > > >wrote:

> > > > > > >
> > > > > > > > Hi Gordon,
> > > > > > > >
> > > > > > > > Originally... I was getting around 200mA for around 75w... then it
> > > >dropped
> > > > >
> > > > > >to
> > > > > >
> > > > > > >around 50w at 200mA etc.
> > > > > > > > >
> > > > > > > > I have suspected the tubes were on their way out for a while - A
> >friend
> > >
> > > >
> > > > >of
> > > > >
> > > > >
> > > > > >mine who helped with a repair said that he thought on one of the tubes
> >was
> > >
> > > >
> > > > > >drawing more current than the other, as one was much hotter than the
> > >other.
> > > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > > > > > >
> > > > > > > > Hi Chris,
> > > > > > > > If one final is lite, the other must be too. The filaments are
> >wired
> > >
> > > >in
> > > > >
> > > > >
> > > > > > series.
> > > > > > > > Check the resistors on the Rectifier board to see if any have gone
> >
> >up
> > >
> > > >
> > > > >in
> > > > >
> > > > >
> > > > > > value or opened.
> > > > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > > > > >

> > > > > > > > Gordon
> > > > > > > >
> > > > > > > >
> > > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > > >>
> > > > > > > >> Hi All,
> > > > > > > >>
> > > > > > > >> Had my 830 working nicely until Saturday... for some reason I was
>
>
> > > > > > > >> struggling to get above 50W on tune up and then suddenly nothing
> > >out.
> > > > > > > >> The HV reading is still there... looking through the final cage, I
> >
> >
> > >can
> > >
> > > >
> > > > > > > >> see one of the tube filaments is light, but can't tell if the
> >other
> >
> >
> > > > > > > >> is... I am suspecting not.
> > > > > > > >>
> > > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
>
>
> > > > > > > >> movement either.
> > > > > > > >>
> > > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > > >>
> > > > > > > >> Thanks
> > > > > > > >> Chris, ZL1CDP
> > > > > > > >>
> > > > > > > >>
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > ------------------------------------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > >
> > > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]

> > > > >
> > > > > ------------------------------------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > > >
> > > > [Non-text portions of this message have been removed]
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> > > > Yahoo! Groups Links
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> > >
> > > [Non-text portions of this message have been removed]
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> > >
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> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>
>
> [Non-text portions of this message have been removed]
>

31402. Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 00:00:30 UTC
From: roberteleazer@rocketmail.com
Topic: 31206 Message: 31402

The situation on the Kenwood Hybrids Net is that a bunch of people would like to have one but there is a separate Yahoo group, Kenwood QSO set up to handle such coordination. And the Kenwwod QSO Group, while requiring memebrship in this group, is so hard to find on Yahoo that you seem to be only able to find it by first going to some kind of "microphone" group and linking to it from there.

And the last time anyone posted anything on the Kenwood QSO group was a couple of years ago, which I guess explains why we are talking about it here.

The summary of possible bands seems to be:

80M: Too local

40M: Possible

20M: Too crowded and often not good at night

15M: Possibly good if the members of the group are all either on the East Coast of the U.S. or in eastern Europe.

10M: Too sporatic.

So I guess we are down to 40M being it. Sounds Okay to me. We need a net control station or two with a good antenna system and located in a central location.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:
>
> Me too! So was there a decision about the Hybrids net? Sorry, I wasn't able to follow all the discussions about it.
>
> Bob, KD5MHQ
>
> --- On Wed, 5/18/11, mac.haszard <mac.haszard@...> wrote:
>
>
> Please keep me appraised of where and when too.
> My 520s yearns to converse with its kin...
> Mac / K6OVI
>

31403. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 00:08:39 UTC
From: n6wk@n6wk.com
Topic: 31206 Message: 31403

There are a few of us that get together on 20 during the week and we never have had a real problem with the band being too crowded.
I suggest something around 14.243 or so maybe even 14.237 is also good.
The Frequency we have been meeting on (a few of us) is 14.218 but this is outside the band for General class. We all started off running Hybrids, but rigs have changed in the last few years. Some run Collins now, some Kenwood's and some run Yaesu's

73,
Gordon

On 5/19/2011 5:00 PM, roberteleazer@... wrote:
>
> The situation on the Kenwood Hybrids Net is that a bunch of people
> would like to have one but there is a separate Yahoo group, Kenwood
> QSO set up to handle such coordination. And the Kenwwod QSO Group,
> while requiring memebrship in this group, is so hard to find on Yahoo
> that you seem to be only able to find it by first going to some kind
> of "microphone" group and linking to it from there.
>
> And the last time anyone posted anything on the Kenwood QSO group was
> a couple of years ago, which I guess explains why we are talking about
> it here.
>
> The summary of possible bands seems to be:
>
> 80M: Too local
>
> 40M: Possible
>
> 20M: Too crowded and often not good at night
>
> 15M: Possibly good if the members of the group are all either on the
> East Coast of the U.S. or in eastern Europe.
>
> 10M: Too sporatic.
>
> So I guess we are down to 40M being it. Sounds Okay to me. We need a
> net control station or two with a good antenna system and located in a
> central location.
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com

> <mailto:TS-520_820_530_830%40yahoogroups.com>, Bob <bob4analog@...> wrote:
> >
> > Me too! So was there a decision about the Hybrids net? Sorry, I
> wasn't able to follow all the discussions about it.
> >
> > Bob, KD5MHQ
> >
> > --- On Wed, 5/18/11, mac.haszard <mac.haszard@...> wrote:
> >
> >
> > Please keep me appraised of where and when too.
> > My 520s yearns to converse with its kin...
> > Mac / K6OVI
> >
>
>

--
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31404. Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 00:12:23 UTC
From: ki4ax
Topic: 31206 Message: 31404

Robert,

I have been over to the QSO group and there is about 10 new members but not much traffic. I can provide a link if anyone is interested; I did post it a couple of days ago but will post it again if needed. 40m sounds good to me. I am in Florida so I am not in a good location for net control; and I have never been net control so I would not be a good candidate. I'm sure if you name a frequency and a time you will have a lot of people show up.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> The situation on the Kenwood Hybrids Net is that a bunch of people would like to have one but there is a separate Yahoo group, Kenwood QSO set up to handle such coordination. And the Kenwwod QSO Group, while requiring memebrship in this group, is so hard to find on Yahoo that you seem to be only able to find it by first going to some kind of "microphone" group and linking to it from there.
>
> And the last time anyone posted anything on the Kenwood QSO group was a couple of years ago, which I guess explains why we are talking about it here.
>
> The summary of possible bands seems to be:
>
> 80M: Too local
>
> 40M: Possible
>
> 20M: Too crowded and often not good at night
>
> 15M: Possibly good if the members of the group are all either on the East Coast of the U.S. or in eastern Europe.
>
> 10M: Too sporatic.
>
> So I guess we are down to 40M being it. Sounds Okay to me. We need a net control station or two with a good antenna system and located in a central location.
>
> Robert
> WB5WSV
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@> wrote:
> >
> > Me too! So was there a decision about the Hybrids net? Sorry, I wasn't able to follow

all the discussions about it.
> >
> > Bob, KD5MHQ
> >
> > --- On Wed, 5/18/11, mac.haszard <mac.haszard@> wrote:
> >
> >
> > Please keep me appraised of where and when too.
> > My 520s yearns to converse with its kin...
> > Mac / K6OVI
> >
>

31405. TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 02:14:32 UTC
From: ki4ax
Topic: 7262 Message: 31405

Mike,

When I tune my TS-520 for 40m (on a dipole cut to resonance)I get about 120w out. I did not note the exact Ip but the rig usually runs about 250ma. Do you think this is pushing the rig too hard? And if I want to cut back on the output, to take it easy on the final section, would I make that adjustment using the LOAD control to take some of the load off? Or should I cut back on the MIC gain control? I value your opinion and would greatly appreciate your comments.

Thanks,

Dan KI4AX

31406. Octal connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 02:43:34 UTC
From: BIll
Topic: 31406 Message: 31406

Hello to all,
anyone know a good source for the octal connector on the back of the 820??
73
Bill

31407. Re: [TS-520_820_530_830] Octal connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 02:49:30 UTC
From: KA5TRO
Topic: 31406 Message: 31407

If you're looking for the plug to go into it, K4EAA stocks those.

If you're looking for the jack itself -- I expect you'll have to pick one up wherever you can find one.

Tony KA5TRO

----- Original Message -----
From: BIll
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 19, 2011 9:43 PM
Subject: [TS-520_820_530_830] Octal connectors

Hello to all,
anyone know a good source for the octal connector on the back of the 820??
73
Bill

[Non-text portions of this message have been removed]

31408. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 02:54:39 UTC
From: John Davidson
Topic: 31320 Message: 31408

If you tune up in the "tune" position, you only have about half power because the screen voltage is reduced in that mode. complete your tune and load adjustment in the "CW"mode.
This is where you may see full recomended power and plate current readings.

----- Original Message ----
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 18, 2011 5:04:07 PM
Subject: Re: [TS-520_820_530_830] Re: Transmit has died

Good call Mike, I will double check later today.

I am pretty certain I was in either Tune or CW though when I measured the voltages, but I may be wrong.

Cheers
Chris

31409. Re: [TS-520_820_530_830] Octal connectors

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 02:54:53 UTC
From: Ruben Echevarria KA2HHB
Topic: 31406 Message: 31409

Check with Gordon N6WK he may have them....
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: BIll
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 19, 2011 10:43 PM
Subject: [TS-520_820_530_830] Octal connectors

Hello to all,
anyone know a good source for the octal connector on the back of the 820??
73
Bill

[Non-text portions of this message have been removed]

31410. Re: [TS-520_820_530_830] Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 03:35:39 UTC
From: Chris Parnell
Topic: 31320 Message: 31410

Hi John,

Correct... I double checked last night and it was in CW.

Cheers
Chris

On 20/05/2011, at 2:54 PM, John Davidson wrote:

> If you tune up in the "tune" position, you only have about half power because
> the screen voltage is reduced in that mode. complete your tune and load
> adjustment in the "CW"mode.
> This is where you may see full recomended power and plate current readings.
>
> ----- Original Message ----
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, May 18, 2011 5:04:07 PM
> Subject: Re: [TS-520_820_530_830] Re: Transmit has died
>
> Good call Mike, I will double check later today.
>
> I am pretty certain I was in either Tune or CW though when I measured the
> voltages, but I may be wrong.
>
> Cheers
> Chris
>
>

[Non-text portions of this message have been removed]

31411. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 03:58:24 UTC
From: w5rkl
Topic: 7262 Message: 31411

Hello Dan,

Tuning up in TUNE then switching to CW, you would use the CAR control to adjust power output.

The 520 is rated at 160 watts DC input in CW mode, not 180 watts.

The 520 has a DC input power rating of 160 watts. The final amplifier has an efficiency rating of 55% which means normal power output in CW mode with 160 watts DC input will be 88 watts (160 - 45 % = 88 watts). When you tune the transmitter and the IP meter shows 250ma and output is 125 watts, adjust the CAR control for an IP indication of 200ma. With an IP indication of 200ma the HV will be approximately 800VDC which will result in a DC input power of 160 watts in CW mode. This is the normal power rating for the 520 in CW mode. Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating. You don't have to readjust anything.

Yes, the MIC gain, along with any ALC produced during sideband transmissions, controls power output in USB and LSB modes. If you follow the steps I indicated above you will be operating your 520 within the factory specs and you will not be overloading/pushing the final amplifier excessive. As I have said quite often, for a clean transmit signal in sideband, adjust the MIC gain while talking 1 to 2 inches from the microphone in a normal voice level so the ALC meter just starts to flicker above zero. This MIC gain setting will produces a very clean sideband transmission. It's not how LOUD you sound but how clean your transmit signal is. There are many stations that talk loud into the microphone, have the mic gain set too high or their external audio processing equipment is set so the ALC peaks well above middle and many times exceeds the top of the ALC scale just so they sound LOUD at the receiving end. Not only is that very poor operating practice but it causes adjacent frequency interference and pushes the final amplifier too hard. I hear a lot of those stations on 80 and 40 meters, just tune around and you'll hear them.

Remember, ALC does not cause your power output to increase. In fact, it's the opposite, power output is reduced when ALC is produced in sideband transmission.

As for adjusting the LOAD control to reduce power output, I do not recommend doing that. Tune for maximum power output as I stated above then reduce power using the CAR control for 200ma of IP current. Then adjust the MIC gain as I indicated above and you will be fine.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Mike,
>
> When I tune my TS-520 for 40m (on a dipole cut to resonance)I get about 120w out. I did

not note the exact Ip but the rig usually runs about 250ma. Do you think this is pushing the rig too hard? And if I want to cut back on the output, to take it easy on the final section, would I make that adjustment using the LOAD control to take some of the load off? Or should I cut back on the MIC gain control? I value your opinion and would greatly appreciate your comments.
>
> Thanks,
>
> Dan KI4AX
>

31412. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 05:11:25 UTC
From: Bob
Topic: 31206 Message: 31412

Ok, thanks for the info. I'll just check with those groups I guess. I'll continue to just enjoy my TS-520 anyway. ;-}
Bob, KD5MHQ

--- On Thu, 5/19/11, roberteleazer@... <roberteleazer@...> wrote:

From: roberteleazer@... <roberteleazer@...>
Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?
To: TS-520_820_530_830@yahoogroups.com
Date: Thursday, May 19, 2011, 6:00 PM

The situation on the Kenwood Hybrids Net is that a bunch of people would like to have one but there is a separate Yahoo group, Kenwood QSO set up to handle such coordination. And the Kenwwod QSO Group, while requiring memebrship in this group, is so hard to find on Yahoo that you seem to be only able to find it by first going to some kind of "microphone" group and linking to it from there.

And the last time anyone posted anything on the Kenwood QSO group was a couple of years ago, which I guess explains why we are talking about it here.

The summary of possible bands seems to be:

80M: Too local

40M: Possible

20M: Too crowded and often not good at night

15M: Possibly good if the members of the group are all either on the East Coast of the U.S. or in eastern Europe.

10M: Too sporatic.

So I guess we are down to 40M being it. Sounds Okay to me. We need a net control station or two with a good antenna system and located in a central location.

Robert

WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, Bob <bob4analog@...> wrote:

>

> Me too! So was there a decision about the Hybrids net? Sorry, I wasn't able to follow all the discussions about it.

>

> Bob, KD5MHQ

>

> --- On Wed, 5/18/11, mac.haszard <mac.haszard@...> wrote:

>

>

> Please keep me appraised of where and when too.

> My 520s yearns to converse with its kin...

> Mac / K6OVI

>

[Non-text portions of this message have been removed]

31413. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 05:15:52 UTC
From: Bob
Topic: 31206 Message: 31413

Sounds good! I'll check that.

Thanks!

Bob, KD5MHQ

--- On Thu, 5/19/11, n6wk@... <n6wk@...> wrote:

> There are a few of us that get
> together on 20 during the week and we
> never have had a real problem with the band being too
> crowded.
> I suggest something around 14.243 or so maybe even 14.237
> is also good.
> The Frequency we have been meeting on (a few of us) is
> 14.218 but this
> is outside the band for General class. We all started off
> running
> Hybrids, but rigs have changed in the last few years. Some
> run Collins
> now, some Kenwood's and some run Yaesu's
>
> 73,
> Gordon

31414. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 06:00:46 UTC
From: van wd8aam
Topic: 31206 Message: 31414

Here is the KENWOOD QSO yahoo groups URL:

http://groups.yahoo.com/group/KenwoodQSO/

van wd8aam

At 05:11 5/20/2011, you wrote:
>Ok, thanks for the info. I'll just check with
>those groups I guess. I'll continue to just enjoy my TS-520 anyway. ;-}
>Bob, KD5MHQ
>
>--- On Thu, 5/19/11,
><mailto:roberteleazer%40rocketmail.com>roberteleazer@...
><<mailto:roberteleazer%40rocketmail.com>roberteleazer@...> wrote:
>
>From:
><mailto:roberteleazer%40rocketmail.com>roberteleazer@...
><<mailto:roberteleazer%40rocketmail.com>roberteleazer@...>
>Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?
>To:
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com
>Date: Thursday, May 19, 2011, 6:00 PM
>
>The situation on the Kenwood Hybrids Net is that
>a bunch of people would like to have one but
>there is a separate Yahoo group, Kenwood QSO set
>up to handle such coordination. And the Kenwwod
>QSO Group, while requiring memebrship in this
>group, is so hard to find on Yahoo that you seem
>to be only able to find it by first going to
>some kind of "microphone" group and linking to it from there.
>
>And the last time anyone posted anything on the
>Kenwood QSO group was a couple of years ago,
>which I guess explains why we are talking about it here.
>
>The summary of possible bands seems to be:
>
>80M: Too local
>
>40M: Possible
>
>20M: Too crowded and often not good at night
>
>15M: Possibly good if the members of the group
>are all either on the East Coast of the U.S. or in eastern Europe.

>
>10M: Too sporatic.
>
>So I guess we are down to 40M being it. Sounds
>Okay to me. We need a net control station or two
>with a good antenna system and located in a central location.
>
>Robert
>
>WB5WSV
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>Bob <bob4analog@...> wrote:
>
> >
>
> > Me too! So was there a decision about the
> Hybrids net? Sorry, I wasn't able to follow all the discussions about it.
>
> >
>
> > Bob, KD5MHQ
>
> >
>
> > --- On Wed, 5/18/11, mac.haszard <mac.haszard@...> wrote:
>
> >
>
> >
>
> > >
>
> > Please keep me appraised of where and when too.
>
> > My 520s yearns to converse with its kin...
>
> > Mac / K6OVI
>
> >
>
> >
>[Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31415. Re: Transmit has died

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 12:44:04 UTC
From: Terry Wagoner
Topic: 31320 Message: 31415

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>Hi Chris-- Before you attempt to clean RL-1 or replace it take a look at Connector 5 on the IF board. It is a 3 terminal connector about 3/4 way toward the front of board right in front of ALC zero pot VR6. With meter in ALC position, rig in tune, flip to send and watch ALC meter and your wattmeter as you gently wiggle and/or tap on this connector. This connector works in concert with RL-1 and applies 9v on pin TB (transmit bias) that turns FETs Q28 and Q29 on and produces Transmit IF (TIF). No TIF means no drive, no ALC indication on meter, and no RF output. I have found that the connectors are a weak point. The connector socket mounted on the board can have bad connections due to cracked/lifted foils or poor factory soldering. Plugging and un-plugging connector typically wont fix this problem. I can give you some tips how to resolder if you find it is the problem. 73s Terry K9TW

> The relay Terry is referring to is on the AF Unit board. This relay controls quite a few circuits when switching between receive and transmit. This is the same relay used in the TS-530 on the IF Unit board plus the TS-120 (there are 2 of them), TS-130 (also 2 of them), and other Kenwood transceivers.
>
> While "very carefully" cleaning this relay may "appear" to fix any problems the relay has caused, the fix is quite often short lived. Therefore, if you suspect this relay is bad, replace it, don't waste your time cleaning it.
>
> A few of the circuits the AF Unit relay controls/switches (receive to transmit and vice verse) are:
>
> Meter from displaying S Units in receive to displaying what ever the meter switch is set to.
>
> Bias levels to the driver tube (DRB), Transmit Bias (TB) to the IF Unit, and bias voltage level to both final tubes.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Chris--I forgot to mention some folks have some success with a "tap" test on RL1
> > relay. You need the rig on its side and while tuning and experiencing the
> > intermittent ALC you can take an insulated tool and gently tap on the plastic
> > case while watching the ALC reading. If this makes a difference you can try to
> > clean the contacts. It is not easy to pop the cover and you can easily damage
> > the relay. Maybe Mike or Gordon have a tool or tip for popping the cover? Terry
> >

> >
> >
> > _____
> > From: Terry Wagoner <wagstw46@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, May 19, 2011 7:17:45 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> >
> > Hi Chris--Your tune up procedure sounds OK to me. I have a new driver tube in as
> >
> > my 830 as the drive had started to slowly drift off during tune. I generally
> > never have to have carrier control much above about 9:00 for 3/4+ meter
> > deflection. In fact almost always have to turn carrier control down to keep it
> > from pegging. When you are varying the drive control (you are driving the
> > chains and varying the variable caps on the RF board) do you get a point where
> > you see a peak on your wattmeter? I will let Mike address this as he is truly an
> >
> > expert. I know there are issues with the Omron relay on bottom of rig on the
> > Audio board. Some folks carefully pop the plastic cover off and clean the
> > contacts with paper wetted with de-oxit. Ken K4EAA sells and exact replacement.
> > I bought one from him as a spare for future. Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, May 19, 2011 12:00:38 AM
> > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> >
> > Hi Terry & Mike... thanks for all of the info
> >
> > Well, I am not sure what is happening with my 830s. - I went home at lunch today
> >
> > and changed the 10K resistor for a 4.7K as recommended.
> > I tested the cathode resistance and it is 5.3Ohms
> >
> > I really am wondering if there is an alignment or tube / driver issue.. I am
> > getting VERY ODD intermittent results... i.e
> >
> > Tune up procedure:
> > â□¢ USB, IP - Key rig and Meter shows IP of 60mA , which we know is good.
> >
> > â□¢ Flick to Tune position
> > â□¢ Set the load control to minimum - adjust plate control for band
> >
> > â□¢ Set to ALC, turn carrier to around 1/2 to 3/4 control
> > â□¢ Flick SEND switch and peak drive control
> >
> > Symptom:

> > OK - here is where I start to see problems - Sometimes I get the meter pegging
> > (even when I reduce the carrier to zero it doesn't alter).... other times the
> > ALC goes up to around half of the meter reading (which is just above the ALC
> > deflection scale)... one thing that I did notice is that altering the Drive
> > control makes no difference at all to the reading.
> >
> > â□¢ Switch meter to IP, Flick Send Switch and use the Plate control to dip the
> > meter
> >
> > Symptom:
> > Again I appear to be having intermittent issues here where IF I HAVE enough IP
> > reading, I can dip the meter with the Plate control, but often I have such a low
> >
> > IP reading at this point in time it's hard to see.
> >
> > etc etc...
> >
> > As a very quick test I tuned for maximum Power out on my external meter (which
> > is fine by the way, I tested it on another radio), and again it will give me
> > around 55W (when lucky)... the IP reading around 80mA - 110mA now (which is more
> >
> > in line having swapped the 10K resistor for 4.7K).
> >
> > When I get time later tonight, I will have to do some voltage readings (Again)
> > :(- Any other suggestions?
> >
> > Thanks
> > Chris Parnell
> >
> > On 19/05/2011, at 12:37 PM, Terry Wagoner wrote:
> >
> > > Mike--I did back of envelope calcs which revealed meter requires 1.0 volt drop
> > >
> > >
> > > across R10 for full scale deflection. That equates to approx .0286 vdc per
> > > >meter
> > > >
> > > division across R10. The more useful measure would be the drop across the
> > > cathode resistors. With 350 ma being indicated full scale reading that equates
> > >
> > >
> > > to approx 1.75 vdc or 0.05 vdc per each of the 35 graduated marks on the meter.
> > > >
> > > >
> > > So if you want to know how much drop you should see across your 5 ohm cathode
> > > resistors just multiply the indicated number of graduations x .05v. For
> > > >example:
> > > >
> > > 225 ma = 22.5 marks and 22.5 x 0.05 = 1.125 vdc across the cathode resistors. I

> > >
> > >
> > > cant work with all the decimal points that you can! Thanks for explaining that
> >
> >
> > > the different schematic and meter multipliers is for the 830M. Havent used ohms
> > >
> > >
> > > law this much since I told my professor I would rather take a sharp stick in
> > >the
> > >
> > > eye than learn Ohms Law! Sure glad he convinced me otherwise. 73s Terry
> > >
> > > From: w5rkl <w5rkl@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Wed, May 18, 2011 6:51:52 PM
> > > Subject: [TS-520_820_530_830] Re: Transmit has died
> > >
> > > Chris and others,
> > >
> > > The "10K" resistor for R10 is for the TS-830M. R10 in the TS-830S is 4.7K.
> > > Replace the 10K with a 4.7K if your TS-830 is NOT the "M" model. The "M" model
> >
> >
> > > has "AM" mode which the TS-830S does not have.
> > >
> > > Lets assume the final amplifier is producing a cathode voltage of 1.125VDC at
> > > full output.
> > >
> > > Lets also assume that R10 is 4.7K and R6 is 2.7K, both resistors are within
> > > tolerance.
> > >
> > > Using ohms law, you can determine the voltage at the junction of R6 and R10
> > > which is fed to the meter when the meter switch is set to IP in transmit mode.
> >
> >
> > > The following examples assume the 830 is producing a stable full carrier output
> > >
> > >
> > > in CW mode, not sideband. Sideband will cause the cathode voltage to "vary"
> > > because of the variable frequencies in the audio applied to the balance
> > > modulator which causes the RF power to vary based on the speech amplifier's
> > > output.
> > >
> > > So, we first have to determine the current through R6 and R10. We do this
> > > because we have 2 of the required values, Resistance and voltage, but we don't
> >
> >
> > > have the 3rd, the current. To get the current we use ohms law, I = E / R.

> > >
> > > Therefore, with 1.125VDC applied to the series string of R6 and R10, the
> > >current
> > >
> > > through the string will be:
> > >
> > > 1.125 / 7400 = .000152027
> > >
> > > Now to determine the voltage drop across R6 we use ohms law again,
> > >
> > > E = I x R
> > >
> > > .000152027 x 2700 = .410472VDC
> > >
> > > The remaining .714527VDC will be dropped across R10.
> > >
> > > .000152027 x 4700 = .714527VDC
> > >
> > > I rounded off the last digit "6" to "7" since the next digit after "6" is "9".
> > >
> > >
> > >
> > > Are we sure this is correct? We can determine this by adding both voltage
> > >drops,
> > >
> > > .410472 and .714527 together. If they equal the source voltage of "1.125VDC"
> > > then we have done our math right and .410472VDC is the correct voltage drop
> > > across R6.
> > >
> > > .410472 + .714527 = 1.12499997VDC
> > >
> > > Close enough for Government work so our math is right.
> > >
> > > Now, lets see what happens when we change R10 to "10K" but leave R6 at 2.7K.
> > >
> > > First, we need the total resistance which is 12.7K,
> > >
> > > 2700 + 10000 = 12700
> > >
> > > Next, we need to determine the current through R6 and R10 which is
> > >
> > > I = E / R
> > >
> > > or
> > >
> > > 1.125 / 12700 = .0000885826
> > >
> > > Next, we determine the voltage drop across R6, which is 2.7K.
> > >

> > > E = I x R
> > >
> > > .0000885826 x 2700 = .239173
> > >
> > > Again, the remaining voltage is dropped across R10 which is now 10K
> > >
> > > .0000885826 x 10000 = .885826VDC
> > >
> > > Check out math;
> > >
> > > .239173 + .885826 = 1.124999VDC
> > >
> > > So we are correct in our calculations. But, there is a difference.
> > >
> > > Notice the different voltage drop across R6 with R10 being 10K. That's a
> > > difference of
> > >
> > > .410472 - .239173 = .171254VDC
> > >
> > > That may not seem like a lot but it can result in an erroneous IP meter
> > > indication.
> > >
> > > If you swapped R6 and R10 around, meaning R6 would be 4700 and R10 would be
> > > 2700, the meter would be looking at a different voltage drop across R6. Try it
> >
> >
> > > to see what you get.
> > >
> > > Therefore, change R10 back to 4.7K 1/2 watt and ensure R6 is 2.7K 1/2 watt,
> > >both
> > >
> > > within tolerance of 10%. This will make the IP meter display the correct
> > >cathode
> > >
> > > current.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> > > >
> > > > OK Chris not questioning your competence just trying to cover all bases. It
> > >is
> > >
> > > >
> > > > easy to make a mistake. I of course never have! Yes 5.4 ohms is good and well
> > >
> > >

> > > > within tolerance for your new cathode resistors. So if your .417 volts across
> > > >
> > > >
> > > > the 5.4 ohm cathode resistors is correct then you only have approx 80 ma of
> > > > plate current and not 160 ma. That is Ohms law and would account for your low
> > > >
> > > >
> > > > output power. Unless of course the .417 wasnt read keydown in CW mode. I will
> > > >
> > > >
> > > > back out now as you are getting lots of help and Mike and others are more
> > > > experienced than I am. I will read with interest as I want to learn from
> > >this.
> > > >
> > > >
> > > > 73s Terry
> > > > >
> > > > >
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Wed, May 18, 2011 5:16:06 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > >
> > > > Hi Terry, -
> > > > >
> > > > > The external meter is a watt meter-- correct?
> > > > > >
> > > > >
> > > > Yes the external meter is a Wattmeter.
> > > > >
> > > > > The 160 ma is the IP reading on your rig meter-- correct?
> > > > > >
> > > > Correct.
> > > > >
> > > > > .417 volts across a 5 ohm cathode resistor you cannot have 160ma plate
> > > > >current. Unless your 5 ohm cathode
> > > > > >
> > > > > resistors are not actually 5 ohms.
> > > > > >
> > > > Well that;s what the meter on the 830 is telling me Terry... I will check
> > > >again,
> > > > >
> > > > but I only just replaced the cathode resistors as one was open, so I replaced
> > > >
> > > >
> > > > all four to be on the safe side.
> > > > Once replaced, I checked and they was reading around 5.4 Ohms when in-line,

> > >so
> > >
> > >
> > > > that should be good.
> > > >
> > > > > I would go back and read the parallel combination of your 4 -20 ohm
> > > >resistors.
> > > > >
> > > > >
> > > > I will do this later.
> > > > >
> > > > > Maybe you read the color code wrong
> > > > > when you replaced them. It is easy to do.
> > > > > >
> > > > >
> > > > No, they were in a pack from Jaycar Electronics - pack of 8 x 1/2 watt 20Ohm
> > >
> > >
> > > > resistors... I also measured them before putting them into the final unit. 20
> > > >
> > > >
> > > > Ohms (give or take) each.
> > > > >
> > > > > Also, my schematic shows R10 to be
> > > > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> > > >multipliers
> > > > >
> > > > >are approx 2/3 ratio.
> > > > > >
> > > > >
> > > > This (I think), is where the problem may lie. - As i stated in my original
> > >post
> > > >
> > > > >
> > > > about this, I have two different final unit schematics...one shows R10 as a
> > > >4.7K
> > > > >
> > > > resistor, the other shows R10 as a 10K resistor... which is why I asked what
> > >
> > >
> > >the
> > > > >
> > > > value of R10 should be.... - The R10 resistor that I removed read around 6.7K
> > > >
> > > >-
> > > >
> > > > >
> > > > I assumed that it was supposed to be 4.7K and reading high, and was about to
> > >

> >
> > > > swap it for another 4.7K that I have, but then saw the second schematic
> > >showing
> > >
> > > >
> > > > R10 as a 10K resistor... confused, so I asked the question on here.
> > > >
> > > > What I may do, is replace the 10K resistor that is now in the R10 position
> > >with
> > >
> > > >
> > > > a 4.7K resistor and see what the meter reads. - Naturally, this will not
> > >alter
> > >
> > >
> > > > the power out problem I have.
> > > >
> > > > Just for reference, I follow the K4EAA tune up procedure to the letter, but
> > > > since my TX died, I have no more than around 55W out and the IP reads low
> > > > (around 160mA maximum for the maximum power out that I can obtain.... - 55W)
> > > >
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 18/05/2011, at 11:49 PM, Terry Wagoner wrote:
> > > >
> > > > > Chris---The external meter is a watt meter-- correct? The 160 ma is the IP
> > >
> > >
> > > > > reading on your rig meter-- correct? With .417 volts across a 5 ohm cathode
> > > >
> > > >
> > > > > resistor you cannot have 160ma plate current. Unless your 5 ohm cathode
> > > > > resistors are not actually 5 ohms. I would go back and read the parallel
> > > > > combination of your 4 -20 ohm resistors. Maybe you read the color code
> > >wrong
> > > >
> > > >
> > > > > when you replaced them. It is easy to do. Also, my schematic shows R10 to
> > >be
> > > >
> > > >
> > > > > 4.7k ohm and that is what is installed in my rig. R6 is 2.7k so my
> > > >multipliers
> > > >
> > > >
> > > > > are approx 2/3 ratio. I dont know what the panel meter FS is or the

> > >internal
> > >
> > >
> > > > > resistance. I suppose it is possible that Kenwood used different meters for
> > >
> > >
> > > > > different production runs but that would be unusual. The pros on here would
> > >
> > >
> > > > > >know
> > > > >
> > > > > if they used different meters that required different meter multipliers. If
> > >
> > >
> > > > > your 160 ma IP reading is correct then .417/.160 = 2.60 ohm cathode
> > >resistor.
> > >
> > > > >
> > > > > Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Wed, May 18, 2011 7:13:29 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > >
> > > > > Hi Terry,
> > > > >
> > > > > I am seeing around 160 mA at the highest power out (on an external Meter).
> > > > >
> > > > > I swapped what was a 6.8K resistor for a 10K resistor in the multipliers
> > >(R10
> > >
> > > > >
> > > > > >on
> > > > >
> > > > > the final unit).
> > > > >
> > > > > Thanks
> > > > > Chris
> > > > >
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/05/2011, at 23:08, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > > Chris---0.417 volts across your 5 ohm cathode resistor is about 1/3 of
> > >what
> > >

> > > >
> > > > >you
> > > > >
> > > > > >
> > > > > > should see at full load. 0.417v divided by 5 ohms equals approx 80ma
> > >plate
> > >
> > >
> > > > > > current. Is that what your IP reading is on the rig panel meter? 80ma x
> > > >820v
> > > >
> > > > >=
> > > > >
> > > > >
> > > > > > 68 watts x 65% efficiency = 45 watts key down output power. I think you
> > > >said
> > > >
> > > >
> > > > > > you were getting about 50 watts out. Your screen voltage is OK so if your
> > >
> > >
> > > > >plate
> > > > >
> > > > > >
> > > > > > voltage is good then output power you are seeing is correct for how you
> > > >have
> > > >
> > > >
> > > > > >the
> > > > > >
> > > > > > rig loaded. If your panel meter Is Not reading 80 ma then your meter
> > > > > > multipliers are not right. I think you said you replaced one of them? I
> > >am
> > >
> > >
> > > > >sure
> > > > >
> > > > > >
> > > > > > someone else will do the calcs and verify my assessment. I dont think
> > >there
> > >
> > >
> > > > >is
> > > > >
> > > > >
> > > > > > anything wrong with your tubes or power supplies. I would take a look at
> >
> >
> > > >your

> > > >
> > > > >
> > > > > > meter multipliers again. Keep at it you will solve this one. 73s Terry
> > > K9TW
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Wed, May 18, 2011 5:41:33 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Transmit has died
> > > > > >
> > > > > > Hi Mike and all..
> > > > > >
> > > > > > Tonight I have done some voltage measurements on the tubes, as follows:-
> >
> > >-
> > >
> > >
> > > > > >
> > > > > > Pins 1, 4 and 6 are :
> > > > > >
> > > > > > 0V in RX and 0.417V in TX
> > > > > >
> > > > > > Pin 3 RX is 242V and in TX it drops to 228V
> > > > > >
> > > > > > Pin 5 RX is -94.8V and in TX it is -42.2V
> > > > > >
> > > > > > These are exactly the same for both tubes.
> > > > > >
> > > > > > Any comments very welcomed:
> > > > > >
> > > > > > Thanks
> > > > > > Chris, ZL1CDP
> > > > > >
> > > > > > On 16/05/2011, at 10:34 AM, w5rkl wrote:
> > > > > >
> > > > > > > Chris,
> > > > > > >
> > > > > > > Have you measured the final tube's screen voltage and compared the
> > > >voltages
> > > > > >
> > > > > >
> > > > > > >between the two tubes? If not then I recommend you do that.
> > > > > > >
> > > > > > >
> > > > > > > You can't tell how good a tube is working by simply feeling the bulb
> > > > > > >temperature. Voltage checks and comparisons between the two final tubes
> >
> >

> > > >will
> > > >
> > > > >
> > > > > > >tell you more about the final tubes than anything else you can do.
> > > > > > > >
> > > > > > > > 73s
> > > > > > > > Mike
> > > > > > > > W5RKL
> > > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >
> > > >
> > > > >
> > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Hi Gordon,
> > > > > > > > > >
> > > > > > > > > Originally... I was getting around 200mA for around 75w... then it
> > > > > >dropped
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >around 50w at 200mA etc.
> > > > > > > > > >
> > > > > > > > > I have suspected the tubes were on their way out for a while - A
> > > >friend
> > > >
> > > >
> > > > >of
> > > > >
> > > > >
> > > > > > >mine who helped with a repair said that he thought on one of the tubes
> > > >was
> > > >
> > > >
> > > > > > >drawing more current than the other, as one was much hotter than the
> > > > >other.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 16/05/2011, at 9:48 AM, n6wk@ wrote:
> > > > > > > > > >
> > > > > > > > > > Hi Chris,
> > > > > > > > > > If one final is lite, the other must be too. The filaments are
> > > >wired
> > > >

> > > >in
> > > >
> > > > >
> > > > > > > > > > series.
> > > > > > > > > > Check the resistors on the Rectifier board to see if any have gone
> >
> > >up
> > >
> > > >
> > > > >in
> > > > > >
> > > > > >
> > > > > > > > > > > value or opened.
> > > > > > > > > > > What sort of IP were you showing at 50W out before nothing?
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 5/15/2011 2:31 PM, Chris Parnell wrote:
> > > > > > > > > > >>
> > > > > > > > > > >> Hi All,
> > > > > > > > > > >>
> > > > > > > > > > >> Had my 830 working nicely until Saturday... for some reason I was
> >
> >
> > > > > > > > > > >> struggling to get above 50W on tune up and then suddenly nothing
> > > > >out.
> > > > > > > > > > >> The HV reading is still there... looking through the final cage, I
> > > >
> > > >
> > > > >can
> > > > >
> > > > > >
> > > > > > > > > > > see one of the tube filaments is light, but can't tell if the
> > > >other
> > > >
> > > >
> > > > > > > > > > > is... I am suspecting not.
> > > > > > > > > > >>
> > > > > > > > > > >> Just to clarify, I get no IP movement, no RF out and no ALC meter
> >
> >
> > > > > > > > > > >> movement either.
> > > > > > > > > > >>
> > > > > > > > > > >> Am I right in thinking the tube(s) are likely EOL?
> > > > > > > > > > >>
> > > > > > > > > > >> Thanks
> > > > > > > > > > >> Chris, ZL1CDP
> > > > > > > > > > >>

> > > > > > > > >>
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ------------------------------------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > > >
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> > > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > ----------------------------------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
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> > > > > Yahoo! Groups Links
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> > Yahoo! Groups Links
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> > [Non-text portions of this message have been removed]
> >
>

31416. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 08:14:27 UTC
From: AB9MS
Topic: 31206 Message: 31416

I've never been net controller before also. I'm just going to call CQ 20MAY11 on 14.250 +/- and see if I can contact anyone. Calling it a net at this stage would be a stretch. :) It seems a good place to start. Evening would work other times, I can't be sure I"m going to be home this Friday. Perhaps we can try Saturday Even as well.
How does CQ KenwoodQSO sound to everyone. I'll repost this on the KenwoodQSO group as well.

--- On Thu, 5/19/11, ki4ax <dan8barb@...> wrote:

> From: ki4ax <dan8barb@...>
> Subject: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, May 19, 2011, 7:12 PM
> Robert,
>
> I have been over to the QSO group and there is about 10 new
> members but not much traffic. I can provide a link if anyone
> is interested; I did post it a couple of days ago but will
> post it again if needed. 40m sounds good to me. I am in
> Florida so I am not in a good location for net control; and
> I have never been net control so I would not be a good
> candidate. I'm sure if you name a frequency and a time you
> will have a lot of people show up.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com,
> "roberteleazer@..." <roberteleazer@...> wrote:
> >
> > The situation on the Kenwood Hybrids Net is that a
> bunch of people would like to have one but there is a
> separate Yahoo group, Kenwood QSO set up to handle such
> coordination.   And the Kenwwod QSO Group,
> while requiring memebrship in this group, is so hard to find
> on Yahoo that you seem to be only able to find it by first
> going to some kind of "microphone" group and linking to it
> from there.
> >
> > And the last time anyone posted anything on the
> Kenwood QSO group was a couple of years ago, which I guess
> explains why we are talking about it here.
> >
> > The summary of possible bands seems to be:
> >
> > 80M: Too local
> >

> > 40M: Possible
> >
> > 20M: Too crowded and often not good at night
> >
> > 15M: Possibly good if the members of the group
> are all either on the East Coast of the U.S. or in eastern
> Europe.
> >
> > 10M: Too sporatic.
> >
> > So I guess we are down to 40M being it. Sounds
> Okay to me. We need a net control station or two with
> a good antenna system and located in a central location.
> >
> > Robert
> > WB5WSV
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com,
> Bob <bob4analog@> wrote:
> > >
> > > Me too! So was there a decision about the Hybrids
> net? Sorry, I wasn't able to follow all the discussions
> about it.
> > >
> > > Bob, KD5MHQ
> > >
> > > --- On Wed, 5/18/11, mac.haszard
> <mac.haszard@> wrote:
> > >
> > >
> > > Please keep me appraised of where and when too.
> > > My 520s yearns to converse with its kin...
> > > Mac / K6OVI
> > >
> >
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

31417. re:Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-19 19:01:57 UTC
From: AB9MS
Topic: 31206 Message: 31417

I started a thread on KenwoodQSO group. I will be calling CQ Friday May 20,2011 at 9AM-9:45 Central (14:00 UTC) on or about 14.250 for tubes and hybrids. Not exactly a net operation but a start.
AB9MS

--- On Thu, 5/19/11, Bob <bob4analog@...> wrote:

> From: Bob <bob4analog@...>
> Subject: Re: [TS-520_820_530_830] Kenwood Hybrids net ...When, Where?
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, May 19, 2011, 12:44 AM
> Me too! So was there a decision about
> the Hybrids net? Sorry, I wasn't able to follow all the
> discussions about it.
>
> Bob, KD5MHQ
>
> --- On Wed, 5/18/11, mac.haszard <mac.haszard@...>
> wrote:
>
>
> Please keep me appraised of where and when too.
> My 520s yearns to converse with its kin...
> Mac / K6OVI

31418. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 15:50:06 UTC
From: ki4ax
Topic: 7262 Message: 31418

Mike, Thanks for the great info. I will try this next time I tune the rig; I certainly don't want to cause any damage to the finals. I have another set ready to go in when the existing ones decide to go out... so far I don't see any indication that I need to do that yet. If I take it easy with the existing ones perhaps they will last another 30 years.

Thanks again.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Dan,
>
> Tuning up in TUNE then switching to CW, you would use the CAR control to adjust power output.
>
> The 520 is rated at 160 watts DC input in CW mode, not 180 watts.
>
> The 520 has a DC input power rating of 160 watts. The final amplifier has an efficiency rating of 55% which means normal power output in CW mode with 160 watts DC input will be 88 watts (160 - 45 % = 88 watts). When you tune the transmitter and the IP meter shows 250ma and output is 125 watts, adjust the CAR control for an IP indication of 200ma. With an IP indication of 200ma the HV will be approximately 800VDC which will result in a DC input power of 160 watts in CW mode. This is the normal power rating for the 520 in CW mode. Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating. You don't have to readjust anything.
>
> Yes, the MIC gain, along with any ALC produced during sideband transmissions, controls power output in USB and LSB modes. If you follow the steps I indicated above you will be operating your 520 within the factory specs and you will not be overloading/pushing the final amplifier excessive. As I have said quite often, for a clean transmit signal in sideband, adjust the MIC gain while talking 1 to 2 inches from the microphone in a normal voice level so the ALC meter just starts to flicker above zero. This MIC gain setting will produces a very clean sideband transmission. It's not how LOUD you sound but how clean your transmit signal is. There are many stations that talk loud into the microphone, have the mic gain set too high or their external audio processing equipment is set so the ALC peaks well above middle and many times exceeds the top of the ALC scale just so they sound LOUD at the receiving end. Not only is that very poor operating practice but it causes adjacent frequency interference and pushes the final amplifier too hard. I hear a lot of those stations on 80 and 40 meters, just tune around and you'll hear them.
>
> Remember, ALC does not cause your power output to increase. In fact, it's the opposite, power output is reduced when ALC is produced in sideband transmission.
>
> As for adjusting the LOAD control to reduce power output, I do not recommend doing that.

Tune for maximum power output as I stated above then reduce power using the CAR control for 200ma of IP current. Then adjust the MIC gain as I indicated above and you will be fine.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > Mike,
> >
> > When I tune my TS-520 for 40m (on a dipole cut to resonance)I get about 120w out. I did not note the exact Ip but the rig usually runs about 250ma. Do you think this is pushing the rig too hard? And if I want to cut back on the output, to take it easy on the final section, would I make that adjustment using the LOAD control to take some of the load off? Or should I cut back on the MIC gain control? I value your opinion and would greatly appreciate your comments.
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31419. Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 16:15:25 UTC
From: John Davidson
Topic: 31206 Message: 31419

You gave no time. I don't get home from work until after 2200 UT.
Doubt I can reach 9land on 20 M from Detroit anyway.

From: AB9MS <ab9ms@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, May 20, 2011 4:14:27 AM
Subject: Re: [TS-520_820_530_830] Re: Kenwood Hybrids net ...When, Where?

I've never been net controller before also. I'm just going to call CQ 20MAY11 on
14.250 +/- and see if I can contact anyone. Calling it a net at this stage would
be a stretch. :) It seems a good place to start. Evening would work other times,
I can't be sure I"m going to be home this Friday. Perhaps we can try Saturday
Even as well.
How does CQ KenwoodQSO sound to everyone. I'll repost this on the KenwoodQSO
group as well.
> about keep me appraised of where and when too.
> > > My 520s yearns to converse with its kin...
> > > Mac / K6OVI
> > >
> >

[Non-text portions of this message have been removed]

31420. FS: TS-830S Gold Edition

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-20 22:55:51 UTC
From: KA5TRO
Topic: 31420 Message: 31420

Bought this a while back as part of an SK estate locally (northeastern Oklahoma). I already have a TS-830S Gold (as well as a TS-530SP, which may be offered up soon as well) so this is surplus to my needs. I bought the lot primarily to get a couple of other pieces of gear (along with this, too, to be fair), and I want to pass this along to someone who will appreciate it.

TS-830S Gold Edition. Cosmetically very good to excellent-minus. Minor scratching on case and minor finger "shine" wear on faceplate -- no scratching on faceplate at all. I've cleaned it up and tested it and it has full output on all bands. Includes extension feet. I have the original manual as well (though the SK taped the spine with duct tape and it's in fair condition overall). I'll include a 'generic' hand mike correctly wired. Sorry, I don't have the original mike.

Only problem with it right now is that I broke the plate pointer in half when I was cleaning it up. I'm expecting a replacement from KE5FTF when he gets back from Okinawa. I'll send that after the fact if need be.

Photos available on request.

Asking $400 shipped in CONUS. As this is a heavy rig, shipping will not be inexpensive, so I think this is a fair price.

Contact me off-list at [mycallsign]@... with questions, offers, etc. I could be persuaded to trade this for the right trade offer. Offering it to this group first before taking it to QTH/QRZ/eHam.

Thanks for looking.

Tony KA5TRO

[Non-text portions of this message have been removed]

31421. Re: [TS-520_820_530_830] FS: TS-830S Gold Edition

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-21 02:39:00 UTC
From: KA5TRO
Topic: 31420 Message: 31421

Already sold to WB7UQU! Must have priced it too low! :-D Thanks for the inquiries -- there were several.

Now, I *also* have an SP-230 available. WB7UQU didn't want it. It's in similar condition -- very good to excellent-minus. Mostly finger "shine" on the front. No connecting cable (1/8" phone to RCA). Includes extension feet.

Asking $65 shipped. Same contact. Thanks.

Tony KA5TRO

----- Original Message -----
From: KA5TRO
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 20, 2011 5:55 PM
Subject: [TS-520_820_530_830] FS: TS-830S Gold Edition

Bought this a while back as part of an SK estate locally (northeastern Oklahoma). I already have a TS-830S Gold (as well as a TS-530SP, which may be offered up soon as well) so this is surplus to my needs. I bought the lot primarily to get a couple of other pieces of gear (along with this, too, to be fair), and I want to pass this along to someone who will appreciate it.

TS-830S Gold Edition. Cosmetically very good to excellent-minus. Minor scratching on case and minor finger "shine" wear on faceplate -- no scratching on faceplate at all. I've cleaned it up and tested it and it has full output on all bands. Includes extension feet. I have the original manual as well (though the SK taped the spine with duct tape and it's in fair condition overall). I'll include a 'generic' hand mike correctly wired. Sorry, I don't have the original mike.

Only problem with it right now is that I broke the plate pointer in half when I was cleaning it up. I'm expecting a replacement from KE5FTF when he gets back from Okinawa. I'll send that after the fact if need be.

Photos available on request.

Asking $400 shipped in CONUS. As this is a heavy rig, shipping will not be inexpensive, so I think this is a fair price.

Contact me off-list at [mycallsign]@... with questions, offers, etc. I could be persuaded to trade this for the right trade offer. Offering it to this group first before taking it to QTH/QRZ/eHam.

Thanks for looking.

Tony KA5TRO

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31422. how big a freq change before tuning again?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-21 20:21:16 UTC
From: ktwhy2003
Topic: 31422 Message: 31422

Maybe a duh question, but how big a change in frequency can I make on my TS-830S before I have to re-tune the plate and load again?

31423. Re: [TS-520_820_530_830] how big a freq change before tuning again?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-21 20:34:51 UTC
From: Joseph Stiles
Topic: 31422 Message: 31423

ktwhy2003,

In theory, any change in frequency other than the one that you "tuned-up on" requires a change in the, "drive," "load," and "plate" adjustments. If it is minor...it is just a "few tweaks," and can be done quickly. If you are adjusting while "on air,"....inquire if freq. is busy... announce your call...and that your are testing...if done right...10-15 seconds.....

73's joe wb7uqu

From: ktwhy2003 <ktwhy2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 21, 2011 1:21 PM
Subject: [TS-520_820_530_830] how big a freq change before tuning again?

Maybe a duh question, but how big a change in frequency can I make on my TS-830S before I have to re-tune the plate and load again?

[Non-text portions of this message have been removed]

31424. Re: how big a freq change before tuning again?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-21 20:57:32 UTC
From: ktwhy2003
Topic: 31422 Message: 31424

ok,, kind of what I though, I've been dialing around 20m all afternoon, and have gotten on the air.. listening to the net on 14.3 and hopping around. But being new to hybrids the whole process makes me nervous (not got for some body that suffers from panic attacks as it is).

I was using a TS-50S on loan to me, and with my TS-830S is a lot nicer rig, I do appreciate the simplicity of solid state also.

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> ktwhy2003,
>
> Â Â In theory, any change in frequency other than the one that you "tuned-up on" requires a change in the, "drive," "load," and "plate" adjustments. If it is minor...it is just a "few tweaks," and can be done quickly. If you are adjusting while "on air,"....inquire if freq. is busy... announce your call...and that your are testing...if done right...10-15 seconds.....................
>
> Â Â Â Â Â Â Â Â 73'sÂ Â Â joeÂ Â wb7uqu
>
>
> _____
> From: ktwhy2003 <ktwhy2003@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Saturday, May 21, 2011 1:21 PM
> Subject: [TS-520_820_530_830] how big a freq change before tuning again?
>
>
> Â
> Maybe a duh question, but how big a change in frequency can I make on my TS-830S before I have to re-tune the plate and load again?
>
>
>
>
> [Non-text portions of this message have been removed]
>

31425. Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-21 21:24:39 UTC
From: n6wk_skcc3
Topic: 31425 Message: 31425

I am listening on 14.242 right now at 21:20 UTC

Gordon
N6WK

31426. Re: Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 00:38:23 UTC
From: n6wk_skcc3
Topic: 31425 Message: 31426

Thank you to everyone that came on and worked me today. I had to move down to 14.240 due to QRM from a station on 14.243.
It was a blast working you all on this TS-830S. I sure hope we can do it again.
best 73 to all,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com, "n6wk_skcc3" <n6wk@...> wrote:
>
> I am listening on 14.242 right now at 21:20 UTC
>
> Gordon
> N6WK
>

31427. RE: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 00:54:45 UTC
From: Jan
Topic: 31425 Message: 31427

I was not able to work you, but I heard you 55 in Norway on 14420 2200UTC. I think you had a QSO with WB2TFM, but I'm not sure. Too much QRM.

73

Jan- LA2XSA

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of n6wk_skcc3
Sent: Sunday, May 22, 2011 2:38 AM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242

Thank you to everyone that came on and worked me today. I had to move down to 14.240 due to QRM from a station on 14.243.
It was a blast working you all on this TS-830S. I sure hope we can do it again.
best 73 to all,
Gordon
N6WK

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "n6wk_skcc3" <n6wk@...> wrote:
>
> I am listening on 14.242 right now at 21:20 UTC
>
> Gordon
> N6WK
>

[Non-text portions of this message have been removed]

31428. Re: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 01:05:43 UTC
From: Sandy
Topic: 31425 Message: 31428

Thanks Gordon for the QSO today.

It was good hearing you on the air, and working 830 to 830 made it great!!

I heard the qrm and figured you might be up or down a few.

73 es gl

Sandy - n9pgo

On 5/21/2011 7:38 PM, n6wk_skcc3 wrote:
>
> Thank you to everyone that came on and worked me today. I had to move
> down to 14.240 due to QRM from a station on 14.243.
> It was a blast working you all on this TS-830S. I sure hope we can do
> it again.
> best 73 to all,
> Gordon
> N6WK
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > I am listening on 14.242 right now at 21:20 UTC
> >
> > Gordon
> > N6WK
> >
>
>

[Non-text portions of this message have been removed]

31429. Re: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 01:13:07 UTC
From: n6wk@n6wk.com
Topic: 31425 Message: 31429

Hi Jan,
Sure would have been great to get you in the log as well today.
I am sorry i didn't get to work you. Perhaps next time.
best 73 and thanks for being there

Gordon
N6WK

On 5/21/2011 5:54 PM, Jan wrote:
>
> I was not able to work you, but I heard you 55 in Norway on 14420
> 2200UTC. I
> think you had a QSO with WB2TFM, but I'm not sure. Too much QRM.
>
> 73
>
> Jan- LA2XSA
>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of n6wk_skcc3
> Sent: Sunday, May 22, 2011 2:38 AM
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Subject: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242
>
> Thank you to everyone that came on and worked me today. I had to move down
> to 14.240 due to QRM from a station on 14.243.
> It was a blast working you all on this TS-830S. I sure hope we can do it
> again.
> best 73 to all,
> Gordon
> N6WK
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "n6wk_skcc3" <n6wk@...>
> wrote:
> >
> > I am listening on 14.242 right now at 21:20 UTC
> >
> > Gordon
> > N6WK
> >

>
> [Non-text portions of this message have been removed]
>
>

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31430. Re: [TS-520_820_530_830] Re: Knwood Hybrid on 14.242

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 01:14:34 UTC
From: n6wk@n6wk.com
Topic: 31425 Message: 31430

Hi Sandy,
Thank you! The pleasure was mine. It was great to discuss the fixes to
different issues on the TS-830 with you.
I do hope we get to do it again and continue on the subject.

best 73,
Gordon
N6WK

On 5/21/2011 6:05 PM, Sandy wrote:
>
> Thanks Gordon for the QSO today.
>
> It was good hearing you on the air, and working 830 to 830 made it great!!
>
> I heard the qrm and figured you might be up or down a few.
>
> 73 es gl
>
> Sandy - n9pgo
>
> On 5/21/2011 7:38 PM, n6wk_skcc3 wrote:
> >
> > Thank you to everyone that came on and worked me today. I had to move
> > down to 14.240 due to QRM from a station on 14.243.
> > It was a blast working you all on this TS-830S. I sure hope we can do
> > it again.
> > best 73 to all,
> > Gordon
> > N6WK
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "n6wk_skcc3" <n6wk@...>
> > wrote:
> > >
> > > I am listening on 14.242 right now at 21:20 UTC
> > >
> > > Gordon
> > > N6WK
> > >
> >
> >
>
> [Non-text portions of this message have been removed]

>
>

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31431. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 02:54:02 UTC
From: ki4ax
Topic: 7262 Message: 31431

Mike,

In the post below you said that "Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating." Then with an efficiency rating of 55%, for the final amplifier stage, and an input of 200 watts I should be producing about 110 watts on ssb... that is if I modulated the signal with something producing a duty cycle close to 100%. This also means, if I am understand correctly, that out of the 200 watts being input to the final section 90 watts is being dissapated as heat? I'm I understanding this correctly? And if that is correct do you know what time function is involved? Is it 90 watts per hour? Just trying to understand how much heat the rig should be generating. I assume that being tube finals with a cooling fan there should be quite a bit of heat being generated during use. In other words, during use like rag chewing, it should be producing enough heat to get pretty warm but not what you would consider hot... right?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Dan,
>
> Tuning up in TUNE then switching to CW, you would use the CAR control to adjust power output.
>
> The 520 is rated at 160 watts DC input in CW mode, not 180 watts.
>
> The 520 has a DC input power rating of 160 watts. The final amplifier has an efficiency rating of 55% which means normal power output in CW mode with 160 watts DC input will be 88 watts (160 - 45 % = 88 watts). When you tune the transmitter and the IP meter shows 250ma and output is 125 watts, adjust the CAR control for an IP indication of 200ma. With an IP indication of 200ma the HV will be approximately 800VDC which will result in a DC input power of 160 watts in CW mode. This is the normal power rating for the 520 in CW mode. Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating. You don't have to readjust anything.
>
> Yes, the MIC gain, along with any ALC produced during sideband transmissions, controls power output in USB and LSB modes. If you follow the steps I indicated above you will be operating your 520 within the factory specs and you will not be overloading/pushing the final amplifier excessive. As I have said quite often, for a clean transmit signal in sideband, adjust the MIC gain while talking 1 to 2 inches from the microphone in a normal voice level so the ALC meter just starts to flicker above zero. This MIC gain setting will produces a very clean sideband transmission. It's not how LOUD you sound but how clean your transmit signal is. There are many stations that talk loud into the microphone, have the mic gain set too high or their external audio processing equipment is set so the ALC peaks well above middle and many times exceeds the top of the ALC scale just so they sound LOUD

at the receiving end. Not only is that very poor operating practice but it causes adjacent frequency interference and pushes the final amplifier too hard. I hear a lot of those stations on 80 and 40 meters, just tune around and you'll hear them.
>
> Remember, ALC does not cause your power output to increase. In fact, it's the opposite, power output is reduced when ALC is produced in sideband transmission.
>
> As for adjusting the LOAD control to reduce power output, I do not recommend doing that. Tune for maximum power output as I stated above then reduce power using the CAR control for 200ma of IP current. Then adjust the MIC gain as I indicated above and you will be fine.
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > Mike,
> >
> > When I tune my TS-520 for 40m (on a dipole cut to resonance)I get about 120w out. I did not note the exact Ip but the rig usually runs about 250ma. Do you think this is pushing the rig too hard? And if I want to cut back on the output, to take it easy on the final section, would I make that adjustment using the LOAD control to take some of the load off? Or should I cut back on the MIC gain control? I value your opinion and would greatly appreciate your comments.
> >
> > Thanks,
> >
> > Dan KI4AX
> >
>

31432. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 11:28:44 UTC
From: Bill
Topic: 7262 Message: 31432

Hi Dan,

The glass envelopes get hot enough to burn your fingers and leave blisters if you could touch them. Don't ask me how I know this <evil grin>. You could keep your coffee hot by setting your coffee mug above the finals. But don't set your coffee mug there - eventually you'll spill coffee in there - *BAD*. I haven't actually spilled coffee in mine because I thought that one through and I don't set my coffee there.

Your understanding of the power being dissipated as heat is essentially correct.

73,

Bill KU8H

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Mike,
>
> In the post below you said that "Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating." Then with an efficiency rating of 55%, for the final amplifier stage, and an input of 200 watts I should be producing about 110 watts on ssb... that is if I modulated the signal with something producing a duty cycle close to 100%. This also means, if I am understand correctly, that out of the 200 watts being input to the final section 90 watts is being dissapated as heat? I'm I understanding this correctly? And if that is correct do you know what time function is involved? Is it 90 watts per hour? Just trying to understand how much heat the rig should be generating. I assume that being tube finals with a cooling fan there should be quite a bit of heat being generated during use. In other words, during use like rag chewing, it should be producing enough heat to get pretty warm but not what you would consider hot... right?
>
> Dan KI4AX
>

31433. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 11:47:16 UTC
From: ki4ax
Topic: 7262 Message: 31433

Hey Bill,

Thanks for the reply. No I would never put coffee up there any way... you don't have to worry about that. Well, I have had this rig since the 80's but have not had it on the air for a long time. The last entry in my log book was 21 years ago and as a result, I don't remember how much heat the thing produced. Also, because the rig is 30 plus years old, I want to make sure I am taking it easy and not trying to burn things up if you know what I mean. I must have done a pretty good job and not pushed it too hard 20 years ago because the final section and amplifier tubes seem to be in pretty good working order for being 30+ years old. I worked a few stations last night and she got pretty warm but no where near hot enough to cook eggs or any thing like that... it might have kept my coffee warm though.

Thansk again...

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Bill" <w_r_cromwell@...> wrote:
>
> Hi Dan,
>
> The glass envelopes get hot enough to burn your fingers and leave blisters if you could touch them. Don't ask me how I know this <evil grin>. You could keep your coffee hot by setting your coffee mug above the finals. But don't set your coffee mug there - eventually you'll spill coffee in there - *BAD*. I haven't actually spilled coffee in mine because I thought that one through and I don't set my coffee there.
>
> Your understanding of the power being dissipated as heat is essentially correct.
>
> 73,
>
> Bill KU8H
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > Mike,
> >
> > In the post below you said that "Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating." Then with an efficiency rating of 55%, for the final amplifier stage, and an input of 200 watts I should be producing about 110 watts on ssb... that is if I modulated the signal with something producing a duty cycle close to 100%. This also means, if I am understand correctly, that out of the 200 watts being input to the final section 90 watts is being dissapated as heat? I'm I understanding this correctly? And if that is correct do you know what time function is involved? Is it 90 watts per hour? Just trying to understand how much heat the rig should be generating. I assume that being tube finals with a cooling fan there should be quite a bit of heat being generated during

use. In other words, during use like rag chewing, it should be producing enough heat to get pretty warm but not what you would consider hot... right?
> >
> > Dan KI4AX
> >
>

31434. VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 12:57:33 UTC
From: bornofthehorses
Topic: 17839 Message: 31434

I have completed my 520 setup part of one of my trades putting it together was a VFO-820 I can part with if anyone is interested in it.
Ken

31435. Low power output and distoted audio TS 830M

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 12:03:31 UTC
From: sadtenor
Topic: 31435 Message: 31435

Hi! My TS830m has developed a fault/s. The power is down to about 15w out. The audio is almost unintelligable and sounds like a Dalek(Alien).
Swapping the final and driver tubes has not changed anything. Any ideas and help would be much appreciated as I love using this rig and it is my main HF TRX. Cheers Jess (G8IYE)

31436. Kenwood Ts-520 at qrp levels?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 15:37:56 UTC
From: Brian
Topic: 31436 Message: 31436

I hope to have a TS520 by the end of the month. The one I owned when I got my license at 14. For the life of me I cant remeber. Can you back the output power to 5 watts or do you have to run high power all the time. Is there a way to "baby" the tubes during operation.

Thanks KB4MNG

31437. Re: [TS-520_820_530_830] Kenwood Ts-520 at qrp levels?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 15:56:26 UTC
From: Joseph Stiles
Topic: 31436 Message: 31437

Brian,

Go to the home page of this group and do a search for message threads regarding this topic...ie TS 520 QRP...or something similar....there are more than likely about 2 dozen topics directly related to what you are looking for.

73's joe wb7uqu

From: Brian <bsa0791@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 22, 2011 8:37 AM
Subject: [TS-520_820_530_830] Kenwood Ts-520 at qrp levels?

I hope to have a TS520 by the end of the month. The one I owned when I got my license at 14. For the life of me I cant remeber. Can you back the output power to 5 watts or do you have to run high power all the time. Is there a way to "baby" the tubes during operation.

Thanks KB4MNG

[Non-text portions of this message have been removed]

31438. RE: [TS-520_820_530_830] Low power output and distorted audio TS 830M

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 16:10:51 UTC
From: brad
Topic: 31435 Message: 31438

Did you check your power supply voltages? Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of sadtenor
Sent: Sunday, May 22, 2011 08:04
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Low power output and distoted audio TS 830M

Hi! My TS830m has developed a fault/s. The power is down to about 15w out.
The audio is almost unintelligable and sounds like a Dalek(Alien).
Swapping the final and driver tubes has not changed anything. Any ideas and
help would be much appreciated as I love using this rig and it is my main HF
TRX. Cheers Jess (G8IYE)

[Non-text portions of this message have been removed]

31439. Re: TS-520 Output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 19:24:08 UTC
From: w5rkl
Topic: 7262 Message: 31439

Dan and others,

The final amplifier's in all of the Kenwood hybrids, as well as many other tube based transceiver final amplifiers, operate in Class AB1. The typical efficiency rating of these final amplifiers is 55% which mean 45% of power is loss to heat and other factors such as resistance (reactance whether inductive or capacitive).

To determine the approximate efficiency of the final amplifier, the following formula is used

Ef% = Po / Pin

where "Ef%" is the amplifier's efficiency percentage rating, "Po" is power output and "Pin" is power input.

For example, the 520 has an DC input power rating of 160 watts in CW mode. That typically results in 88 watts output from a properly tuned transmitter. So what is the efficiency percentage rating?

Using the above formula, it's 55%

Ef% = 88 / 160 = 55%

The same applies to sideband. If PEP input power is 200 watts and the output power is 110 watts PEP, the amplifier's efficiency rating is still "55%"

110 / 200 = 55%

The typical IP current in CW mode is 200ma and HV is approximately 800VDC for 160 watt DC input, the typical CW power input rating of the 520. To determine the DC input power simply multiply the final amplifier's HV at full output times the IP current.

DCPin = IP x HV

.200 x 800 = 160 (DC watts input).

"DCPin" is the DC Power Input in CW mode

"IP" is the combination of the final amplifier's screen and plate current.

"HV" is the DC HV at the plates of the final tubes at 160 watts DC input.

You don't need a watt meter to determine what the approximate power output is. All you need is the HV and plate current then use the formula presented above.

I hope this helps to answer your question(s) Dan.

73s
Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Mike,
>
> In the post below you said that "Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating." Then with an efficiency rating of 55%, for the final amplifier stage, and an input of 200 watts I should be producing about 110 watts on ssb... that is if I modulated the signal with something producing a duty cycle close to 100%. This also means, if I am understand correctly, that out of the 200 watts being input to the final section 90 watts is being dissapated as heat? I'm I understanding this correctly? And if that is correct do you know what time function is involved? Is it 90 watts per hour? Just trying to understand how much heat the rig should be generating. I assume that being tube finals with a cooling fan there should be quite a bit of heat being generated during use. In other words, during use like rag chewing, it should be producing enough heat to get pretty warm but not what you would consider hot... right?
>
> Dan KI4AX
>
>
>
>
> --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Dan,
> >
> > Tuning up in TUNE then switching to CW, you would use the CAR control to adjust power output.
> >
> > The 520 is rated at 160 watts DC input in CW mode, not 180 watts.
> >
> > The 520 has a DC input power rating of 160 watts. The final amplifier has an efficiency rating of 55% which means normal power output in CW mode with 160 watts DC input will be 88 watts (160 - 45 % = 88 watts). When you tune the transmitter and the IP meter shows 250ma and output is 125 watts, adjust the CAR control for an IP indication of 200ma. With an IP indication of 200ma the HV will be approximately 800VDC which will result in a DC input power of 160 watts in CW mode. This is the normal power rating for the 520 in CW mode. Once you have tuned the 520 up to these current and HV levels, switching to sideband will produce approximately 200 watts PEP input, the normal sideband input power rating. You don't have to readjust anything.
> >
> > Yes, the MIC gain, along with any ALC produced during sideband transmissions, controls power output in USB and LSB modes. If you follow the steps I indicated above you will be operating your 520 within the factory specs and you will not be overloading/pushing the final amplifier excessive. As I have said quite often, for a clean transmit signal in sideband, adjust the MIC gain while talking 1 to 2 inches from the microphone in a normal voice level so the ALC meter just starts to flicker above zero. This MIC gain setting will produces a very clean sideband transmission. It's not how LOUD you sound but how clean your

transmit signal is. There are many stations that talk loud into the microphone, have the mic gain set too high or their external audio processing equipment is set so the ALC peaks well above middle and many times exceeds the top of the ALC scale just so they sound LOUD at the receiving end. Not only is that very poor operating practice but it causes adjacent frequency interference and pushes the final amplifier too hard. I hear a lot of those stations on 80 and 40 meters, just tune around and you'll hear them.
> >
> > Remember, ALC does not cause your power output to increase. In fact, it's the opposite, power output is reduced when ALC is produced in sideband transmission.
> >
> > As for adjusting the LOAD control to reduce power output, I do not recommend doing that. Tune for maximum power output as I stated above then reduce power using the CAR control for 200ma of IP current. Then adjust the MIC gain as I indicated above and you will be fine.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > Mike,
> > >
> > > When I tune my TS-520 for 40m (on a dipole cut to resonance)I get about 120w out. I did not note the exact Ip but the rig usually runs about 250ma. Do you think this is pushing the rig too hard? And if I want to cut back on the output, to take it easy on the final section, would I make that adjustment using the LOAD control to take some of the load off? Or should I cut back on the MIC gain control? I value your opinion and would greatly appreciate your comments.
> > >
> > > Thanks,
> > >
> > > Dan KI4AX
> > >
> >
>

31440. Re: Low power output and distorted audio TS 830M

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 19:29:28 UTC
From: w5rkl
Topic: 31435 Message: 31440

I agree with Brad. The first thing you should do, before swapping any tubes, is to take voltage measurements. Quite often, loss of power output, as in your case Jess, is not caused by bad tubes but rather a failure in a circuit component(s).

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "brad" <kb2chy@...> wrote:
>
> Did you check your power supply voltages? Brad KB2CHY
>
>
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of sadtenor
> Sent: Sunday, May 22, 2011 08:04
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Low power output and distoted audio TS 830M
>
>
>
>
>
> Hi! My TS830m has developed a fault/s. The power is down to about 15w out.
> The audio is almost unintelligable and sounds like a Dalek(Alien).
> Swapping the final and driver tubes has not changed anything. Any ideas and
> help would be much appreciated as I love using this rig and it is my main HF
> TRX. Cheers Jess (G8IYE)
>
>
>
>
>
> [Non-text portions of this message have been removed]
>

31441. kenwood riser feet

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 21:42:36 UTC
From: kd8iju
Topic: 31441 Message: 31441

anyone have any kenwood riser feet for sale, need 2
John Quail KD8IJU

31442. Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 21:18:53 UTC
From: John
Topic: 31442 Message: 31442

Hi all,
I have just acquired a very nice TS520SE in good condition and working order.
The problem is that after tuning using correct procedure, if I adjust mic gain to give around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
73 John

31443. Re: [TS-520_820_530_830] Re: Low power output and distorted audio TS 830M

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 21:55:02 UTC
From: John Becker
Topic: 31435 Message: 31443

I also agree.
And if I may I back it up with 30 years as a 2 way radio tech.
We *really* have a bunch of real good people here.

John, W0JAB

At 02:29 PM 5/22/2011, you wrote:
>I agree with Brad. The first thing you should do, before swapping any tubes, is to take voltage measurements. Quite often, loss of power output, as in your case Jess, is not caused by bad tubes but rather a failure in a circuit component(s).
>
>73s
>Mike
>W5RKL

31444. Re: [TS-520_820_530_830] Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 22:08:57 UTC
From: Jim S
Topic: 31442 Message: 31444

Please follow the instructions in the manual concerning ALC levels. (you do have the owners manual, don't you?)

The human voice's average power is about 25-30 % of its peak power. The meters on the 520 read AVERAGE power. If you can read 100 watts in CW mode, you should only be driving the rig to 25-30 watts in SSB mode. This is perfectly normal. Any more output than this is just adding distortion to your signal.

I don't know who is telling you that you sound OK at 90 watt level, but I would be willing to bet that they do not know how good a 520 CAN sound if it is not being over-driven.

The ALC above about 1/3rd scale or less is TOO MUCH .

This question comes up so often, that I cannot understand WHY it isn't taught in every license class that is conducted.

73, Jim

----- Original Message -----
From: John
To: TS-520_820_530_830@yahoogroups.com
Sent: Sunday, May 22, 2011 5:18 PM
Subject: [TS-520_820_530_830] Kenwood TS520SE ALC reading high.

Hi all,
I have just acquired a very nice TS520SE in good condition and working order.
The problem is that after tuning using correct procedure, if I adjust mic gain to give around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
73 John

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17560)
http://www.pctools.com
=======

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17560)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

31445. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-22 22:38:26 UTC
From: w5rkl
Topic: 31442 Message: 31445

John,

Why did you turn the MIC gain up until the watt meter displayed "90 watts"? Were you told to do that or was it because you thought the watt meter should show 90 watts? Also, what make and model watt meter are you using?

I agree with Jim, you have the MIC gain set way too high. The ALC meter should NEVER go full scale! If someone told you to turn the MIC gain up so the watt meter displayed 90 watts then they mislead you!

After tuning the 520SE up properly (follow the 520SE operator's manual), set the meter switch to ALC. Set the MIC gain fully CCW (lowest setting) then press the PTT button. Speak into the microphone from a distance of 1 to 2 inches in a normal voice level and advance the MIC gain until the ALC meter just barely flicker above zero on voice peaks. At this point stop adjusting the MIC gain, the 520SE is producing maximum power output with very little, if any, distortion. The watt meter will more than likely display 20 to 30 watts peak output which is "normal".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@...> wrote:
>
> Hi all,
> I have just acquired a very nice TS520SE in good condition and working order.
> The problem is that after tuning using correct procedure, if I adjust mic gain to give around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
> If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
> The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
> 73 John
>

31446. Ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-23 03:17:04 UTC
From: kcid51
Topic: 4043 Message: 31446

I got my 520 back from Gordon yesterday, I have been listening on and off all day. I am ready to give it the on air test, 2030 pst 7.200 Ka7ayt, Dick

31447. Re: Low power output and distorted audio TS 830M

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-23 13:33:20 UTC
From: sadtenor
Topic: 31435 Message: 31447

Thanks guys! Looks like one of the HV caps failed so have ordered a replacement kit. Cheers Jess
--- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@...> wrote:
>
> I also agree.
> And if I may I back it up with 30 years as a 2 way radio tech.
> We *really* have a bunch of real good people here.
>
> John, W0JAB
>
>
> At 02:29 PM 5/22/2011, you wrote:
> >I agree with Brad. The first thing you should do, before swapping any tubes, is to take voltage measurements. Quite often, loss of power output, as in your case Jess, is not caused by bad tubes but rather a failure in a circuit component(s).
> >
> >73s
> >Mike
> >W5RKL
>

31448. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-23 21:07:38 UTC
From: andy_westcott2004
Topic: 31442 Message: 31448

One way to confirm you are 'pushing power' is to carefully watch the brightness of the meter and dial lamps.

Despite the RF indication seeming to be low, I'll bet you can see the brightness of those lams dimming slightly on voice peaks - this is proof (if you needed it) that the rig is actually drawing, and therefore outputting, power.

As already said, set the mic gain so you can just see some ALC action - this is ample and you will be heard! Don't expect to see a continuous power indication as voices don't behave that way unless female, and screeching...

31449. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-23 21:03:03 UTC
From: John
Topic: 31442 Message: 31449

Hi Mike and Jim,
Thanks very much for the advice, I have tried the radio as you suggest and have had some good contacts this evening, I have the manual and follow the tune up procedure.
One thing I have just noticed is that I tried the radio on different bands, it was fine on 80m, 40m and 20m, I found that on 20m I had to back the mic gain off more than the lower bands.
I tried to tune it on 28.5mhz and found that I couldn't peak the ALC during the initial tune up even with the carrier level at maximum, I dipped the plate current and tuned with plate and load and could only get about 30w in the final tune up in CW position.
I think I read somewhere that this could be a driver tube problem ?.
What do you think.
Many thanks again John M0JVW

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> John,
>
> Why did you turn the MIC gain up until the watt meter displayed "90 watts"? Were you told to do that or was it because you thought the watt meter should show 90 watts? Also, what make and model watt meter are you using?
>
> I agree with Jim, you have the MIC gain set way too high. The ALC meter should NEVER go full scale! If someone told you to turn the MIC gain up so the watt meter displayed 90 watts then they mislead you!
>
> After tuning the 520SE up properly (follow the 520SE operator's manual), set the meter switch to ALC. Set the MIC gain fully CCW (lowest setting) then press the PTT button. Speak into the microphone from a distance of 1 to 2 inches in a normal voice level and advance the MIC gain until the ALC meter just barely flicker above zero on voice peaks. At this point stop adjusting the MIC gain, the 520SE is producing maximum power output with very little, if any, distortion. The watt meter will more than likely display 20 to 30 watts peak output which is "normal".
>
> 73s
> Mike
> W5RKL
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@> wrote:
> >
> > Hi all,
> > I have just acquired a very nice TS520SE in good condition and working order.
> > The problem is that after tuning using correct procedure, if I adjust mic gain to give

around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
> > If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
> > The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
> > 73 John
> >
>

31450. Re: Ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 01:19:42 UTC
From: Brian
Topic: 4043 Message: 31450

--- In TS-520_820_530_830@yahoogroups.com, "kcid51" <rwilimek@...> wrote:
>
> I got my 520 back from Gordon yesterday, I have been listening on and off all day. I am ready to give it the on air test, 2030 pst 7.200 Ka7ayt, Dick
>
Do you mind if I ask who Gordon is? Does he restore 520s?

31451. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 02:44:34 UTC
From: w5rkl
Topic: 31442 Message: 31451

Hi John,

There has been some evidence that driver tubes, when going soft, will produce lower drive to the finals at higher frequencies.

An easy test of the driver tube is to watch the ALC indication during TUNE mode. When peaking ALC, in TUNE mode, a weak driver tube will have a tendency to show a peak ALC meter indication but after a very short period, possibly a few seconds or so, the ALC meter indication will start to drop back towards zero. A good driver tube will produce a solid and stable ALC peak indication on all bands during tune up. A good driver tube will produce more than enough RF drive to the final tubes to results in a full scale ALC indication during tune up.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@...> wrote:
>
> Hi Mike and Jim,
> Thanks very much for the advice, I have tried the radio as you suggest and have had some good contacts this evening, I have the manual and follow the tune up procedure.
> One thing I have just noticed is that I tried the radio on different bands, it was fine on 80m, 40m and 20m, I found that on 20m I had to back the mic gain off more than the lower bands.
> I tried to tune it on 28.5mhz and found that I couldn't peak the ALC during the initial tune up even with the carrier level at maximum, I dipped the plate current and tuned with plate and load and could only get about 30w in the final tune up in CW position.
> I think I read somewhere that this could be a driver tube problem ?.
> What do you think.
> Many thanks again John M0JVW
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > John,
> >
> > Why did you turn the MIC gain up until the watt meter displayed "90 watts"? Were you told to do that or was it because you thought the watt meter should show 90 watts? Also, what make and model watt meter are you using?
> >
> > I agree with Jim, you have the MIC gain set way too high. The ALC meter should NEVER go full scale! If someone told you to turn the MIC gain up so the watt meter displayed 90 watts then they mislead you!
> >
> > After tuning the 520SE up properly (follow the 520SE operator's manual), set the meter switch to ALC. Set the MIC gain fully CCW (lowest setting) then press the PTT button. Speak

into the microphone from a distance of 1 to 2 inches in a normal voice level and advance the MIC gain until the ALC meter just barely flicker above zero on voice peaks. At this point stop adjusting the MIC gain, the 520SE is producing maximum power output with very little, if any, distortion. The watt meter will more than likely display 20 to 30 watts peak output which is "normal".
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@> wrote:
> > >
> > > Hi all,
> > > I have just acquired a very nice TS520SE in good condition and working order.
> > > The problem is that after tuning using correct procedure, if I adjust mic gain to give around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
> > > If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
> > > The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
> > > 73 John
> > >
> >
>

31452. Re: Ts-520

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 02:47:23 UTC
From: w5rkl
Topic: 4043 Message: 31452

Hi Brian,

Gordon, N6WK, is one of the Moderators of this group. I can't and won't speak for Gordon regarding work on your 520. Therefore, you would have to drop him an e-mail and ask him about working on your 520. Gordon has a website, www.n6wk.com, that contains a lot of valuable information on the various Kenwood hybrid rigs and microphones etc.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Brian" <bsa0791@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "kcid51" <rwilimek@> wrote:
> >
> > I got my 520 back from Gordon yesterday, I have been listening on and off all day. I am ready to give it the on air test, 2030 pst 7.200 Ka7ayt, Dick
> >
> Do you mind if I ask who Gordon is? Does he restore 520s?
>

31453. 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 14:06:07 UTC
From: Bill Hendrickson
Topic: 31453 Message: 31453

Hello again to all. 820 is working great except for one issue. I tried using the remote socket to key my amp but it won' t work....I get a closed contact on the plug when I key up but it won' t trigger the amp. The amp has a 24v relay which is powered by a small 1a power supply in the amp. This setup works great with my Drakes which uses the same basic setup (small relay).. I tried cleaning the relay in 820 but no go...any ideas....Bill

sent via samsung android..

[Non-text portions of this message have been removed]

31454. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 12:40:17 UTC
From: John
Topic: 31442 Message: 31454

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi John,
>
> There has been some evidence that driver tubes, when going soft, will produce lower drive to the finals at higher frequencies.
>
> An easy test of the driver tube is to watch the ALC indication during TUNE mode. When peaking ALC, in TUNE mode, a weak driver tube will have a tendency to show a peak ALC meter indication but after a very short period, possibly a few seconds or so, the ALC meter indication will start to drop back towards zero. A good driver tube will produce a solid and stable ALC peak indication on all bands during tune up. A good driver tube will produce more than enough RF drive to the final tubes to results in a full scale ALC indication during tune up.
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@> wrote:
> >
> > Hi Mike and Jim,
> > Thanks very much for the advice, I have tried the radio as you suggest and have had some good contacts this evening, I have the manual and follow the tune up procedure.
> > One thing I have just noticed is that I tried the radio on different bands, it was fine on 80m, 40m and 20m, I found that on 20m I had to back the mic gain off more than the lower bands.
> > I tried to tune it on 28.5mhz and found that I couldn't peak the ALC during the initial tune up even with the carrier level at maximum, I dipped the plate current and tuned with plate and load and could only get about 30w in the final tune up in CW position.
> > I think I read somewhere that this could be a driver tube problem ?.
> > What do you think.
> > Many thanks again John M0JVW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > John,
> > >
> > > Why did you turn the MIC gain up until the watt meter displayed "90 watts"? Were you told to do that or was it because you thought the watt meter should show 90 watts? Also, what make and model watt meter are you using?

> > >
> > > I agree with Jim, you have the MIC gain set way too high. The ALC meter should NEVER go full scale! If someone told you to turn the MIC gain up so the watt meter displayed 90 watts then they mislead you!
> > >
> > > After tuning the 520SE up properly (follow the 520SE operator's manual), set the meter switch to ALC. Set the MIC gain fully CCW (lowest setting) then press the PTT button. Speak into the microphone from a distance of 1 to 2 inches in a normal voice level and advance the MIC gain until the ALC meter just barely flicker above zero on voice peaks. At this point stop adjusting the MIC gain, the 520SE is producing maximum power output with very little, if any, distortion. The watt meter will more than likely display 20 to 30 watts peak output which is "normal".
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "John" <jvwild@> wrote:
> > > >
> > > > Hi all,
> > > > I have just acquired a very nice TS520SE in good condition and working order.
> > > > The problem is that after tuning using correct procedure, if I adjust mic gain to give around 80-90 watts peak when I switch meter to ALC it is pegging the meter right across.
> > > > If I reduce mic gain to around 3 the ALC is within limits but peak power is only around 40 watts, stations I have worked say that I sound ok at 90 watt level.
> > > > The mic I got with the rig appears to be a pace mic (possibly a CB mic) so I wonder if this is causing the problem or is some adjustment needed.
> > > > 73 John
> > > >
> > > >
> > >
Hi Mike,
I tried what you suggest and the needle seems to hold ok in bands up to 28mz.
You can get alc on 28 mhz position (with increased carrier level) but when I try 28.5mhz there is no drive although I can get some power out at this frequency.
Thanks again
John

31455. paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 14:54:07 UTC
From: STANLEY WHITE
Topic: 31455 Message: 31455

Anyone know where i could buy paint to match the TS 830s Cabinets,in spray cans,shipping to Canada..????
Thank you,,Stan VE3GN Ottawa

[Non-text portions of this message have been removed]

31456. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 17:24:33 UTC
From: w5rkl
Topic: 31442 Message: 31456

Hi John,

Many hams tend to look at the absence of ALC indication during tune up as loss of RF drive and that's not true, especially if there is plenty of drive/ALC indication on the lower bands and tuning up in CW mode on the higher bands produces RF output.

ALC occurs ONLY when a portion of the RF driving signal's Positive Sine Wave is at a level that causes the grids of the final tubes to swing positive. If the RF driving signal is not at that level during the positive segment of the RF sine wave that results in the grids of the final tubes to swing positive then there will be no ALC indication.

When the grids of the final tubes swing positive, a current exits between the final tube's cathode and grid. When this occurs, a voltage is produced due to a "difference in potential" existing between the ALC transistor's "emitter" and "base". This difference in potential results in the ALC transistor's collector voltage to change. The change in the ALC transistor's collector voltage is the actual ALC voltage. If there is no grid current flowing then there will be no difference in potential between the ALC transistor's emitter and Base and the ALC transistor's collector voltage will remain the same, no ALC is produced. This does NOT mean there is a loss of RF drive. It simply means the level of RF drive to the final amplifier is not at a level that causes the grids of the final tubes to swing positive.

As I said, there is evidence that a weak driver tube can result in lower RF output on higher band(s) then lower bands.

73s
Mike
W5RKL

> Hi Mike,
> I tried what you suggest and the needle seems to hold ok in bands up to 28mz.
> You can get alc on 28 mhz position (with increased carrier level) but when I try 28.5mhz there is no drive although I can get some power out at this frequency.
> Thanks again
> John
>

31457. Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 17:29:51 UTC
From: w5rkl
Topic: 31453 Message: 31457

Bill,

You say you get a "closed circuit" when connecting the amplifier to the 820's 8 pin octal socket. What pins are you using on the 820's 8 pin octal socket?

Pins 3 and 4 should, in receive, be "open" but "closed" in transmit.

If you don't see this happening then you have it wired wrong. You also could have bad connections in the 8 pin plug. I've seen this happen quite often, even if you are using the correct pins, 3 and 4.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@...> wrote:
>
> Hello again to all. 820 is working great except for one issue. I tried
> using the remote socket to key my amp but it won' t work....I get a closed
> contact on the plug when I key up but it won' t trigger the amp. The amp has
> a 24v relay which is powered by a small 1a power supply in the amp. This
> setup works great with my Drakes which uses the same basic setup (small
> relay).. I tried cleaning the relay in 820 but no go...any ideas....Bill
>
> sent via samsung android..
>
>
> [Non-text portions of this message have been removed]
>

31458. Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 17:31:24 UTC
From: Terry Wagoner
Topic: 31458 Message: 31458

Anyone have a hard copy or an on-line source for an index of the Kenwood Users Group Newsletters? I have never seen an issue of this newsletter but understand they had good articles regarding mods, maintenance tips etc. Perhaps one of our members has the complete collection? If so, please contact me off list to discuss (wagstw46@...). I have Googled and come up empty. Thanks Terry K9TW

31459. Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 17:34:02 UTC
From: w5rkl
Topic: 31453 Message: 31459

I typed the wrong pins.

The rear 8 pin octal socket pins "5" and "4" should be used to key the relay, NOT pins "3" and "4".

Connect pin "5" to the amplifier's hot relay terminal and pin "4" to the amplifier's chassis.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bill,
>
> You say you get a "closed circuit" when connecting the amplifier to the 820's 8 pin octal socket. What pins are you using on the 820's 8 pin octal socket?
>
> Pins 3 and 4 should, in receive, be "open" but "closed" in transmit.
>
> If you don't see this happening then you have it wired wrong. You also could have bad connections in the 8 pin plug. I've seen this happen quite often, even if you are using the correct pins, 3 and 4.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@> wrote:
> >
> > Hello again to all. 820 is working great except for one issue. I tried
> > using the remote socket to key my amp but it won' t work....I get a closed
> > contact on the plug when I key up but it won' t trigger the amp. The amp has
> > a 24v relay which is powered by a small 1a power supply in the amp. This
> > setup works great with my Drakes which uses the same basic setup (small
> > relay).. I tried cleaning the relay in 820 but no go...any ideas....Bill
> >
> > sent via samsung android..
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31460. Re: [TS-520_820_530_830] Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 17:38:52 UTC
From: Bill Hendrickson
Topic: 31453 Message: 31460

Mike, I am using pins 4 and 5, which are shown in the manual as the open contact. I get 4 and 5 to close, according to my meter, but it is not closing the relay in the amp, maybe a high resistance in the contact under a heavier load than an ohm meter....I just put together a transistor interface to drive the relay in the amp..we will see if that works...73
Bill

sent via samsung android..
On May 24, 2011 1:30 PM, "w5rkl" <w5rkl@...> wrote:
> Bill,
>
> You say you get a "closed circuit" when connecting the amplifier to the 820's 8 pin octal socket. What pins are you using on the 820's 8 pin octal socket?
>
> Pins 3 and 4 should, in receive, be "open" but "closed" in transmit.
>
> If you don't see this happening then you have it wired wrong. You also could have bad connections in the 8 pin plug. I've seen this happen quite often, even if you are using the correct pins, 3 and 4.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@...> wrote:
>>
>> Hello again to all. 820 is working great except for one issue. I tried
>> using the remote socket to key my amp but it won' t work....I get a closed
>> contact on the plug when I key up but it won' t trigger the amp. The amp has
>> a 24v relay which is powered by a small 1a power supply in the amp. This
>> setup works great with my Drakes which uses the same basic setup (small
>> relay).. I tried cleaning the relay in 820 but no go...any ideas....Bill
>>
>> sent via samsung android..
>>
>>
>> [Non-text portions of this message have been removed]
>>
>
>

[Non-text portions of this message have been removed]

31461. Re: [TS-520_820_530_830] paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 16:16:53 UTC
From: jpr3232819@aol.com
Topic: 31455 Message: 31461

check on ebay they have it for the ts-520

[Non-text portions of this message have been removed]

31462. Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 18:54:17 UTC
From: w5rkl
Topic: 31453 Message: 31462

Bill,

I had a similar problem with my Drake T4XB transmitter. I had the right amplifier relay connections but the amplifier relay simply would not activate in transmit. I even went as far as manually activating the relay armature and checking the rear pins to ensure the closure was occurring which it was. But, when I plugged the 12 pin "female" side of the power connector into the male pins it wouldn't work, no closure even when manually activating the relay armature.

I found the problem to be the "female" pins on the rear of the transmitter were not making contact with the "male" pins. Cleaning the male pins with contact cleaner and an old tooth brush then inserting the female plug a number of times with the male pins wet with contact cleaner, fixed the problem.

You might also check to ensure the solder connections between the wires and the pins is good. Continuity from the male pin, not the wire sticking out of the male pin, is good to the end of the wire that connects to the amplifier's relay socket. I have seen bad soldering that appears to be good (visually) but in reality it was not good.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@...> wrote:
>
> Mike, I am using pins 4 and 5, which are shown in the manual as the open
> contact. I get 4 and 5 to close, according to my meter, but it is not
> closing the relay in the amp, maybe a high resistance in the contact under a
> heavier load than an ohm meter....I just put together a transistor interface
> to drive the relay in the amp..we will see if that works...73
> Bill
>
> sent via samsung android..
> On May 24, 2011 1:30 PM, "w5rkl" <w5rkl@...> wrote:
> > Bill,
> >
> > You say you get a "closed circuit" when connecting the amplifier to the
> 820's 8 pin octal socket. What pins are you using on the 820's 8 pin octal
> socket?
> >
> > Pins 3 and 4 should, in receive, be "open" but "closed" in transmit.
> >
> > If you don't see this happening then you have it wired wrong. You also
> could have bad connections in the 8 pin plug. I've seen this happen quite
> often, even if you are using the correct pins, 3 and 4.
> >

> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@>
> wrote:
> >>
> >> Hello again to all. 820 is working great except for one issue. I tried
> >> using the remote socket to key my amp but it won' t work....I get a
> closed
> >> contact on the plug when I key up but it won' t trigger the amp. The amp
> has
> >> a 24v relay which is powered by a small 1a power supply in the amp. This
> >> setup works great with my Drakes which uses the same basic setup (small
> >> relay).. I tried cleaning the relay in 820 but no go...any ideas....Bill
> >>
> >> sent via samsung android..
> >>
> >>
> >> [Non-text portions of this message have been removed]
> >>
> >
> >
>
>
> [Non-text portions of this message have been removed]
>

31463. Re: Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 21:34:53 UTC
From: John
Topic: 31442 Message: 31463

Hi Mike,
Thanks very much for your explanation, I managed to tune it up on 28.5mhz tonight and had a couple of qso's at a reasonable power level, so I am getting more familiar with the radio every day.
Thanks again 73
John

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi John,
>
> Many hams tend to look at the absence of ALC indication during tune up as loss of RF drive and that's not true, especially if there is plenty of drive/ALC indication on the lower bands and tuning up in CW mode on the higher bands produces RF output.
>
> ALC occurs ONLY when a portion of the RF driving signal's Positive Sine Wave is at a level that causes the grids of the final tubes to swing positive. If the RF driving signal is not at that level during the positive segment of the RF sine wave that results in the grids of the final tubes to swing positive then there will be no ALC indication.
>
> When the grids of the final tubes swing positive, a current exits between the final tube's cathode and grid. When this occurs, a voltage is produced due to a "difference in potential" existing between the ALC transistor's "emitter" and "base". This difference in potential results in the ALC transistor's collector voltage to change. The change in the ALC transistor's collector voltage is the actual ALC voltage. If there is no grid current flowing then there will be no difference in potential between the ALC transistor's emitter and Base and the ALC transistor's collector voltage will remain the same, no ALC is produced. This does NOT mean there is a loss of RF drive. It simply means the level of RF drive to the final amplifier is not at a level that causes the grids of the final tubes to swing positive.
>
> As I said, there is evidence that a weak driver tube can result in lower RF output on higher band(s) then lower bands.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
> > Hi Mike,
> > I tried what you suggest and the needle seems to hold ok in bands up to 28mz.

> > You can get alc on 28 mhz position (with increased carrier level) but when I try 28.5mhz there is no drive although I can get some power out at this frequency.
> > Thanks again
> > John
> >
>

31464. RE: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 21:44:12 UTC
From: Walter Milton
Topic: 31458 Message: 31464

Terry,

I will take a look and see if I still have them and get back to you one way or the other.

Walt, KA2NJF

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Tuesday, May 24, 2011 1:31 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Kenwood Users Group Newsletter

Anyone have a hard copy or an on-line source for an index of the Kenwood Users Group Newsletters? I have never seen an issue of this newsletter but understand they had good articles regarding mods, maintenance tips etc. Perhaps one of our members has the complete collection? If so, please contact me off list to discuss (wagstw46@... <mailto:wagstw46%40aol.com>). I have Googled and come up empty. Thanks
Terry K9TW

[Non-text portions of this message have been removed]

31465. TS-830s power switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 21:58:53 UTC
From: ktwhy2003
Topic: 31465 Message: 31465

Would anybody know the part number or size info for the power swtich on the TS-830S? Mine cam with a broken off handle (in the on position) and I'd like to repair it. It's ok using a power bar, but I'd like to make it 100% again..

thanks

Kent VE3KNT

31466. Re: TS-830s power switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-24 22:04:08 UTC
From: w5rkl
Topic: 31465 Message: 31466

Hi Kent,

The main power switch and heater switch are both the same, part number S59-2020-05.

You might write Bob Mansker, ke5ftf at mail.com and ask him for a replacement.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> Would anybody know the part number or size info for the power swtich on the TS-830S? Mine cam with a broken off handle (in the on position) and I'd like to repair it. It's ok using a power bar, but I'd like to make it 100% again..
>
>
> thanks
>
> Kent VE3KNT
>

31467. Re: [TS-520_820_530_830] Kenwood TS520SE ALC reading high.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 00:10:25 UTC
From: AB9MS
Topic: 31442 Message: 31467

Thanks Alot!, I hadn't asked it, but was wondering the same thing. Your post answered several questions I had.
AB9MS

--- On Sun, 5/22/11, Jim S <jimstan@...> wrote:

> From: Jim S <jimstan@...>
> Subject: Re: [TS-520_820_530_830] Kenwood TS520SE ALC reading high.
> To: TS-520_820_530_830@yahoogroups.com
> Date: Sunday, May 22, 2011, 5:08 PM
> Please follow the instructions in the
> manual concerning ALC levels. (you do have the owners
> manual, don't you?)
>
> The human voice's average power is about 25-30 % of its
> peak power.   The meters on the 520 read
> AVERAGE power. If you can read 100 watts in CW mode,
> you should only be driving the rig to 25-30 watts in SSB
> mode. This is perfectly normal. Any more output
> than this is just adding distortion to your
> signal.
>
> I don't know who is telling you that you sound OK at 90
> watt level, but I would be willing to bet that they do not
> know how good a 520 CAN sound if it is not being
> over-driven.
>
> The ALC above about 1/3rd scale or less is TOO MUCH
> .
>
> This question comes up so often, that I cannot understand
> WHY it isn't taught in every license class that is
> conducted.
>
> 73, Jim
>
>
>   ----- Original Message -----
>   From: John
>   To: TS-520_820_530_830@yahoogroups.com
>
>   Sent: Sunday, May 22, 2011 5:18 PM
>   Subject: [TS-520_820_530_830] Kenwood TS520SE ALC
> reading high.
>

>
>
> Hi all,
> I have just acquired a very nice TS520SE in good
> condition and working order.
> The problem is that after tuning using correct
> procedure, if I adjust mic gain to give around 80-90 watts
> peak when I switch meter to ALC it is pegging the meter
> right across.
> If I reduce mic gain to around 3 the ALC is within
> limits but peak power is only around 40 watts, stations I
> have worked say that I sound ok at 90 watt level.
> The mic I got with the rig appears to be a pace mic
> (possibly a CB mic) so I wonder if this is causing the
> problem or is some adjustment needed.
> 73 John
>
>
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>
>
> =======
> Email scanned by PC Tools - No viruses or spyware
> found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database:
> 6.17560)
> http://www.pctools.com
> =======
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17560)
> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>

> TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

31468. Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 00:39:21 UTC
From: Terry Wagoner
Topic: 31458 Message: 31468

```
--- In TS-520_820_530_830@yahoogroups.com, "Walter Milton" <wmilton@...> wrote:
> Walt--I would appreciate that when you get time. Terry
> Terry,
>
> I will take a look and see if I still have them and get back to you one way
> or the other.
>
> Walt, KA2NJF
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Tuesday, May 24, 2011 1:31 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Kenwood Users Group Newsletter
>
>
> Anyone have a hard copy or an on-line source for an index of the Kenwood
> Users Group Newsletters? I have never seen an issue of this newsletter but
> understand they had good articles regarding mods, maintenance tips etc.
> Perhaps one of our members has the complete collection? If so, please
> contact me off list to discuss (wagstw46@...
> <mailto:wagstw46%40aol.com> ). I have Googled and come up empty. Thanks
> Terry K9TW
>
>
>
> [Non-text portions of this message have been removed]
>
```

31469. RE: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 00:57:58 UTC
From: fpath fpath
Topic: 31458 Message: 31469

HI Guys,

If at all possible wuld I be able to get a copy of the user group newsletters. I use to have them and too them to my local club, unfor4tunately they were borrowed but unknown person and never returned

73's
Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: wagstw46@...
Date: Wed, 25 May 2011 00:39:21 +0000
Subject: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

--- In TS-520_820_530_830@yahoogroups.com, "Walter Milton" <wmilton@...> wrote:
> Walt--I would appreciate that when you get time. Terry
> Terry,
>
> I will take a look and see if I still have them and get back to you one way
> or the other.
>
> Walt, KA2NJF
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: Tuesday, May 24, 2011 1:31 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Kenwood Users Group Newsletter
>
>
> Anyone have a hard copy or an on-line source for an index of the Kenwood
> Users Group Newsletters? I have never seen an issue of this newsletter but
> understand they had good articles regarding mods, maintenance tips etc.
> Perhaps one of our members has the complete collection? If so, please
> contact me off list to discuss (wagstw46@...
> <mailto:wagstw46%40aol.com>). I have Googled and come up empty. Thanks
> Terry K9TW
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31470. Blowing the cathode resitors with intermittent monotony - TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 01:46:42 UTC
From: Robin
Topic: 31470 Message: 31470

Hi, I seem to keep blowing the cathode resistors with some monotony on a TS-820s I am restoring and for no reason I can find. I have checked all voltages under both RX and TX (80W output or so, measured two different ways CW) and B+ is 850V (I have checked and replaced the HV resistors in the HV unit to ±1%), C- is correct and only droops a couple of volts under TX, and SG at 257V on RX, 180V - 130V on SG depending on transmit mode (FSK, TUNE, CW). SG voltage is high, but the SG current is less than 20mA, so within bounds. Power output does drop after a second or so from 100W to 80W on CW, which makes me suspicious. So, if the voltages and currents are within ballpark, this only leaves the tubes: can soft finals contribute to blowing the cathode resistors? I can't see a mechanism that would do this. Reports from local stations tell me that my SSB sigs sound great, so I can assume that everything before the driver is good. What gives?

31471. RE: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 02:16:29 UTC
From: AB9MS
Topic: 31458 Message: 31471

I would be interested in reading these, would it be possible to post these here, if they are found?
AB9MS
LewisB

--- On Tue, 5/24/11, fpath fpath <fpath@...> wrote:

> From: fpath fpath <fpath@...>
> Subject: RE: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter
> To: ts-520_820_530_830@yahoogroups.com
> Date: Tuesday, May 24, 2011, 7:57 PM
>
> HI Guys,
>
> If at all possible wuld I be able to get a copy of the user
> group newsletters. I use to have them and too them to
> my local club, unfor4tunately they were borrowed but unknown
> person and never returned
>
> 73's
> Dave
> VK5PDL
>
>
>
> To: TS-520_820_530_830@yahoogroups.com
> From: wagstw46@...
> Date: Wed, 25 May 2011 00:39:21 +0000
> Subject: [TS-520_820_530_830] Re: Kenwood Users Group
> Newsletter
>
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com,
> "Walter Milton" <wmilton@...> wrote:
> > Walt--I would appreciate that when you get time.
> Terry
> > Terry,
> >
> > I will take a look and see if I still have them and
> get back to you one way

> > or the other.
> >
> > Walt, KA2NJF
> >
> > From: TS-520_820_530_830@yahoogroups.com
> > [mailto:TS-520_820_530_830@yahoogroups.com]
> On Behalf Of Terry Wagoner
> > Sent: Tuesday, May 24, 2011 1:31 PM
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Kenwood Users Group
> Newsletter
> >
> >
> > Anyone have a hard copy or an on-line source for an
> index of the Kenwood
> > Users Group Newsletters? I have never seen an issue of
> this newsletter but
> > understand they had good articles regarding mods,
> maintenance tips etc.
> > Perhaps one of our members has the complete
> collection? If so, please
> > contact me off list to discuss (wagstw46@...
> > <mailto:wagstw46%40aol.com>). I have Googled
> and come up empty. Thanks
> > Terry K9TW
> >
> >
> >
> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>

>

31472. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 03:18:41 UTC
From: pmarkavage@juno.com
Topic: 31458 Message: 31472

The Kenwood newsletters were published by Rob, N8RT. Go here for more information: http://n8rt.com/ About 3/4 down the page, it indicates that International Radio (INRAD) was selling back issues of the newsletters. Not sure if the new INRAD owners are doing the same or whether Rob still retains copyright ownership of the newsletters. I think I have about 5 to 8 years worth of newsletters.

Pete, wa2cwa

On Tue, 24 May 2011 17:31:24 -0000 "Terry Wagoner" <wagstw46@...> writes:
> Anyone have a hard copy or an on-line source for an index of the
> Kenwood Users Group Newsletters? I have never seen an issue of this
> newsletter but understand they had good articles regarding mods,
> maintenance tips etc. Perhaps one of our members has the complete
> collection? If so, please contact me off list to discuss
> (wagstw46@...). I have Googled and come up empty. Thanks Terry
> K9TW

31473. Re: [TS-520_820_530_830] Blowing the cathode resitors with intermittent monotony - TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 05:08:45 UTC
From: Joseph Stiles
Topic: 31470 Message: 31473

Robin,

I highly suspect the finals. Have they been changed and now you're blowing the R's? It has been my personal experience on both an 820 and 830 that I was not as lucky as you...as soon as I turned on the heater...zap/pop...I had just put in new 6146B's...China's finest...they were the cause of the problem. Check your Ip to see if it drops after you "key-down" in CW...the Ip should hold steady...if not..your driver or finals may be giving up the ghost...also how's the "dip" in CW mode? If it is broad and shallow this usually indicates driver going bad. Good luck.....

73's joe wb7uqu

From: Robin <r.mcneill@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, May 24, 2011 6:46 PM
Subject: [TS-520_820_530_830] Blowing the cathode resitors with intermittent monotony - TS-820s

Hi, I seem to keep blowing the cathode resistors with some monotony on a TS-820s I am restoring and for no reason I can find. I have checked all voltages under both RX and TX (80W output or so, measured two different ways CW) and B+ is 850V (I have checked and replaced the HV resistors in the HV unit to ±1%), C- is correct and only droops a couple of volts under TX, and SG at 257V on RX, 180V - 130V on SG depending on transmit mode (FSK, TUNE, CW). SG voltage is high, but the SG current is less than 20mA, so within bounds. Power output does drop after a second or so from 100W to 80W on CW, which makes me suspicious. So, if the voltages and currents are within ballpark, this only leaves the tubes: can soft finals contribute to blowing the cathode resistors? I can't see a mechanism that would do this. Reports from local stations tell me that my SSB sigs sound great, so I can assume that everything before the driver is good. What gives?

[Non-text portions of this message have been removed]

31474. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 10:27:15 UTC
From: Terry Wagoner
Topic: 31458 Message: 31474

Pete--Do you know if anyone ever published an index? I seem to recall that Rob owned INRAD and sold it? Maybe I will contact him and see what he has available. I will look at the INRAD site. If they are selling back issues maybe they have an index?

I am only interested in the years/issues that address our hybrids. Especially interested in any articles on rig maintenance and alignment. I was hoping to find an article on the VBT-1 test jig. I would like to find out if a schematic is available for it. I wrote Kenwood (california) and they didnt know what I was talking about. Perhaps there are articles on alternate ways to perform some of the alignment steps in the TS-830S service manual? In addition to the language translation problems in this manual there are some steps that need amplification/clarification or just cant be performed as written. I wonder what it would take to get the back issues on Gordons site? Terry

---
From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 24, 2011 11:18:41 PM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

The Kenwood newsletters were published by Rob, N8RT. Go here for more information: http://n8rt.com/ About 3/4 down the page, it indicates that International Radio (INRAD) was selling back issues of the newsletters. Not sure if the new INRAD owners are doing the same or whether Rob still retains copyright ownership of the newsletters. I think I have about 5 to 8 years worth of newsletters.

Pete, wa2cwa

On Tue, 24 May 2011 17:31:24 -0000 "Terry Wagoner" <wagstw46@...m> writes:
> Anyone have a hard copy or an on-line source for an index of the
> Kenwood Users Group Newsletters? I have never seen an issue of this
> newsletter but understand they had good articles regarding mods,
> maintenance tips etc. Perhaps one of our members has the complete
> collection? If so, please contact me off list to discuss
> (wagstw46@...). I have Googled and come up empty. Thanks Terry
> K9TW

[Non-text portions of this message have been removed]

31475. Re: [TS-520_820_530_830] Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 11:10:15 UTC
From: Bill Hendrickson
Topic: 31453 Message: 31475

Mike. I found the problem. I forgot that the amp relay was fired to pass the relay voltage thru not ground it. I re-wired the amp to use ground to key it. Problem solved... Hi....
73
Bill

sent via samsung android..
On May 24, 2011 2:54 PM, "w5rkl" <w5rkl@...> wrote:
> Bill,
>
> I had a similar problem with my Drake T4XB transmitter. I had the right amplifier relay connections but the amplifier relay simply would not activate in transmit. I even went as far as manually activating the relay armature and checking the rear pins to ensure the closure was occurring which it was. But, when I plugged the 12 pin "female" side of the power connector into the male pins it wouldn't work, no closure even when manually activating the relay armature.
>
> I found the problem to be the "female" pins on the rear of the transmitter were not making contact with the "male" pins. Cleaning the male pins with contact cleaner and an old tooth brush then inserting the female plug a number of times with the male pins wet with contact cleaner, fixed the problem.
>
> You might also check to ensure the solder connections between the wires and the pins is good. Continuity from the male pin, not the wire sticking out of the male pin, is good to the end of the wire that connects to the amplifier's relay socket. I have seen bad soldering that appears to be good (visually) but in reality it was not good.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@...> wrote:
>>
>> Mike, I am using pins 4 and 5, which are shown in the manual as the open
>> contact. I get 4 and 5 to close, according to my meter, but it is not
>> closing the relay in the amp, maybe a high resistance in the contact under a
>> heavier load than an ohm meter....I just put together a transistor interface
>> to drive the relay in the amp..we will see if that works...73

>> Bill
>>
>> sent via samsung android..
>> On May 24, 2011 1:30 PM, "w5rkl" <w5rkl@...> wrote:
>> > Bill,
>> >
>> > You say you get a "closed circuit" when connecting the amplifier to the
>> 820's 8 pin octal socket. What pins are you using on the 820's 8 pin
octal
>> socket?
>> >
>> > Pins 3 and 4 should, in receive, be "open" but "closed" in transmit.
>> >
>> > If you don't see this happening then you have it wired wrong. You also
>> could have bad connections in the 8 pin plug. I've seen this happen quite
>> often, even if you are using the correct pins, 3 and 4.
>> >
>> > 73s
>> > Mike
>> > W5RKL
>> >
>> >
>> > --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@>
>> wrote:
>> >>
>> >> Hello again to all. 820 is working great except for one issue. I tried
>> >> using the remote socket to key my amp but it won' t work....I get a
>> closed
>> >> contact on the plug when I key up but it won' t trigger the amp. The
amp
>> has
>> >> a 24v relay which is powered by a small 1a power supply in the amp.
This
>> >> setup works great with my Drakes which uses the same basic setup
(small
>> >> relay).. I tried cleaning the relay in 820 but no go...any
ideas....Bill
>> >>
>> >> sent via samsung android..
>> >>
>> >>
>> >> [Non-text portions of this message have been removed]
>> >>
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>> [Non-text portions of this message have been removed]
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>

[Non-text portions of this message have been removed]

31476. Re: 820 relay

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 14:11:20 UTC
From: w5rkl
Topic: 31453 Message: 31476

Hi Bill,

It makes sense now. I'm glad you found and fixed the problem. Great job!!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@...> wrote:
>
> Mike. I found the problem. I forgot that the amp relay was fired to pass the
> relay voltage thru not ground it. I re-wired the amp to use ground to key
> it. Problem solved... Hi....
> 73
> Bill
>
> sent via samsung android..
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> > Bill,
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> > > I had a similar problem with my Drake T4XB transmitter. I had the right
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> armature and checking the rear pins to ensure the closure was occurring
> which it was. But, when I plugged the 12 pin "female" side of the power
> connector into the male pins it wouldn't work, no closure even when manually
> activating the relay armature.
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> > > I found the problem to be the "female" pins on the rear of the transmitter
> were not making contact with the "male" pins. Cleaning the male pins with
> contact cleaner and an old tooth brush then inserting the female plug a
> number of times with the male pins wet with contact cleaner, fixed the
> problem.
> > >
> > > You might also check to ensure the solder connections between the wires
> and the pins is good. Continuity from the male pin, not the wire sticking
> out of the male pin, is good to the end of the wire that connects to the
> amplifier's relay socket. I have seen bad soldering that appears to be good
> (visually) but in reality it was not good.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@>

> wrote:
> >>
> >> Mike, I am using pins 4 and 5, which are shown in the manual as the open
> >> contact. I get 4 and 5 to close, according to my meter, but it is not
> >> closing the relay in the amp, maybe a high resistance in the contact
> under a
> >> heavier load than an ohm meter....I just put together a transistor
> interface
> >> to drive the relay in the amp..we will see if that works...73
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> >> On May 24, 2011 1:30 PM, "w5rkl" <w5rkl@> wrote:
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> >> often, even if you are using the correct pins, 3 and 4.
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> >> > 73s
> >> > Mike
> >> > W5RKL
> >> >
> >> >
> >> > --- In TS-520_820_530_830@yahoogroups.com, Bill Hendrickson <billjhs@>
> >> wrote:
> >> >>
> >> >> Hello again to all. 820 is working great except for one issue. I tried
> >> >> using the remote socket to key my amp but it won' t work....I get a
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> >> >> contact on the plug when I key up but it won' t trigger the amp. The
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> >> >> a 24v relay which is powered by a small 1a power supply in the amp.
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> >> >> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
>

31477. relay problems in 599 twins

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 15:41:28 UTC
From: Bill
Topic: 31477 Message: 31477

Hi,

My Twins are getting long in the tooth and have made lots of QSOs over the years. That includes being dragged out to Field Day numerous times. The transmitter develops ALC voltage okay but it does not get applied to control the output. That particular detail involves the T/R relay which has clicked in and out how many dozen times now?

The receiver has been developing some intermittent woes, too, and you might know there is an identical relay in there that has clicked in and out just exactly as many times as the one in the transmitter. New relays are ordered. I will probably have some leftover issues after they are installed but they are both obviously wearing out. There is no point looking further until the relay problems are removed. I'll post results when they are in place.

My QRP operation has been successful even without the ALC trick working. I carefully aligned everything except the bandpass filter (~8 MHz) and the T-599 behaves well and will dial down to ~1 or 2 watts with just the "Carrier" control (CW). I have been running it just under 5 watts. At the other end of the range I can still get full power output.

73,

Bill KU8H

31478. 530 s intermitten audio hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 15:35:15 UTC
From: km5wx@bellsouth.net
Topic: 31478 Message: 31478

Hi Gang, I'm sure someone here can answer my question. I have an intermittent hum on my transmit audio. Ken's website says that if you have pin 4 connected on the mic plug that you will get a hum.Should there not be anything connected here. The manual seems to show the 2 mic element wires connected to 1 and 4 with a ground connected to 4 also? How should I wire this connector. I'm using a telex/turner RK 56 hand mic if anyone is familiar with them. I saw an ad in an old cq mag of a heil HMM hand mic that I think may be a better mic but it's no longer in production. I also have an audio comm boomset that worked really great on a ten tec rig that I had to sell but I believe it has an electret element is there any way I can make this work on my 530? Thanks in advance. Richard KM5WX

31479. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 16:51:24 UTC
From: pmarkavage@juno.com
Topic: 31458 Message: 31479

Every year I think in the January issue, an index was printed for all the articles of the previous year. There were also supplemental collections of articles for specific rigs that appeared on the market in the 90's. I think I still have a TS-430S collection. If you read Rob's blog at the link I provided, you'll see the history of INRAD. From what I remember without digging them up, there were lots of hinks, mods, tweaks, regurgitation of old problems, kenwood service addenda, etc. Most were submitted by members but, from I remember, generally there was no formal testing to validate the article(s). Over the years, a lot of this same info, has found its way to specific Internet sites that cater to specific models or model families. I seriously doubt you'll find something there that hasn't already been covered somewhere on someone's Internet site in one form or another.

Pete, wa2cwa

On Wed, 25 May 2011 03:27:15 -0700 (PDT) Terry Wagoner
<wagstw46@...> writes:
> Pete--Do you know if anyone ever published an index? I seem to recall
> that Rob
> owned INRAD and sold it? Maybe I will contact him and see what he
> has available.
> I will look at the INRAD site. If they are selling back issues maybe
> they have
> an index?
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> I am only interested in the years/issues that address our hybrids.
> Especially
> interested in any articles on rig maintenance and alignment. I was
> hoping to
> find an article on the VBT-1 test jig. I would like to find out if a
> schematic
> is available for it. I wrote Kenwood (california) and they didnt
> know what I was
> talking about. Perhaps there are articles on alternate ways to
> perform some of
> the alignment steps in the TS-830S service manual? In addition to
> the language
> translation problems in this manual there are some steps that need
> amplification/clarification or just cant be performed as written. I
> wonder what
> it would take to get the back issues on Gordons site? Terry
>

31480. Re: [TS-520_820_530_830] 530 s intermitten audio hum

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 17:27:12 UTC
From: Joseph Stiles
Topic: 31478 Message: 31480

Richard,

I think you may have mis-read Ken's info. If this is Kenwood MC-50 or other similar mic...check the following: (the mic base end has 5 pins, the radio end has 4)

Base end pin #1 (yellow wire) to radio end pin #1
Base end pin #2 (shield) to radio end pin #2
Base end pin #3 NOT USED
Base end pin #4 (red wire) to radio end pin #3
Base end pin #5 shield to radio end pin #4

You may have an intermittent problem in the cord. Go to Ken's web site, look under "Large Format Schematics" and go way down to the bottom...you will see the wiring diagram for the pins

73's joe wb7uqu

From: "km5wx@..." <km5wx@bellsouth.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 25, 2011 8:35 AM
Subject: [TS-520_820_530_830] 530 s intermitten audio hum

Hi Gang, I'm sure someone here can answer my question. I have an intermittent hum on my transmit audio. Ken's website says that if you have pin 4 connected on the mic plug that you will get a hum.Should there not be anything connected here. The manual seems to show the 2 mic element wires connected to 1 and 4 with a ground connected to 4 also? How should I wire this connector. I'm using a telex/turner RK 56 hand mic if anyone is familiar with them. I saw an ad in an old cq mag of a heil HMM hand mic that I think may be a better mic but it's no longer in production. I also have an audio comm boomset that worked really great on a ten tec rig that I had to sell but I believe it has an electret element is there any way I can make this work on my 530? Thanks in advance. Richard KM5WX

[Non-text portions of this message have been removed]

31481. TS830s _ plate current way too high !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 17:56:04 UTC
From: Will
Topic: 31481 Message: 31481

Guys, a chum of mine recently managed to fry the output stage of his 830s by simply not having a load on the antenna output. Please dont ask as I have absolutely no idea !! Guess he was plain dumb !! The 6146b bottles were totally destroyed too. Now, I have managed to obtain a replacemement choke, (his original was fried to a crisp) which sits between the bottles and have hooked everything up and made a brief attempt at getting something out of this old lady once more. Problem: In all output modes including TUNE, the plate current reading is virtually full scale and even by adjusting the bias on the rear of the rig, it hardly reduces at all. I have checked out the solder joints in and around the pa bottles (which incidently are brand new) and cannot come up with a reasonable theory as to why this should be happening. The 12by7a driver is also new. The HV reading is a little over 900 volts. Clearly something appears to be drawing full plate current and even adjustments on LOAD, PLATE and DRIVE have no impact at all. I have also made an attempt to alter the bias potentiometer for a reduced reading on the back of the rig but this only invites a very minor reduction in current reading. Any thoughts.......Will

31482. Re: [TS-520_820_530_830] TS830s _ plate current way too high !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 18:38:11 UTC
From: Joseph Stiles
Topic: 31481 Message: 31482

Will,

Check the value of the 4 (four) 20 ohm resistors on the final board. The board does not have to be removed to do this. It will help to find an X-RAY view of the board(try n6wk.com) and look in the service manual to locate the R's in question. They should measure about 5 (five) ohms to ground +/- tolerance. Simple first step

73's joe wb7uqu

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 25, 2011 10:56 AM
Subject: [TS-520_820_530_830] TS830s _ plate current way too high !!

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even adjustments on LOAD, PLATE and DRIVE have no impact at all. I have also made an attempt to alter the bias potentiometer for a reduced reading on the back of the rig but this only invites a very minor reduction in current reading. Any thoughts.....Will

[Non-text portions of this message have been removed]

31483. Re: TS830s _ plate current way too high !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 18:50:56 UTC
From: PGA
Topic: 31481 Message: 31483

Maybe the coupling condensor between the 12BY7A and the finals is bad and you have positive grid voltage.

Just a tought,

73, Wim PA0PGA

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Guys, a chum of mine recently managed to fry the output stage of his 830s by simply not having a load on the antenna output. Please dont ask as I have absolutely no idea !! Guess he was plain dumb !! The 6146b bottles were totally destroyed too. Now, I have managed to obtain a replacemement choke, (his original was fried to a crisp) which sits between the bottles and have hooked everything up and made a brief attempt at getting something out of this old lady once more. Problem: In all output modes including TUNE, the plate current reading is virtually full scale and even by adjusting the bias on the rear of the rig, it hardly reduces at all. I have checked out the solder joints in and around the pa bottles (which incidently are brand new) and cannot come up with a reasonable theory as to why this should be happening. The 12by7a driver is also new. The HV reading is a little over 900 volts. Clearly something appears to be drawing full plate current and even adjustments on LOAD, PLATE and DRIVE have no impact at all. I have also made an attempt to alter the bias potentiometer for a reduced reading on the back of the rig but this only invites a very minor reduction in current reading. Any thoughts.......Will
>

31484. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 19:20:57 UTC
From: Terry Wagoner
Topic: 31458 Message: 31484

Ok Pete--I suspect you are correct. I know most if not all the service bulletins are on line and I have copy of the Survivors Guide. Still would be fun to look at the Hints, Tweaks etc. If nothing else the history would be fun. Yes--there is some risk in performing suggestions in unvalidated technical articles. I wrote INRAD today so will see what they say. I specifically asked about indexes. Appreciate your insights. Terry

---

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 25, 2011 12:51:24 PM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

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> amplification/clarification or just cant be performed as written. I
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[Non-text portions of this message have been removed]

31485. TS-820S Display Off Freq.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 20:17:37 UTC
From: ka9gpx
Topic: 31485 Message: 31485

Hello to all,

I'm new to the group,...and have recently obtained a TS-820S from an estate. This is my first experience with the "Hybrids" so please bear with my "green-ness".

This radio like many that have been "sitting around" for years, has a few issues that need to be resolved. The first problem I need to take care of is the display. For some reason it is showing a frequency that is always / exactly 5Mhz. higher than the actual operating freq. It is happening on all the bands. For example....40M display reads 12.xxx, 20M reads 19.xxx, 15M reads 26.xxx. etc. The khz. portion is always correct but the Mhz. is always 5Mhz higher. The actual frequency (being received in this case) is correct if I mentally subtract 5Mhz. from the display. On occasion, if I put pressure on the VFO knob a bit ,...the display would correctly display the proper freq., but then revert back to the "5-up" display.

I have searched a bit through the Msgs. here but haven't found anything specifically regarding this problem. Seems like there are a number of issues with poor / loose ground connections / screws related to the display & VFO to deal with, So my first question for the group is ,...Has anyone encountered this before,? Any thoughts on the best route to follow to try to resolve the problem ?

Again, being new to the "Hybrids" and their restoration, and with all the mentioned "grounding" issues...Is there a recommended "To-Do" list I should follow to help alleviate those ground related problems? Such as "Make sure you clean,...tightened,...resolder, on this module"...etc.

Sorry for the long post,...

Thanks in advance for any thoughts / recommendations,
Carl
KA9GPX

31486. Re: [TS-520_820_530_830] TS830s _ plate current way too high !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 20:51:49 UTC
From: Chris Parnell
Topic: 31481 Message: 31486

Will, I have had this twice in the past fee weeks, most likely the cathode resistors are blown. Mine read around 7K to ground when it read full deflection in IP mode.

Swapped them out and all good now.

Check these first Will Change them if needed for 4x new 20 Ohm 1/2 watt resistors.

Cheers
Chris, ZL1CDP

Sent from my iPhone

On 26/05/2011, at 5:56, Will <gm0hks@yahoo.co.uk> wrote:

> Guys, a chum of mine recently managed to fry the output stage of his 830s by simply not having a load on the antenna output. Please dont ask as I have absolutely no idea !! Guess he was plain dumb !! The 6146b bottles were totally destroyed too. Now, I have managed to obtain a replacemement choke, (his original was fried to a crisp) which sits between the bottles and have hooked everything up and made a brief attempt at getting something out of this old lady once more. Problem: In all output modes including TUNE, the plate current reading is virtually full scale and even by adjusting the bias on the rear of the rig, it hardly reduces at all. I have checked out the solder joints in and around the pa bottles (which incidently are brand new) and cannot come up with a reasonable theory as to why this should be happening. The 12by7a driver is also new. The HV reading is a little over 900 volts. Clearly something appears to be drawing full plate current and even adjustments on LOAD, PLATE and DRIVE have no impact at all. I have also made an attempt to alter the bias potentiometer for a reduced reading on the back of the rig but this only invites a very minor reduction in current reading. Any thoughts.....Will
>
>

[Non-text portions of this message have been removed]

31487. Re: TS-820S Display Off Freq.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 21:35:02 UTC
From: w5rkl
Topic: 31485 Message: 31487

Hi Carl,

I recommend cleaning the Display Unit plugs on the bottom (top and bottom covers need to be removed and the 820 turned upside down) first.

In addition, clean the IF Unit plugs and pins.

Once these are done check for proper operation.

It is also possible that the 2 PC boards inside the Display Unit have connection problems (corroded/dirty fixed pins inside the Display Unit) that may also need cleaning.

If you do not have the operator and service manuals for the 820 then I recommend you download them from Gordon's website

www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ka9gpx" <KA9GPX@...> wrote:
>
> Hello to all,
>
> I'm new to the group,...and have recently obtained a TS-820S from an estate. This is my first experience with the "Hybrids" so please bear with my "green-ness".
>
> This radio like many that have been "sitting around" for years, has a few issues that need to be resolved. The first problem I need to take care of is the display. For some reason it is showing a frequency that is always / exactly 5Mhz. higher than the actual operating freq. It is happening on all the bands. For example....40M display reads 12.xxx, 20M reads 19.xxx, 15M reads 26.xxx. etc. The khz. portion is always correct but the Mhz. is always 5Mhz higher. The actual frequency (being received in this case) is correct if I mentally subtract 5Mhz. from the display. On occasion, if I put pressure on the VFO knob a bit ,...the display would correctly display the proper freq., but then revert back to the "5-up" display.
>
> I have searched a bit through the Msgs. here but haven't found anything specifically regarding this problem. Seems like there are a number of issues with poor / loose ground connections / screws related to the display & VFO to deal with, So my first question for the group is ,...Has anyone encountered this before,? Any thoughts on the best route to follow to try to resolve the problem ?
>
> Again, being new to the "Hybrids" and their restoration, and with all the mentioned "grounding" issues...Is there a recommended "To-Do" list I should follow to help alleviate those ground related problems? Such as "Make sure you clean,...tightened,...resolder, on

this module"...etc.
>
> Sorry for the long post,...
>
> Thanks in advance for any thoughts / recommendations,
> Carl
> KA9GPX
>

31488. Re: [TS-520_820_530_830] Re: TS-820S Display Off Freq.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 23:21:42 UTC
From: Joseph Stiles
Topic: 31485 Message: 31488

Hey Carl & Mike,

     How about cleaning the VFO "wiper?"

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 25, 2011 2:35 PM
Subject: [TS-520_820_530_830] Re: TS-820S Display Off Freq.

Hi Carl,

I recommend cleaning the Display Unit plugs on the bottom (top and bottom covers need to be removed and the 820 turned upside down) first.

In addition, clean the IF Unit plugs and pins.

Once these are done check for proper operation.

It is also possible that the 2 PC boards inside the Display Unit have connection problems (corroded/dirty fixed pins inside the Display Unit) that may also need cleaning.

If you do not have the operator and service manuals for the 820 then I recommend you download them from Gordon's website

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73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ka9gpx" <KA9GPX@...> wrote:
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> Hello to all,
>
> I'm new to the group,...and have recently obtained a TS-820S from an estate. This is my first experience with the "Hybrids" so please bear with my "green-ness".
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> Again, being new to the "Hybrids" and their restoration, and with all the mentioned "grounding" issues...Is there a recommended "To-Do" list I should follow to help alleviate those ground related problems? Such as "Make sure you clean,...tightened,...resolder, on this module"...etc.
>
> Sorry for the long post,...
>
> Thanks in advance for any thoughts / recommendations,
> Carl
> KA9GPX
>

[Non-text portions of this message have been removed]

31489. Re: TS-820S Display Off Freq.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-25 23:26:33 UTC
From: roberteleazer@rocketmail.com
Topic: 31485 Message: 31489

Carl:

Mike's comments about cleaning the display unit contacts are excellent, as usual.

What I would suggest is that since the VFO operates in the 5 MHZ range the tuning cap is shorting out and causing the frequency to be off. My TS-820S did this when I first got it, jumping by 5 MHZ at spots on the dial. The fact that you can wiggle the knob and make it come and go tends to confirm this as a possibility.

I recommend you do one of the following:

1. Spray some CRC Lectro contact cleaner inside the hole in the VFO can, tunr it upside doan and let it run out, and hope that cleans things up. This would be called "Spray and Pray." You can get the CRC stuff at Ace Hardware, usually.

2. Take the VFO out of the transceiver (there is an illustrated procedure for doing this online), take the can off, clean the tuning cap with first all over with CRC Lectro and then the bearing points with Deoxit and then lube the bearings with a wee bit of LPS-1, applied with a Q-tip or artist's brush. If you do not have access to deoxit (Radio Shack usually has it at a merely ridiculous price) you might just try the CRC and LPS-1.

Good Luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ka9gpx" <KA9GPX@...> wrote:
>
> Hello to all,
>
> I'm new to the group,...and have recently obtained a TS-820S from an estate. This is my first experience with the "Hybrids" so please bear with my "green-ness".
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> This radio like many that have been "sitting around" for years, has a few issues that need to be resolved. The first problem I need to take care of is the display. For some reason it is showing a frequency that is always / exactly 5Mhz. higher than the actual operating freq. It is happening on all the bands. For example....40M display reads 12.xxx, 20M reads 19.xxx, 15M reads 26.xxx. etc. The khz. portion is always correct but the Mhz. is always 5Mhz higher. The actual frequency (being received in this case) is correct if I mentally subtract 5Mhz. from the display. On occasion, if I put pressure on the VFO knob a bit ,...the display would correctly display the proper freq., but then revert back to the "5-up" display.
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> I have searched a bit through the Msgs. here but haven't found anything specifically regarding this problem. Seems like there are a number of issues with poor / loose ground connections / screws related to the display & VFO to deal with, So my first question for the group is ,...Has anyone encountered this before,? Any thoughts on the best route to

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> Again, being new to the "Hybrids" and their restoration, and with all the mentioned "grounding" issues...Is there a recommended "To-Do" list I should follow to help alleviate those ground related problems? Such as "Make sure you clean,...tightened,...resolder, on this module"...etc.
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> Sorry for the long post,...
>
> Thanks in advance for any thoughts / recommendations,
> Carl
> KA9GPX
>

31490. RE: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 00:42:25 UTC
From: fpath fpath
Topic: 31458 Message: 31490

Hi Guys,

Here in VK the newsletter came from Kenwood (Sydney) Australia, every three months. It had a lot of Kenwood advertising and lots of specials/discounts for Kenwood User members, but when Kenwood Australia went, so did the club. It covered things along the lines of adding an 8.83Mhz IF output to the TS 530 to enable the SM220 BS8 to be used, adding a meter light to the AT230 via the TS830/530 series. Circuit updates and technical related issues all tried, tested and approved by Kenwood, All models and issues were covered under service warranty. Lots of the information that I recall, I can't find anywhere on the net.

Anyone heard if Kenwood has released a new model??

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: pmarkavage@...
Date: Wed, 25 May 2011 12:51:24 -0400
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Every year I think in the January issue, an index was printed for all the articles of the previous year. There were also supplemental collections of articles for specific rigs that appeared on the market in the 90's. I think I still have a TS-430S collection. If you read Rob's blog at the link I provided, you'll see the history of INRAD. From what I remember without digging them up, there were lots of hinks, mods, tweaks, regurgitation of old problems, kenwood service addenda, etc. Most were submitted by members but, from I remember, generally there was no formal testing to validate the article(s). Over the years, a lot of this same info, has found its way to specific Internet sites that cater to specific models or model families. I seriously doubt you'll find something there that hasn't already been covered somewhere on someone's Internet site in one form or another.

Pete, wa2cwa

On Wed, 25 May 2011 03:27:15 -0700 (PDT) Terry Wagoner
<wagstw46@...> writes:
> Pete--Do you know if anyone ever published an index? I seem to recall
> that Rob
> owned INRAD and sold it? Maybe I will contact him and see what he
> has available.
> I will look at the INRAD site. If they are selling back issues maybe
> they have
> an index?
>
> I am only interested in the years/issues that address our hybrids.

> Especially
> interested in any articles on rig maintenance and alignment. I was
> hoping to
> find an article on the VBT-1 test jig. I would like to find out if a
> schematic
> is available for it. I wrote Kenwood (california) and they didnt
> know what I was
> talking about. Perhaps there are articles on alternate ways to
> perform some of
> the alignment steps in the TS-830S service manual? In addition to
> the language
> translation problems in this manual there are some steps that need
> amplification/clarification or just cant be performed as written. I
> wonder what
> it would take to get the back issues on Gordons site? Terry
>

[Non-text portions of this message have been removed]

31491. Re: [TS-520_820_530_830] TS830s _ plate current way too high !!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 01:19:15 UTC
From: John Davidson
Topic: 31481 Message: 31491

HAVE YOU CHECKED THE VALUE OF THE CATHODE RESISTORS, THEY MAY HAVE BEEN COOKED.

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, May 25, 2011 1:56:04 PM
Subject: [TS-520_820_530_830] TS830s _ plate current way too high !!

Guys, a chum of mine recently managed to fry the output stage of his 830s by simply not having a load on the antenna output. Please dont ask as I have absolutely no idea !! Guess he was plain dumb !! The 6146b bottles were totally destroyed too. Now, I have managed to obtain a replacemement choke, (his original was fried to a crisp) which sits between the bottles and have hooked everything up and made a brief attempt at getting something out of this old lady once more. Problem: In all output modes including TUNE, the plate current reading is virtually full scale and even by adjusting the bias on the rear of the rig, it hardly reduces at all. I have checked out the solder joints in and around the pa bottles (which incidently are brand new) and cannot come up with a reasonable theory as to why this should be happening. The 12by7a driver is also new. The HV reading is a little over 900 volts. Clearly something appears to be drawing full plate current and even adjustments on LOAD, PLATE and DRIVE have no impact at all. I have also made an attempt to alter the bias potentiometer for a reduced reading on the back of the rig but this only invites a very minor reduction in current reading. Any thoughts.......Will

[Non-text portions of this message have been removed]

31492. Re: Blowing the cathode resitors with intermittent monotony - TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 04:50:15 UTC
From: Robin
Topic: 31470 Message: 31492

Joe, no I have the same old finals that came with the rig. I think all the valves are soft as ALC is a bit erratic and on CW the output power and Ip both drop 10% very quickly before stabilising. But, how would that cause the cathode resistors to fail? If anything, they should be under less stress than for full spec valves. Do the finals arc over? 73 Robin ZL4IG

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Robin,
>
> Â Â Â Â I highly suspect the finals. Have they been changed and now you're blowing the R's? It has been my personal experience on both an 820 and 830 that I was not as lucky as you...as soon as I turned on the heater...zap/pop...I had just put in new 6146B's...China's finest...they were the cause of the problem. Check your Ip to see if it drops after you "key-down" in CW...the Ip should hold steady...if not..your driver or finals may be giving up the ghost...also how's the "dip" in CW mode? If it is broad and shallow this usually indicates driver going bad.Â Â Â Â Â Â Good luck.....
>
> Â Â Â Â Â Â Â Â Â 73'sÂ Â joeÂ Â wb7uqu
>

31493. Re: [TS-520_820_530_830] Re: Blowing the cathode resitors with intermittent monotony - TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 04:57:14 UTC
From: Chris Parnell
Topic: 31470 Message: 31493

Robin,

I (didn't know it at the time) had a faulty tube (6146B) that was arcing over as I tuned up, which in turn blew the cathode resistors in my 830s recently (twice!!).
Once I replaced the faulty tube and resistors, it tunes much better now.

Cheers
Chris, ZL1CDP

On 26/05/2011, at 4:50 PM, Robin wrote:

>
>
> Joe, no I have the same old finals that came with the rig. I think all the valves are soft as ALC is a bit erratic and on CW the output power and Ip both drop 10% very quickly before stabilising. But, how would that cause the cathode resistors to fail? If anything, they should be under less stress than for full spec valves. Do the finals arc over? 73
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> >
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> >
>
>

[Non-text portions of this message have been removed]

31494. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 10:51:55 UTC
From: Terry Wagoner
Topic: 31458 Message: 31494

I received a response from the new INRAD owners today and they said they are not selling back issues and if they had them they would be buried in dusty boxes they havent opened yet. They mentiond that Fox Tango issued a CD rom of their newsletter and perhaps I should check to see if it contained the Kenwood letters as well. I doubt FT group would have included Kenwood letters. So the search continues. If I can find a complete set I will look into what it would cost to make them available to our members. Someone out there has the complete set in a nice binder gathering dust. 73s Terry

---

From: fpath fpath <fpath@...>
To: ts-520_820_530_830@yahoogroups.com
Sent: Wed, May 25, 2011 8:42:25 PM
Subject: RE: [TS-520_820_530_830] Kenwood Users Group Newsletter

Hi Guys,

Here in VK the newsletter came from Kenwood (Sydney) Australia, every three months. It had a lot of Kenwood advertising and lots of specials/discounts for Kenwood User members, but when Kenwood Australia went, so did the club. It covered things along the lines of adding an 8.83Mhz IF output to the TS 530 to enable the SM220 BS8 to be used, adding a meter light to the AT230 via the TS830/530 series. Circuit updates and technical related issues all tried, tested and approved by Kenwood, All models and issues were covered under service warranty. Lots of the information that I recall, I can't find anywhere on the net.

Anyone heard if Kenwood has released a new model??

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: pmarkavage@...
Date: Wed, 25 May 2011 12:51:24 -0400
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Every year I think in the January issue, an index was printed for all the articles of the previous year. There were also supplemental collections of articles for specific rigs that appeared on the market in the 90's. I think I still have a TS-430S collection. If you read Rob's blog at the link I provided, you'll see the history of INRAD. From what I remember without digging them up, there were lots of hinks, mods, tweaks, regurgitation of old problems, kenwood service addenda, etc. Most were submitted by members but, from I remember, generally there was no formal testing to validate the article(s). Over the years, a lot of this same info, has found its way to specific Internet sites that cater to specific

models or model families. I seriously doubt you'll find something there
that hasn't already been covered somewhere on someone's Internet site in
one form or another.

Pete, wa2cwa

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> amplification/clarification or just cant be performed as written. I
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> it would take to get the back issues on Gordons site? Terry
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[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31495. Re: [TS-520_820_530_830] Re: Blowing the cathode resitors with intermittent monotony - TS-820s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 15:52:05 UTC
From: Joseph Stiles
Topic: 31470 Message: 31495

Robin,

I am not an expert on "valves." I just love that term. It has just been my experience that one, or both finals are highly suspect when just the cathode R's pop. Testing RF output valves in a tube(valve) tester does not offer a "real life" test. I have had valves test "good" and in actual use..would not perform...low power...arcing..etc. Mike...w5rkl...and others in this group are way more knowledgeable than I on this matter.

Cheers mate, joe wb7uqu

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, May 25, 2011 9:57 PM
Subject: Re: [TS-520_820_530_830] Re: Blowing the cathode resitors with intermittent monotony - TS-820s

Robin,

I (didn't know it at the time) had a faulty tube (6146B) that was arcing over as I tuned up, which in turn blew the cathode resistors in my 830s recently (twice!!).
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Cheers
Chris, ZL1CDP

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> Joe, no I have the same old finals that came with the rig. I think all the valves are soft as ALC is a bit erratic and on CW the output power and Ip both drop 10% very quickly before stabilising. But, how would that cause the cathode resistors to fail? If anything, they should be under less stress than for full spec valves. Do the finals arc over? 73 Robin ZL4IG
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> > Robin,
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> > Â Â Â Â I highly suspect the finals. Have they been changed and now you're blowing the R's? It has been my personal experience on both an 820 and 830 that I was not as lucky as you...as soon as I turned on the heater...zap/pop...I had just put in new 6146B's...China's finest...they were the cause of the problem. Check your Ip to see if it drops after you "key-down" in CW...the Ip should hold steady...if not..your driver or finals may be giving

up the ghost...also how's the "dip" in CW mode? If it is broad and shallow this usually indicates driver going bad.Â Â Â Â Â Â Good luck.....
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> >
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31496. Re: TS-830s power switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 16:21:23 UTC
From: ktwhy2003
Topic: 31465 Message: 31496

Hi, Thanks, I got in touch with him and he does have one for sale. SO I'll be get one from him :)

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Kent,
>
> The main power switch and heater switch are both the same, part number S59-2020-05.
>
> You might write Bob Mansker, ke5ftf at mail.com and ask him for a replacement.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@> wrote:
> >
> > Would anybody know the part number or size info for the power swtich on the TS-830S? Mine cam with a broken off handle (in the on position) and I'd like to repair it. It's ok using a power bar, but I'd like to make it 100% again..
> >
> >
> > thanks
> >
> > Kent VE3KNT
> >
>

31497. Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 16:26:47 UTC
From: Ravi
Topic: 31497 Message: 31497

Hi Friends

Today my TS520SE stopped suddenly with a 'pop'.

When checked, the AC fuse was blown.I opened the covers and noted that one of the small ceramic capacitors across high voltage caps was blown. This is noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 & C20 connected to 800V line in the rectifier unit.

I can replace both after discharging high voltage caps.My worry is why this has happened? Is it due to aging of the caps or for some other reason.Looks like caps are originals but not sure as previous repair notes are not available.
Appreciate any views/suggestions.73's de 4S6RAV (Ravi)

31498. RE: [TS-520_820_530_830] Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 16:36:18 UTC
From: brad
Topic: 31497 Message: 31498

Well the Radio blew the fuse as designed. Replace the caps and check the high voltage to be sure it is correct. If all seems well, forget it and chalk it up to age. I would purchase a spare set to be on the safe side. It's an old radio and I know how much fun they are to use, so have fun and don't try and second guess age. Have fun.Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ravi
Sent: Thursday, May 26, 2011 12:27
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Capacitors blown off!!

Hi Friends

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When checked, the AC fuse was blown.I opened the covers and noted that one of the small ceramic capacitors across high voltage caps was blown. This is noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 & C20 connected to 800V line in the rectifier unit.

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Appreciate any views/suggestions.73's de 4S6RAV (Ravi)

[Non-text portions of this message have been removed]

31499. Re: [TS-520_820_530_830] Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 16:47:18 UTC
From: ravi sumith
Topic: 31497 Message: 31499

Thanks Brad

From: brad <kb2chy@frontiernet.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 26, 2011 10:06 PM
Subject: RE: [TS-520_820_530_830] Capacitors blown off!!

Well the Radio blew the fuse as designed. Replace the caps and check the high voltage to be sure it is correct. If all seems well, forget it and chalk it up to age. I would purchase a spare set to be on the safe side. It's an old radio and I know how much fun they are to use, so have fun and don't try and second guess age. Have fun.Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ravi
Sent: Thursday, May 26, 2011 12:27
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Capacitors blown off!!

Hi Friends

Today my TS520SE stopped suddenly with a 'pop'.

When checked, the AC fuse was blown.I opened the covers and noted that one of the small ceramic capacitors across high voltage caps was blown. This is noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 & C20 connected to 800V line in the rectifier unit.

I can replace both after discharging high voltage caps.My worry is why this has happened? Is it due to aging of the caps or for some other reason.Looks like caps are originals but not sure as previous repair notes are not available.
Appreciate any views/suggestions.73's de 4S6RAV (Ravi)

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31500. Re: Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 17:06:46 UTC
From: w5rkl
Topic: 31497 Message: 31500

Disc capacitors "typically" do not blow up like that unless their voltage ratings are exceeded.

The manual parts list doesn't show the voltage rating but a 1KV .01ufd cap would not be too much for each cap.

I wouldn't just replace the caps, I would also check the 2 equalizing resistors, R3 and R4, both 470K 1/2 watt. R3 and R4 not only provide a path to bleed the HV filter capacitors to zero volts when power is removed, they also provide a means to equalize the voltage applied across each filter capacitor in the voltage doubling circuit.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Thanks Brad
>
>
>
> _____
> From: brad <kb2chy@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 26, 2011 10:06 PM
> Subject: RE: [TS-520_820_530_830] Capacitors blown off!!
>
>
> Â
> Well the Radio blew the fuse as designed. Replace the caps and check the
> high voltage to be sure it is correct. If all seems well, forget it and
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> Sent: Thursday, May 26, 2011 12:27
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Capacitors blown off!!
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>
> [Non-text portions of this message have been removed]
>
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>
> [Non-text portions of this message have been removed]
>

31501. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 17:27:55 UTC
From: pmarkavage@juno.com
Topic: 31458 Message: 31501

The originator of the newsletters, N8RT Rob, is still around. So, in essence, he owned the initial copyright. When he transferred ownership of the business to the first INRAD owner (who is listed on his web site), did he transfer ownership (all rights and privileges) of the newsletter to this owner and/or did this owner transfer the rights to the current owner as part of the overall business transfer? You might pose the question to Rob and/or the first INRAD owner.
It would be wise to get everyone's blessing on what you want to do (preferably in writing), i.e. find the newsletters, scan them, and put them up on the web before you spend the time and effort.

Pete, wa2cwa

On Thu, 26 May 2011 03:51:55 -0700 (PDT) Terry Wagoner
<wagstw46@...> writes:
> I received a response from the new INRAD owners today and they said
> they are not
> selling back issues and if they had them they would be buried in
> dusty boxes
> they havent opened yet. They mentiond that Fox Tango issued a CD rom
> of their
> newsletter and perhaps I should check to see if it contained the
> Kenwood letters
> as well. I doubt FT group would have included Kenwood letters. So
> the search
> continues. If I can find a complete set I will look into what it
> would cost to
> make them available to our members. Someone out there has the
> complete set in a
> nice binder gathering dust. 73s Terry
>

31502. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 17:56:26 UTC
From: Terry Wagoner
Topic: 31458 Message: 31502

Pete-- I hadnt thought of the copyright aspect. I got a response from a ham in Chicago who has complete set in binder. I am driving tomorrow to meet him to purchase them. He knows what I want to do with them and made me a very fair price. I will email Rob and tell him what I would like to do. In any event, I should have the set tomorrow. Hopefully, that will have been the hard part. Terry-K9TW

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 26, 2011 1:27:55 PM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

The originator of the newsletters, N8RT Rob, is still around. So, in essence, he owned the initial copyright. When he transferred ownership of the business to the first INRAD owner (who is listed on his web site), did he transfer ownership (all rights and privileges) of the newsletter to this owner and/or did this owner transfer the rights to the current owner as part of the overall business transfer? You might pose the question to Rob and/or the first INRAD owner.
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> continues. If I can find a complete set I will look into what it
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> make them available to our members. Someone out there has the
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> nice binder gathering dust. 73s Terry
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[Non-text portions of this message have been removed]

31503. RE; Disc ceramics and equalizing resistors !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 17:47:38 UTC
From: Prof. Arnaldo Coro Antich
Topic: 31503 Message: 31503

Dear amigos :

I did change the two capacitors for .01 at 2kV units and the equalizing resistors
for a pair of very nice 2 Watt rated 470 k units.
Called a post factory ¨upgrade¨ if you wish...
Also checked the state of the high voltage electrolytic capacitors with an ESR Equivalent Series Resistance meter...
As a result... the two high voltage units were replaced...
The ESR meter is an amazingly useful test instrument !!! You can measure the electrolytics without desoldering them from the circuit !!!
By the way, have a new rare problem with the TS820S... that I will post in another message..

73 and DX
Arnie Coro
CO2KK

Disc capacitors "typically" do not blow up like that unless their voltage ratings are exceeded.

The manual parts list doesn't show the voltage rating but a 1KV .01ufd cap would not be too much for each cap.

I wouldn't just replace the caps, I would also check the 2 equalizing resistors, R3 and R4, both 470K 1/2 watt. R3 and R4 not only provide a path to bleed the HV filter capacitors to zero volts when power is removed, they also provide a means to equalize the voltage applied across each filter capacitor in the voltage doubling circuit.

73s
Mike
W5RKL

31504. Re: [TS-520_820_530_830] Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 19:33:38 UTC
From: Chris Robinson
Topic: 31497 Message: 31504

I wouldnt fret over it to much. sounds like sudden escape of the magic smoke, it happens sometimes with age. As said before grab an extra set for the repair just in case.
Do you see any obvious signs of burn or extreme heat, or any evidence it is more then just a part failure? If not, dont worry.

On Thu, May 26, 2011 at 11:26 AM, Ravi <mindover2003@...> wrote:

>
>
> Hi Friends
>
> Today my TS520SE stopped suddenly with a 'pop'.
>
> When checked, the AC fuse was blown.I opened the covers and noted that one
> of the small ceramic capacitors across high voltage caps was blown. This is
> noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 &
> C20 connected to 800V line in the rectifier unit.
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> I can replace both after discharging high voltage caps.My worry is why this
> has happened? Is it due to aging of the caps or for some other reason.Looks
> like caps are originals but not sure as previous repair notes are not
> available.
> Appreciate any views/suggestions.73's de 4S6RAV (Ravi)
>
>
>
>

--
Mr.C.Robinson
73 DE KF6NFW

[Non-text portions of this message have been removed]

31505. Re: [TS-520_820_530_830] RE; Disc ceramics and equalizing resistors !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 19:44:18 UTC
From: Terry Wagoner
Topic: 31503 Message: 31505

I agree with Mike that these .01 1000v RF bypass disc ceramics do not typically blow up. It would be good to understand why if possible. In addition to changing out the equalizing resistors I would look at C8 and L1 at bottom of your plate choke in the PA cage. It is possible these 2 components have significantly changed value or are damaged and you are getting some RF into your power supply which is not a good thing. While you have the covers off you can physically look at these two components for obvious damage. K4EAA sells a kit for them. Yes--I recently bought an ESR tester and do not know how I got along without one. Best 73s Terry

---
From: Prof. Arnaldo Coro Antich <inforhc@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, May 26, 2011 1:47:38 PM
Subject: [TS-520_820_530_830] RE; Disc ceramics and equalizing resistors !!!

Dear amigos :

I did change the two capacitors for .01 at 2kV units and the equalizing resistors
for a pair of very nice 2 Watt rated 470 k units.
Called a post factory ¨upgrade¨ if you wish...
Also checked the state of the high voltage electrolytic capacitors with an ESR Equivalent Series Resistance meter...
As a result... the two high voltage units were replaced...
The ESR meter is an amazingly useful test instrument !!! You can measure the electrolytics without desoldering them from the circuit !!!
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73 and DX
Arnie Coro
CO2KK

Disc capacitors "typically" do not blow up like that unless their voltage ratings are exceeded.

The manual parts list doesn't show the voltage rating but a 1KV .01ufd cap would not be too much for each cap.

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73s
Mike
W5RKL

[Non-text portions of this message have been removed]

31506. Re: TS-820S Display Off Freq.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-26 23:46:13 UTC
From: ka9gpx
Topic: 31485 Message: 31506

To all that responded both on & off list,...

Thank you very much for the helpful ideas. Looks like I'll be removing the VCO & Counter module soon,...Hopefully to cure the problem I'm having.

A thought occurred to me that might warrant asking the experts in the group.....As long as I'm going through this "Exercise",...while I have the counter & VCO out of the radio. Is there anything else I should check,...tighten,...do,... internally in the radio chassis before putting the modules back in.

Per all the recommendations all the contacts on the counter module will be cleaned,& screws tightened,...& the VCO will be "rebuilt" per the instructions I found on Gordon's (N6WK) site.... Just curious if there's another "While you've got it apart" type item I should address...

When I can find the time to get to this "Exercise",
I'll post the results...
Thanks again for all the input,

Carl
KA9GPX

31507. Re: [TS-520_820_530_830] Re: Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 00:45:17 UTC
From: ravi sumith
Topic: 31497 Message: 31507

Yes Mike,I thought of replacing resistors too

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 26, 2011 10:36 PM
Subject: [TS-520_820_530_830] Re: Capacitors blown off!!

Disc capacitors "typically" do not blow up like that unless their voltage ratings are exceeded.

The manual parts list doesn't show the voltage rating but a 1KV .01ufd cap would not be too much for each cap.

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73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, ravi sumith <mindover2003@...> wrote:
>
> Thanks Brad
>
>
>
> ---
> From: brad <kb2chy@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thursday, May 26, 2011 10:06 PM
> Subject: RE: [TS-520_820_530_830] Capacitors blown off!!
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>
> Â
> Well the Radio blew the fuse as designed. Replace the caps and check the
> high voltage to be sure it is correct. If all seems well, forget it and
> chalk it up to age. I would purchase a spare set to be on the safe side.
> It's an old radio and I know how much fun they are to use, so have fun and
> don't try and second guess age. Have fun.Brad KB2CHY
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com

> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ravi
> Sent: Thursday, May 26, 2011 12:27
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Capacitors blown off!!
>
> Hi Friends
>
> Today my TS520SE stopped suddenly with a 'pop'.
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> When checked, the AC fuse was blown.I opened the covers and noted that one
> of the small ceramic capacitors across high voltage caps was blown. This is
> noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 &
> C20 connected to 800V line in the rectifier unit.
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> I can replace both after discharging high voltage caps.My worry is why this
> has happened? Is it due to aging of the caps or for some other reason.Looks
> like caps are originals but not sure as previous repair notes are not
> available.
> Appreciate any views/suggestions.73's de 4S6RAV (Ravi)
>
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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31508. Dust Covers For Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 00:59:30 UTC
From: kd8hmo_us
Topic: 31508 Message: 31508

i just noticed that Surplus Sales Of Nebraska is selling Covercraft dust covers for almost every ham rig out there. They are offering covers for all the Kenwood hybrids for around $10. Here is the link...
http://www.surplussales.com/Equipment/HamEquipment/DustCovers.html

31509. Re: Dust Covers For Kenwood Hybrids

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 01:07:39 UTC
From: roberteleazer@rocketmail.com
Topic: 31508 Message: 31509

Glad to see those are available.

The best dust covers I have found for my TS-820S and TS-520 are those zip-up clear plastic cases that bedspreads are packaged in. They are great for storage but a bit awkward for rigs that are in use and hooked up for operation.

Thanks!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kd8hmo_us" <burwell.rick@...> wrote:
>
> i just noticed that Surplus Sales Of Nebraska is selling Covercraft dust covers for almost every ham rig out there. They are offering covers for all the Kenwood hybrids for around $10. Here is the link...
http://www.surplussales.com/Equipment/HamEquipment/DustCovers.html
>

31510. Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 03:42:39 UTC
From: ki4ax
Topic: 31510 Message: 31510

For anyone that is interested... there are a couple of us over on the Kenwood QSO group that will be testing the propagation on 40m tommorrow night at 11:00 EDT (8:00 PDT) at 7.185 +/- 5kc. Anyone who would like to show up on frequency will be welcome. This is not going to be a formal net so there will be no "control operator"; check in, chat, or just see what the propagation is like. I will start calling KA7AYT at about 11:00 EDT. If I fail to hear him, after about 5 min., I will start calling "CQ Kenwood Hybrid Group" or something like that. If there are any issues with T-storms etc. on my end I will post here and on the QSO group page so that everyone will know what is going on. Anyone that can hear me is welcome to call me.

Dan KI4AX

31511. W5RKL & Terry Wagoner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 11:41:36 UTC
From: Chris Parnell
Topic: 31511 Message: 31511

I would like to extend a HUGE thank you to both Mike (W5RKL) and Terry Wagoner for their collective assistance in the troubleshooting and subsequent repair of my TS-830s.
It is without doubt that without their expertise my troubleshooting and subsequent repair would have taken weeks if not months to sort out... but thanks to them both I have the 830s working great again.
Fantastic guys... I cannot thank you enough..

Chris Parnell, ZL1CDP

31512. Re: [TS-520_820_530_830] W5RKL & Terry Wagoner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 12:31:49 UTC
From: Terry Wagoner
Topic: 31511 Message: 31512

Chris--That is what this group is all about. We all want to keep these treasures on the air. It is fun part of hobby for me and I always have a take away that helps me. Best 73s Terry K9TW

From: Chris Parnell <cparnell1001@...>
To: TS-830 Yahoo Group <TS-520_820_530_830@yahoogroups.com>
Sent: Fri, May 27, 2011 7:41:36 AM
Subject: [TS-520_820_530_830] W5RKL & Terry Wagoner

I would like to extend a HUGE thank you to both Mike (W5RKL) and Terry Wagoner for their collective assistance in the troubleshooting and subsequent repair of my TS-830s.
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Fantastic guys... I cannot thank you enough..

Chris Parnell, ZL1CDP

[Non-text portions of this message have been removed]

31513. Re: W5RKL & Terry Wagoner

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 12:34:26 UTC
From: w5rkl
Topic: 31511 Message: 31513

You're welcome Chris. Enjoy your 830.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> I would like to extend a HUGE thank you to both Mike (W5RKL) and Terry Wagoner for their collective assistance in the troubleshooting and subsequent repair of my TS-830s.
> It is without doubt that without their expertise my troubleshooting and subsequent repair would have taken weeks if not months to sort out... but thanks to them both I have the 830s working great again.
> Fantastic guys... I cannot thank you enough..
>
> Chris Parnell, ZL1CDP
>

31514. Re: Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 14:16:55 UTC
From: Terry Wagoner
Topic: 31510 Message: 31514

Danny: I am old help me out here ...0300 UTC (ZULU/GMT) Right? I would like to hear some of these old rigs on the air. I will listen if I can stay up that late! Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> For anyone that is interested... there are a couple of us over on the Kenwood QSO group that will be testing the propagation on 40m tommorrow night at 11:00 EDT (8:00 PDT) at 7.185 +/- 5kc. Anyone who would like to show up on frequency will be welcome. This is not going to be a formal net so there will be no "control operator"; check in, chat, or just see what the propagation is like. I will start calling KA7AYT at about 11:00 EDT. If I fail to hear him, after about 5 min., I will start calling "CQ Kenwood Hybrid Group" or something like that. If there are any issues with T-storms etc. on my end I will post here and on the QSO group page so that everyone will know what is going on. Anyone that can hear me is welcome to call me.
>
> Dan KI4AX
>

31515. 830S paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 14:41:30 UTC
From: ve3gn
Topic: 31515 Message: 31515

Would anyone know if cabinet paint for the TS 830S
is available in spray cans...Shipped to Canada.??
Thank you,,Stan,,VE3GN Ottawa

31516. Re: [TS-520_820_530_830] 830S paint

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-27 16:51:09 UTC
From: Joseph Stiles
Topic: 31515 Message: 31516

Stan,

There is at least 1 guy on EBAY selling two different colors. The early models had a more grey color..the later...had a slight "olive" tint to the paint. You can go to EBAY and look for "KENWOOD PAINT." I think his EBAY sellers name is "pppmike," and I think he is in the upper middle of the US.

73's joe wb7uqu

From: ve3gn <stnlywhite@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, May 27, 2011 7:41 AM
Subject: [TS-520_820_530_830] 830S paint

Would anyone know if cabinet paint for the TS 830S
is available in spray cans...Shipped to Canada.??
Thank you,,Stan,,VE3GN Ottawa

[Non-text portions of this message have been removed]

31517. Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 01:03:43 UTC
From: Terry Wagoner
Topic: 31458 Message: 31517

Hi Gang: I am now the proud owner of what I believe to be most of the Kenwood Users Group Newsletters. I have issue No. 11 2/81 thru issue No. 130 12/92. I emailed Rob N8RT the Publisher/Editor regarding copyright issues and await his response. Hopefully I can get permission to scan them and get them loaded on this site or perhaps Gordons site? I will keep you posted. I quickly reviewed a few early issues and saw a tip that I may consider for my TS-830. The fan runs all the time and is only needed in Xmit. The heater switch only uses one set of two contacts. So this tip has you disconnect the fan from the 100v tap on the xfmr and connect it to the heater switch. The fan now comes on when you switch on the filaments. This is an example of kinds of things contained in these newsletters. Terry K9TW

31518. Kenwood Users Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 01:10:49 UTC
From: Terry Wagoner
Topic: 31518 Message: 31518

From the Kenwood Users Newsletters I see that they had a net that met on Sundays around 14.317 @ 2000GMT and would move around 2100GMT to 21.440 (propagation permitting) to better facility west coast and dx stations. The big problem they had was getting people to serve as net control in absence of Rob N8RT and one or two others who occaisionally filled in for him. I read a letter where he appealed for help to keep the net going. Apparently plenty of check ins but few willing to run the net (I have done this couple of times for Midcars on 7.258 and it is not easy).The net was still active in the early 90s as far as I can tell.
Terry K9TW

31519. TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 01:27:10 UTC
From: ww8x_joe
Topic: 31519 Message: 31519

My TS-830S has been working great. Easy tune-up to get 120+ Watts out. Problem is tonight the receive went nearly deaf. Very little S-meter movement and only the very loudest of signals are easy copy. I have to crank the AF gain full to hear comfortable audio. This has just happened suddenly...up to tonight the receive on the rig has been very responsive. I hope this is an easy problem to get straight. Any suggestions very much appreciated.
73
WW8X
Joe

31520. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 02:37:01 UTC
From: Terry Wagoner
Topic: 31519 Message: 31520

Joe: How is your marker signal (xtal calibrator)? Do you get about S9 signal with it on and vfo tuned to 25khz interval? Common failure is Antenna Input Coil L41 on the RF Board. As far as I know they are no longer available and have to be rewound. They use very small guage wire. Ken K4EAA describes rewind procedure on his website. Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "ww8x_joe" <ww8x.joe@...> wrote:
>
> My TS-830S has been working great. Easy tune-up to get 120+ Watts out. Problem is tonight the receive went nearly deaf. Very little S-meter movement and only the very loudest of signals are easy copy. I have to crank the AF gain full to hear comfortable audio. This has just happened suddenly...up to tonight the receive on the rig has been very responsive. I hope this is an easy problem to get straight. Any suggestions very much appreciated.
> 73
> WW8X
> Joe
>

31521. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 04:59:07 UTC
From: Joe Loverti
Topic: 31519 Message: 31521

Terry: With the calibrator I'm only to get the S-meter to peak at S-3. The beat sounds plenty loud through the speaker, but the S-meter is not going over S-3. Signals from the antenna are still muted.
Joe
WW8X

On Fri, May 27, 2011 at 10:37 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe: How is your marker signal (xtal calibrator)? Do you get about S9
> signal with it on and vfo tuned to 25khz interval? Common failure is Antenna
> Input Coil L41 on the RF Board. As far as I know they are no longer
> available and have to be rewound. They use very small guage wire. Ken K4EAA
> describes rewind procedure on his website. Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ww8x_joe" <ww8x.joe@...>
> wrote:
> >
> > My TS-830S has been working great. Easy tune-up to get 120+ Watts out.
> Problem is tonight the receive went nearly deaf. Very little S-meter
> movement and only the very loudest of signals are easy copy. I have to crank
> the AF gain full to hear comfortable audio. This has just happened
> suddenly...up to tonight the receive on the rig has been very responsive. I
> hope this is an easy problem to get straight. Any suggestions very much
> appreciated.
> > 73
> > WW8X
> > Joe
> >
>
>
>

[Non-text portions of this message have been removed]

31522. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 11:26:53 UTC
From: Terry Wagoner
Topic: 31519 Message: 31522

Joe--just to make sure on same page. When describing signal strength there is difference between "loud" and "strong". I am trying to undertand if you have an RF amp or AF amp problem. With low strength and loud volume Calibrator signal it sounds like RF problem in front end. So, if you turn the RF gain up full clockwise and make sure RF Attenuator button is Off and have AF gain turned up clockwise to comfortable listening level, you tune across band and hear no or just very weak signals with very little S-meter deflection. Is that correct? Is that on 40 as well as 20 or 15 meters?

Also, have you checked your coax connector to the so-239 chassis connector on back of rig and any jumpers you may have connecting wattmeters, antenna switches etc. You could have a loose antenna connection. Check simple stuff first.

Do you have a signal generator? Can inject test signal to see where you are losing the signal ie at RL-1 antenna relay, at L41 antenna input coil, and at Q1 rf amp mosfet. Do you have RF millivolt meter or VTVM w/rf probe? There are level diagrams and couple of test points on the RF board to measure receive level. Do you have service manual? Terry K9TW

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 12:59:07 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry: With the calibrator I'm only to get the S-meter to peak at S-3. The beat sounds plenty loud through the speaker, but the S-meter is not going over S-3. Signals from the antenna are still muted.
Joe
WW8X

On Fri, May 27, 2011 at 10:37 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe: How is your marker signal (xtal calibrator)? Do you get about S9
> signal with it on and vfo tuned to 25khz interval? Common failure is Antenna
> Input Coil L41 on the RF Board. As far as I know they are no longer
> available and have to be rewound. They use very small guage wire. Ken K4EAA
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> the AF gain full to hear comfortable audio. This has just happened
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>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31523. Re: Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 11:56:54 UTC
From: ki4ax
Topic: 31510 Message: 31523

Terry,

We are going to try again this Sunday at 1:00 PM EDT (17:00 UTC) on 21.285 and would be thrilled to hear you there. We made the 40m sked so late in order to give Chris over in Greece a chance to see if he could hear us over here in the U.S. Anyway, I think he will have a better chance on 15m Sunday. I am going to have to get busy and get a wire up for 20m.... I think 20m is going to be the "key" to getting a Kenwood group together on the air.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Danny: I am old help me out here ...0300 UTC (ZULU/GMT) Right? I would like to hear some of these old rigs on the air. I will listen if I can stay up that late! Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> >
> > For anyone that is interested... there are a couple of us over on the Kenwood QSO group that will be testing the propagation on 40m tommorrow night at 11:00 EDT (8:00 PDT) at 7.185 +/- 5kc. Anyone who would like to show up on frequency will be welcome. This is not going to be a formal net so there will be no "control operator"; check in, chat, or just see what the propagation is like. I will start calling KA7AYT at about 11:00 EDT. If I fail to hear him, after about 5 min., I will start calling "CQ Kenwood Hybrid Group" or something like that. If there are any issues with T-storms etc. on my end I will post here and on the QSO group page so that everyone will know what is going on. Anyone that can hear me is welcome to call me.
> >
> > Dan KI4AX
> >
>

31524. Re: [TS-520_820_530_830] Re: Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 12:12:28 UTC
From: Terry Wagoner
Topic: 31510 Message: 31524

Dan--Thanks--I dont have anything up for 15. I will soon as I am putting up a Rohn 45G and will get my tribander back up or I may experiment with a Hex beam? I will listen Sunday. I did listen to Gordon and his group recently on 14.218 and could copy S9 signals from Florida and California very well here in Michigan so I think you are right that 20 is where you will end up. Very hard to accomodate everyones location. Have nice holiday. Terry K9TW

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 7:56:54 AM
Subject: [TS-520_820_530_830] Re: Kenwood Hybrid Net?

Terry,

We are going to try again this Sunday at 1:00 PM EDT (17:00 UTC) on 21.285 and would be thrilled to hear you there. We made the 40m sked so late in order to give Chris over in Greece a chance to see if he could hear us over here in the U.S. Anyway, I think he will have a better chance on 15m Sunday. I am going to have to get busy and get a wire up for 20m.... I think 20m is going to be the "key" to getting a Kenwood group together on the air.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Danny: I am old help me out here ...0300 UTC (ZULU/GMT) Right? I would like to
>hear some of these old rigs on the air. I will listen if I can stay up that
>late! Terry K9TW
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> --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
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>will be welcome. This is not going to be a formal net so there will be no
>"control operator"; check in, chat, or just see what the propagation is like. I
>will start calling KA7AYT at about 11:00 EDT. If I fail to hear him, after about
>5 min., I will start calling "CQ Kenwood Hybrid Group" or something like that.
>If there are any issues with T-storms etc. on my end I will post here and on the
>QSO group page so that everyone will know what is going on. Anyone that can hear
>me is welcome to call me.
> >
> > Dan KI4AX
> >
>

[Non-text portions of this message have been removed]

31525. Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:30:35 UTC
From: Terry Wagoner
Topic: 31525 Message: 31525

Hi Gang--For those of us experiencing 6146 final tube arc overs and blown cathode resistors in our TS-830s here is an exact quote from International Kenwood Users Group Newsletter February 1981 review of the New TS-830S....." A note within the owners manual states: During transmit you may occasionally hear a small popping sound or High Voltage arcing sound, this will be the 6146B power tubes and is considered normal". Additionally the review goes on to say ...Final plate and load tuning should be accomplished within 10 seconds. If more time is required return to receive for more than 20 seconds. Note: The TS-830S under test did arc a few times."

I find this to be amazing coming from 1981 review of new TS-830S with new tubes. I wonder if this was with the S2001 or S2001A tubes?

Had I been performing this test and review on a newly issued TS-830s in 1981 I think a phone call to Japan would have been in order. If we are to believe this review, arcing 6146 tubes in a Kenwood TS-830 was considered normal from the factory and noted in the owners manual. I guess I would have to see an early manual to believe this.

Thought you might be interested in this. Have nice holiday Terry K9TW

31526. Re: [TS-520_820_530_830] Re: Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:32:56 UTC
From: Chris and Alex
Topic: 31510 Message: 31526

Dan,

This morning I heard nets on both 7190 and 7185. I checked between 7175 and 7200 for an hour but didn't hear you. There was rag chew on 7182 that I tried to break in to. They could tell I was there but couldn't copy. Conditions weren't good. I had heavy rain and thunder and from listening to the net Florida was the same. The band was very noisy here. Noise was S5 - S6. I listened on 20m and it wasn't open at all. Perhaps my evening, your morning could be better. I may check conditions at dusk tonight but were having a barby so ..... maybe not.

73
Chris SV0XBQ/9

On Sat, May 28, 2011 at 1:56 PM, ki4ax <dan8barb@...> wrote:

>
>
> Terry,
>
> We are going to try again this Sunday at 1:00 PM EDT (17:00 UTC) on 21.285
> and would be thrilled to hear you there. We made the 40m sked so late in
> order to give Chris over in Greece a chance to see if he could hear us over
> here in the U.S. Anyway, I think he will have a better chance on 15m Sunday.
> I am going to have to get busy and get a wire up for 20m.... I think 20m is
> going to be the "key" to getting a Kenwood group together on the air.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...>
> wrote:
> >
> > Danny: I am old help me out here ...0300 UTC (ZULU/GMT) Right? I would
> like to hear some of these old rigs on the air. I will listen if I can stay
> up that late! Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > For anyone that is interested... there are a couple of us over on the
> Kenwood QSO group that will be testing the propagation on 40m tommorrow
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> show up on frequency will be welcome. This is not going to be a formal net
> so there will be no "control operator"; check in, chat, or just see what the
> propagation is like. I will start calling KA7AYT at about 11:00 EDT. If I
> fail to hear him, after about 5 min., I will start calling "CQ Kenwood
> Hybrid Group" or something like that. If there are any issues with T-storms

> etc. on my end I will post here and on the QSO group page so that everyone
> will know what is going on. Anyone that can hear me is welcome to call me.
> > >
> > > Dan KI4AX
> > >
> >
>
>
>

[Non-text portions of this message have been removed]

31527. Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:42:21 UTC
From: w5rkl
Topic: 31525 Message: 31527

Hi Terry,

I "think" the statement referring to "popping" sound actually meant a "clink" sound which can occur in a vacuum tube such as the S2001/6146A or S2001A/6146B tubes during tune up. The "clink" sound is a very high pitched low level sound that is heard when the elements in the tubes warm/heat up. It doesn't happen all the time. I've heard this quite often, not only in Kenwood hybrids but in other transmitters with 6146 or other final tubes. I hear it every now and then in my AL-811. It doesn't mean there's a problem, it simply means the elements in the tube are heating up and vibrating resulting in the "clink" sound.

There are various "misleading" statements in the manuals that can confuse the operators and I based these on translation issue from Japanese to English. I guess there is no such word such as "clink", translating to English, other than "pop" to explain the sound coming from the final amplifier. I do not believe the statement is referring to the cathode resistors failing but more about what I indicated above.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Gang--For those of us experiencing 6146 final tube arc overs and blown cathode resistors in our TS-830s here is an exact quote from International Kenwood Users Group Newsletter February 1981 review of the New TS-830S........." A note within the owners manual states: During transmit you may occasionally hear a small popping sound or High Voltage arcing sound, this will be the 6146B power tubes and is considered normal". Additionally the review goes on to say ...Final plate and load tuning should be accomplished within 10 seconds. If more time is required return to receive for more than 20 seconds. Note: The TS-830S under test did arc a few times."
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> I find this to be amazing coming from 1981 review of new TS-830S with new tubes. I wonder if this was with the S2001 or S2001A tubes?
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> Had I been performing this test and review on a newly issued TS-830s in 1981 I think a phone call to Japan would have been in order. If we are to believe this review, arcing 6146 tubes in a Kenwood TS-830 was considered normal from the factory and noted in the owners manual. I guess I would have to see an early manual to believe this.
>
> Thought you might be interested in this. Have nice holiday Terry K9TW
>

31528. Re: [TS-520_820_530_830] Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:47:55 UTC
From: Sandy
Topic: 31525 Message: 31528

Terry...

Thanks for the info on the newsletters. Very interesting stuff! I for one sure hope that you get to make these available to the group. Seem as though you can't always believe everything you read, but still very interesting all the same.

Sandy - n9pgo

On 5/28/2011 9:30 AM, Terry Wagoner wrote:
>
> Hi Gang--For those of us experiencing 6146 final tube arc overs and
> blown cathode resistors in our TS-830s here is an exact quote from
> International Kenwood Users Group Newsletter February 1981 review of
> the New TS-830S....." A note within the owners manual states:
> During transmit you may occasionally hear a small popping sound or
> High Voltage arcing sound, this will be the 6146B power tubes and is
> considered normal". Additionally the review goes on to say ...Final
> plate and load tuning should be accomplished within 10 seconds. If
> more time is required return to receive for more than 20 seconds.
> Note: The TS-830S under test did arc a few times."
>
> I find this to be amazing coming from 1981 review of new TS-830S with
> new tubes. I wonder if this was with the S2001 or S2001A tubes?
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> Had I been performing this test and review on a newly issued TS-830s
> in 1981 I think a phone call to Japan would have been in order. If we
> are to believe this review, arcing 6146 tubes in a Kenwood TS-830 was
> considered normal from the factory and noted in the owners manual. I
> guess I would have to see an early manual to believe this.
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> Thought you might be interested in this. Have nice holiday Terry K9TW
>
>

[Non-text portions of this message have been removed]

31529. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:59:06 UTC
From: w5rkl
Topic: 31519 Message: 31529

The Marker (Calibrator) signal flows directly from the PLL Unit plug 4 pin 2 "MKR" to the RF Unit plug 4 pin 2 "MKR". The Marker signal does not flow through the RF ATTN push button switch nor does it flow through the antenna T/R relay. The position of the RF ATTN switch has no affect on the Marker signal level.

If the Marker signal is weak on all bands then it is quite possible that Terry is right, L41 is bad.

You can inject a HF signal on both sides of L41. First inject the signal to the primary windings of L41 at TP1 on the RF Unit. Keep the signal level less than 1uv ("uv" stands for "micro-volt"). If the signal is very weak, inject the same signal on the secondary windings at the junction of L41 and C42. You may have to increase the signal level a bit. If the receive generator signal indicates a significant increase, i.e., the S meter rises to S9 or so, then most likely L41 is bad.

Again, the signal generator's output signal level must be kept low to prevent the RF amplifier from being over driven. If your signal generator has a built in audio generator, most typically do, turn it ON then apply the signal at the points above. You should hear the beat note AND the generator's audio signal in the speaker. The beat note AND audio signal can results in a 2 tone sound coming from the speaker. If you hear this, turn the generator's audio generator output "OFF" then adjust the VFO for a zero beat. Zero beat mean there the VFO is adjust to the point where you no longer hear the beat note. At this point, turn the generator's audio output "ON" and you should hear the generator's audio signal in the speaker.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Joe--just to make sure on same page. When describing signal strength there is
> difference between "loud" and "strong". I am trying to undertand if you have an
> RF amp or AF amp problem. With low strength and loud volume Calibrator signal it
> sounds like RF problem in front end. So, if you turn the RF gain up full
> clockwise and make sure RF Attenuator button is Off and have AF gain turned up
> clockwise to comfortable listening level, you tune across band and hear no or
> just very weak signals with very little S-meter deflection. Is that correct? Is
> that on 40 as well as 20 or 15 meters?
>
> Also, have you checked your coax connector to the so-239 chassis connector on
> back of rig and any jumpers you may have connecting wattmeters, antenna switches
> etc. You could have a loose antenna connection. Check simple stuff first.
>
> Do you have a signal generator? Can inject test signal to see where you are
> losing the signal ie at RL-1 antenna relay, at L41 antenna input coil, and at

> Q1 rf amp mosfet. Do you have RF millivolt meter or VTVM w/rf probe? There are
> level diagrams and couple of test points on the RF board to measure receive
> level. Do you have service manual? Terry K9TW
>
>
>
> _____
> From: Joe Loverti <ww8x.joe@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, May 28, 2011 12:59:07 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
> movement
>
> Terry: With the calibrator I'm only to get the S-meter to peak at S-3. The
> beat sounds plenty loud through the speaker, but the S-meter is not going
> over S-3. Signals from the antenna are still muted.
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> WW8X
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> On Fri, May 27, 2011 at 10:37 PM, Terry Wagoner <wagstw46@...> wrote:
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> >
> > Joe: How is your marker signal (xtal calibrator)? Do you get about S9
> > signal with it on and vfo tuned to 25khz interval? Common failure is Antenna
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> > describes rewind procedure on his website. Terry K9TW
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> > >
> > --- In TS-520_820_530_830@yahoogroups.com, "ww8x_joe" <ww8x.joe@>
> > wrote:
> > > >
> > > > My TS-830S has been working great. Easy tune-up to get 120+ Watts out.
> > Problem is tonight the receive went nearly deaf. Very little S-meter
> > movement and only the very loudest of signals are easy copy. I have to crank
> > the AF gain full to hear comfortable audio. This has just happened
> > suddenly...up to tonight the receive on the rig has been very responsive. I
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> > > > 73
> > > > WW8X
> > > > Joe
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> > [Non-text portions of this message have been removed]

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> ------------------------------------
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> Yahoo! Groups Links
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>
> [Non-text portions of this message have been removed]
>

31530. Thanks to the forum, I'm OTA! First HF experiences.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:47:38 UTC
From: kd0fds
Topic: 31530 Message: 31530

Last night, I tried to catch the informal Kenwood Hybrid net, but only caught the late 40m OMISS net. Since I was already tuned up, I attempted to check in. That was my very first HF transmission ever.

It turns out that the things I have learned with your help on this forum is indeed enough for a hack like me to get a tech special TS-820s back on the air good enough to talk to folks from Delaware to California!

The patience of the OMISS net in working with new users like myself is certainly appreciated. I think I logged 14 contacts in my first experience. Everyone kept giving me a chance to "get it right." *laughs*

What antenna was I using? Oh a 40m dipole strung up on a suburban fence no more than 6 feet off the ground. I'm sure a better antenna situation would go a very long way to improve things as will continued efforts to find and correct the multitude of problems with my classic TS-820s.

Certainly here in the age of the internet, talking to folks 1,000s of miles away is as easy as picking up a mobile phone, but now I understand the magic that hams felt before VOIP and unlimited minutes were commonplace. I also sheepishly look back at the excitement I experienced talking 70 miles on a modern, turnkey 2 meter mobile rig as small potatoes compared to talking 1,700+ miles with my classic Kenwood.

I am really looking forward to talking to other Kenwood hybrid owners on HF now. I have no idea what my radio sounds like on the air. I need feedback to help me figure out what other adjustments are out of whack on my gear. I need help figuring out where in the world my mic gain needs to be, whether or not my compression is set correctly (or if it even works!) and things like that.

Thanks again team. You helped keep another classic Kenwood radio doing what it was designed to do. Hope to catch y'all on the air soon!

kd0fds in Denver, CO, USA

31531. Re: Kenwood Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 14:19:59 UTC
From: kd0fds
Topic: 31510 Message: 31531

I'll try to catch this Sunday 1700UTC. I don't think my longwire makes a very good 15m antenna, but I'll try none-the-less.

I tuned in on 7.185 last night and caught the OMISS late net. I'll post up about that in a separate thread.

KD0FDS In Denver, CO, USA

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Terry,
>
> We are going to try again this Sunday at 1:00 PM EDT (17:00 UTC) on 21.285 and would be thrilled to hear you there. We made the 40m sked so late in order to give Chris over in Greece a chance to see if he could hear us over here in the U.S. Anyway, I think he will have a better chance on 15m Sunday. I am going to have to get busy and get a wire up for 20m.... I think 20m is going to be the "key" to getting a Kenwood group together on the air.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
> >
> > Danny: I am old help me out here ...0300 UTC (ZULU/GMT) Right? I would like to hear some of these old rigs on the air. I will listen if I can stay up that late! Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@> wrote:
> > >
> > > For anyone that is interested... there are a couple of us over on the Kenwood QSO group that will be testing the propagation on 40m tommorrow night at 11:00 EDT (8:00 PDT) at 7.185 +/- 5kc. Anyone who would like to show up on frequency will be welcome. This is not going to be a formal net so there will be no "control operator"; check in, chat, or just see what the propagation is like. I will start calling KA7AYT at about 11:00 EDT. If I fail to hear him, after about 5 min., I will start calling "CQ Kenwood Hybrid Group" or something like that. If there are any issues with T-storms etc. on my end I will post here and on the QSO group page so that everyone will know what is going on. Anyone that can hear me is welcome to call me.
> > >
> > > Dan KI4AX
> > >
> >
>

31532. Re: [TS-520_820_530_830] Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 16:21:29 UTC
From: Joseph Stiles
Topic: 31525 Message: 31532

Greetings group.

I agree with Mike's statement about the "clink" sound. I have heard the "popping"....followed by the "smell of smoke" and ZERO Ip, numerous times due to faulty final tubes causing the cathode R's to go. I have also heard the "clink" sound...NOT followed by the "popping" and no smell of smoke while "tuning up." When any object gets warm/hot...it will expand...as will the tube internals and the glass envelope. For what it's worth.....

To all the Veterans: THANK YOU

73's joe wb7uqu

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, May 28, 2011 7:42 AM
Subject: [TS-520_820_530_830] Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Hi Terry,

I "think" the statement referring to "popping" sound actually meant a "clink" sound which can occur in a vacuum tube such as the S2001/6146A or S2001A/6146B tubes during tune up. The "clink" sound is a very high pitched low level sound that is heard when the elements in the tubes warm/heat up. It doesn't happen all the time. I've heard this quite often, not only in Kenwood hybrids but in other transmitters with 6146 or other final tubes. I hear it every now and then in my AL-811. It doesn't mean there's a problem, it simply means the elements in the tube are heating up and vibrating resulting in the "clink" sound.

There are various "misleading" statements in the manuals that can confuse the operators and I based these on translation issue from Japanese to English. I guess there is no such word such as "clink", translating to English, other than "pop" to explain the sound coming from the final amplifier. I do not believe the statement is referring to the cathode resistors failing but more about what I indicated above.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "Terry Wagoner" <wagstw46@...> wrote:
>
> Hi Gang--For those of us experiencing 6146 final tube arc overs and blown cathode resistors in our TS-830s here is an exact quote from International Kenwood Users Group Newsletter February 1981 review of the New TS-830S....." A note within the owners manual states: During transmit you may occasionally hear a small popping sound or High Voltage

arcing sound, this will be the 6146B power tubes and is considered normal". Additionally the review goes on to say ...Final plate and load tuning should be accomplished within 10 seconds. If more time is required return to receive for more than 20 seconds. Note: The TS-830S under test did arc a few times."
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> I find this to be amazing coming from 1981 review of new TS-830S with new tubes. I wonder if this was with the S2001 or S2001A tubes?
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> Had I been performing this test and review on a newly issued TS-830s in 1981 I think a phone call to Japan would have been in order. If we are to believe this review, arcing 6146 tubes in a Kenwood TS-830 was considered normal from the factory and noted in the owners manual. I guess I would have to see an early manual to believe this.
>
> Thought you might be interested in this. Have nice holiday Terry K9TW
>

[Non-text portions of this message have been removed]

31533. Re: [TS-520_820_530_830] Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 16:30:59 UTC
From: Terry Wagoner
Topic: 31525 Message: 31533

Mike--that may explain it as they never made any mention of cathode resistors, but the reviewer doing the testing of the new rig said the rig "arced" several times during the testing.That doesnt sound like translation problem? I would hope an experienced ham testing a new rig would know what a "arcing" sound was. Maybe not. Yes I have heard the "tink or clink" of a glass tube warming up and cooling down. Very different sound from a pop or high voltage arcing. Also, very strange to actually write this in the owners manual. I still would like to see the exact texts. Terry

---

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 10:42:21 AM
Subject: [TS-520_820_530_830] Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Hi Terry,

I "think" the statement referring to "popping" sound actually meant a "clink" sound which can occur in a vacuum tube such as the S2001/6146A or S2001A/6146B tubes during tune up. The "clink" sound is a very high pitched low level sound that is heard when the elements in the tubes warm/heat up. It doesn't happen all the time. I've heard this quite often, not only in Kenwood hybrids but in other transmitters with 6146 or other final tubes. I hear it every now and then in my AL-811. It doesn't mean there's a problem, it simply means the elements in the tube are heating up and vibrating resulting in the "clink" sound.

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73s
Mike
W5RKL

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>A note within the owners manual states: During transmit you may occasionally
>hear a small popping sound or High Voltage arcing sound, this will be the 6146B

>power tubes and is considered normal". Additionally the review goes on to say
>...Final plate and load tuning should be accomplished within 10 seconds. If more
>time is required return to receive for more than 20 seconds. Note: The TS-830S
>under test did arc a few times."
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>manual to believe this.
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> Thought you might be interested in this. Have nice holiday Terry K9TW
>

[Non-text portions of this message have been removed]

31534. Re: Thanks to the forum, I'm OTA! First HF experiences.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 16:44:23 UTC
From: Terry Wagoner
Topic: 31530 Message: 31534

Steve--My son in law is a VOIP generation person and he cant understand the magic of ham radio. I remind him that he needs connecting wire and/or fiber optic cable to complete his call around the world. It is still very amazing what 100 watts (light bulb power) and a wire 6 foot off the ground can do as you found last nite. Get that dipole higher and you should do better. The magic never goes away! Terry

--- In TS-520_820_530_830@...m, "kd0fds" <kd0fds@...> wrote:
>
> Last night, I tried to catch the informal Kenwood Hybrid net, but only caught the late 40m OMISS net. Since I was already tuned up, I attempted to check in. That was my very first HF transmission ever.
>
> It turns out that the things I have learned with your help on this forum is indeed enough for a hack like me to get a tech special TS-820s back on the air good enough to talk to folks from Delaware to California!
>
> The patience of the OMISS net in working with new users like myself is certainly appreciated. I think I logged 14 contacts in my first experience. Everyone kept giving me a chance to "get it right." *laughs*
>
> What antenna was I using? Oh a 40m dipole strung up on a suburban fence no more than 6 feet off the ground. I'm sure a better antenna situation would go a very long way to improve things as will continued efforts to find and correct the multitude of problems with my classic TS-820s.
>
> Certainly here in the age of the internet, talking to folks 1,000s of miles away is as easy as picking up a mobile phone, but now I understand the magic that hams felt before VOIP and unlimited minutes were commonplace. I also sheepishly look back at the excitement I experienced talking 70 miles on a modern, turnkey 2 meter mobile rig as small potatoes compared to talking 1,700+ miles with my classic Kenwood.
>
> I am really looking forward to talking to other Kenwood hybrid owners on HF now. I have no idea what my radio sounds like on the air. I need feedback to help me figure out what other adjustments are out of whack on my gear. I need help figuring out where in the world my mic gain needs to be, whether or not my compression is set correctly (or if it even works!) and things like that.
>
> Thanks again team. You helped keep another classic Kenwood radio doing what it was designed to do. Hope to catch y'all on the air soon!
>
> kd0fds in Denver, CO, USA
>

31535. TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 17:13:31 UTC
From: jim.goldring
Topic: 31535 Message: 31535

I recently acquired a really nice TS-820S from an estate sale. It's been off air for probably at least 2 years (SK died about 2 years ago or more). In going through the tune-up spelled out in the manual, I can't get a meter reading plate current (Ip) after peaking the ALC reading with the drive control, mode switch in TUN. When I come back to dip the final with meter reading Ip and mode still in TUN, there's no plate current induication, even when CAR is increased. But putting it in CW mode I can dip the plate normally, and the rig seems to work just fine. So far all I've done to this rig is to remove the VFO, lubricate its front bearing and use DeOxit on its rear bearing. I'm about to reassemble it but still am puzzled about the above symptom. Is this a problem, or am I just missing something? THANKS!

73,
Jim, AK7R

31536. Re: Kenwood User Group Newsletter Issue No. 11 Feb 1981 Arcing Finals

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 18:42:20 UTC
From: w5rkl
Topic: 31525 Message: 31536

Terry,

Yes, arcing is entirely different.

Arcing can occur when a tube's voltage limits are exceeded. This type of arcing is not only heard but seen. The sound and visual is quite different than other types of arcing. A tube can arc but you may not see it, typical with receiving tubes. I experienced that with an HW-101. The arcing tube, the receiver's RF amplifier, arced intermittently, produced a 40 over 9 S meter indication even when the antenna was removed. Removing the tube and replacing it with a known good tube eliminated the problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Mike--that may explain it as they never made any mention of cathode resistors,
> but the reviewer doing the testing of the new rig said the rig "arced" several
> times during the testing.That doesnt sound like translation problem? I would
> hope an experienced ham testing a new rig would know what a "arcing" sound was.
> Maybe not. Yes I have heard the "tink or clink" of a glass tube warming up and
> cooling down. Very different sound from a pop or high voltage arcing. Also, very
> strange to actually write this in the owners manual. I still would like to see
> the exact texts. Terry
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>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, May 28, 2011 10:42:21 AM
> Subject: [TS-520_820_530_830] Re: Kenwood User Group Newsletter Issue No. 11 Feb
> 1981 Arcing Finals
>
>
> Hi Terry,
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> I "think" the statement referring to "popping" sound actually meant a "clink"
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> the time. I've heard this quite often, not only in Kenwood hybrids but in other
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> AL-811. It doesn't mean there's a problem, it simply means the elements in the

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> "pop" to explain the sound coming from the final amplifier. I do not believe the
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> 73s
> Mike
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>
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> >...Final plate and load tuning should be accomplished within 10 seconds. If more
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> >review, arcing 6146 tubes in a Kenwood TS-830 was considered normal from the
> >factory and noted in the owners manual. I guess I would have to see an early
> >manual to believe this.
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> >
> > Thought you might be interested in this. Have nice holiday Terry K9TW
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31537. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 18:43:53 UTC
From: w5rkl
Topic: 31535 Message: 31537

Hi Jim,

Look on the rear of the 820, there's a slide switch labeled "SG". Make sure it's in the "ON" position. If it's in the "OFF" position, there will be zero IP current indication in any mode.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jim.goldring" <jimgoldring@...> wrote:
>
> I recently acquired a really nice TS-820S from an estate sale. It's been off air for probably at least 2 years (SK died about 2 years ago or more). In going through the tune-up spelled out in the manual, I can't get a meter reading plate current (Ip) after peaking the ALC reading with the drive control, mode switch in TUN. When I come back to dip the final with meter reading Ip and mode still in TUN, there's no plate current induication, even when CAR is increased. But putting it in CW mode I can dip the plate normally, and the rig seems to work just fine. So far all I've done to this rig is to remove the VFO, lubricate its front bearing and use DeOxit on its rear bearing. I'm about to reassemble it but still am puzzled about the above symptom. Is this a problem, or am I just missing something? THANKS!
>
> 73,
> Jim, AK7R
>

31538. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 18:52:26 UTC
From: Joe Loverti
Topic: 31519 Message: 31538

Terry, Mark: Thanks for the replies. I'm going to get into it this afternoon and see what's up...thanks for the tips on what to look for.

Connected directly to a G5RV with RF gain and AF gain turned up full, I'm hearing no signals on any band...only noise. I can hear the marker audio in the speaker fairly loud, but the S-meter readings are way down. The S-meter readings with the calibrator on vary from band to band: 1.5 Mhz = S3, 3.5 Mhz = S6, 7 Mhz = S2, 14 Mhz = S1, 21 Mhz = S0.

I have the Service manual and some basic tools, hopefully with your guidance I can locate the problem.

73
Joe
WW8X

[Non-text portions of this message have been removed]

31539. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 19:00:44 UTC
From: barrie@eos.net
Topic: 31519 Message: 31539

Without an antenna tuner,a G5RV does not perform.
Jim
WA8SDF
Long time G5 user

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: Joe Loverti <ww8x.joe@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 28 May 2011 14:52:26
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry, Mark: Thanks for the replies. I'm going to get into it this afternoon
and see what's up...thanks for the tips on what to look for.

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hearing no signals on any band...only noise. I can hear the marker audio in
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Joe
WW8X

[Non-text portions of this message have been removed]

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31540. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 19:17:49 UTC
From: roberteleazer@rocketmail.com
Topic: 31535 Message: 31540

Mike:

Note that Jim says that everything is FB in CW mode and he can dip the plate. I assume that means he has some plate current in CW Mode but not in Tune mode. And he can peak the ALC as well.

I guess that eliminates the SG Switch, the relay, the driver tube, and the finals as problems, as well as the usual burned out resistors.

Can't figure out what this problem could be other than a Mode Switch Problem, as unlikely as that sounds. Could he have messed up something when he pulled the VFO to clean it? I pulled the VFO in my 820S and nothing comes to mind. What do you think?

I suppose cleaning the Mode Switch would be a good idea. In fact, clean all the switches, given that the set has been sitting for a long time

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Jim,
>
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>
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> >
> > 73,

> > Jim, AK7R
> >
>

31541. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 19:19:28 UTC
From: Terry Wagoner
Topic: 31519 Message: 31541

Joe--OK sounds like your AF is working fine and it is a failed L41 antenna transformer. Hopefully didnt take out Q1. You didnt inadvertently get some xmit RF into the so-239 on back of rig did you? Will be a little hard to trouble shoot if you dont have signal generator or a noise bridge to inject a signal after Q1. I wonder if you could connect a mini-clip test lead to Test Point TP-4 on RF Board and touch it with your hand or touch to center pin of your antenna coax lead and see if RF sigs come way up? I will let Mike W5RKL run with this one. I have never replaced a failed L41. By the way if you dont have a Rf sig generator, Elekraft makes a nice little sig generator in their Mini Module series. For around $70.00 you get a very accurate 1uv and 50uv signal source. Great for testing receivers and aligning S-meters. Good luck. Terry K9TW

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 2:52:26 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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31542. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 19:28:19 UTC
From: tnnyswy@yahoo.com
Topic: 31519 Message: 31542

Why does so many people think that a G5RV Antenna is a Miracle Antenna?
A G5RV antenna was design to work on the 20m band, yet I see on numerous occasions it is expected to perform wonders on other bands.
Sorry about the off topic.

(((73))) Milverton.
Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: barrie@...
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 28 May 2011 19:00:44
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Without an antenna tuner,a G5RV does not perform.
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31543. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 20:28:55 UTC
From: barrie@eos.net
Topic: 31519 Message: 31543

As the only antenna that I can cram into my small backyard, it works great. On 80 through 10. It isn't a beam antenna, but I can and do operate contests with it all the time. To get it to work, you need to have a tuner (AT-200) and be at least 1/4 wave up. (60 ft in my case). I use it with my TS-830, TS480HX and my Drake 4 line.
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: tnnyswy@...
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 28 May 2011 19:28:19
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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31544. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 20:59:11 UTC
From: Joe Loverti
Topic: 31519 Message: 31544

Please don't high-jack the thread with a discussion of antenna's. The subject of the thread is about a low receive issue inside the TS-830S. While antenna discussions can be interesting... it's not going to help much with my original question. Thanks.

Continuing with the subject of the thread: After opening the case, I can see getting at the RF board to make tests or repairs is going to take quite a bit of disassembly. Any suggestions for a newbie on the best way to get at that board without messing it up. Frankly, I'm used to working on Drake Twins or my FT-101B, where getting at the components is quite a bit easier to say the least. Thanks in advance.

73
Joe
WW8X

On Sat, May 28, 2011 at 4:28 PM, <barrie@...> wrote:

>
>
> As the only antenna that I can cram into my small backyard, it works great.
> On 80 through 10. It isn't a beam antenna, but I can and do operate contests
> with it all the time. To get it to work, you need to have a tuner (AT-200)
> and be at least 1/4 wave up. (60 ft in my case). I use it with my TS-830,
> TS480HX and my Drake 4 line.
> Sent via BlackBerry from T-Mobile
>
> -----Original Message-----
> From: tnnyswy@...
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 28 May 2011 19:28:19
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter movement
>
> Why does so many people think that a G5RV Antenna is a Miracle Antenna?
> A G5RV antenna was design to work on the 20m band, yet I see on numerous
> occasions it is expected to perform wonders on other bands.
> Sorry about the off topic.
>
> (((73))) Milverton.
> Sent from my Verizon Wireless BlackBerry
>
> -----Original Message-----

> From: barrie@...
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 28 May 2011 19:00:44
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter movement
>
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> Jim
> WA8SDF
> Long time G5 user
>
>
> Sent via BlackBerry from T-Mobile
>
> -----Original Message-----
> From: Joe Loverti <ww8x.joe@gmail.com>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 28 May 2011 14:52:26
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
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> Terry, Mark: Thanks for the replies. I'm going to get into it this
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> the speaker fairly loud, but the S-meter readings are way down. The S-meter
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> readings with the calibrator on vary from band to band: 1.5 Mhz = S3, 3.5
> Mhz = S6, 7 Mhz = S2, 14 Mhz = S1, 21 Mhz = S0.
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> I have the Service manual and some basic tools, hopefully with your
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> I can locate the problem.
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> WW8X
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31545. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:10:36 UTC
From: Terry Wagoner
Topic: 31519 Message: 31545

Joe--If you have the top cover off your rig here is simple test for Q1 RF amp. This assumes you do not have a signal generator.

Set your rig for 40 mtrs, turn RF gain to max, peak the drive with the xtal calibrator on and then turn it off.

On right side of rig is the RF board. You will see 3 chain driven air variable capacitors. VC-1 is the first one. You will see 2 solder lugs standing upright on top right hand side of VC-1. There is nothing landed on these lugs. Touch either one of these lugs with your finger or a test lead and you should get a large increase in signal.

This proves that Q1 RF Amp is working. If you get no increase in signal then locate TP-4 a square upright post close to Connector 10. Touch there with screwdriver with clip lead on it. Be careful not to slip off. You should get increase in noise but not as dramatic proving that Q2 Buffer Amp is working.

I could copy signals on 40 meters with just 18 inch clip lead touched to either of one these two points. I guess my money is still on L41 being shorted. If either L41 or Q1 are bad you will need to remove the RF board to replace them. Hope this helps. Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry, Mark: Thanks for the replies. I'm going to get into it this afternoon
> and see what's up...thanks for the tips on what to look for.
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> Connected directly to a G5RV with RF gain and AF gain turned up full, I'm
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> I have the Service manual and some basic tools, hopefully with your guidance
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> Joe
> WW8X
>
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31546. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:20:19 UTC
From: Terry Wagoner
Topic: 31519 Message: 31546

Joe-Unfortunately you are correct the RF board is the hardest board to remove and reinstall. Sure helps if you have done it before. I guess it depends on your confidence level. It may be worth seeing if Gordon has the time to repair it? I think you should troubleshoot to determine if there is failed component on the board first and then see if you want someone to talk your thru the removal and install. That probably should be done off list. Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> *Please* don't high-jack the thread with a discussion of antenna's. The
> subject of the thread is about a low receive issue inside the TS-830S. While
> antenna discussions can be interesting... it's not going to help much with
> my original question. Thanks.
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> Continuing with the subject of the thread: After opening the case, I can see
> getting at the RF board to make tests or repairs is going to take quite a
> bit of disassembly. Any suggestions for a newbie on the best way to get at
> that board without messing it up. Frankly, I'm used to working on Drake
> Twins or my FT-101B, where getting at the components is quite a bit easier
> to say the least. Thanks in advance.
>
> 73
> Joe
> WW8X
>
>
> On Sat, May 28, 2011 at 4:28 PM, <barrie@...> wrote:
>
> >
> >
> > As the only antenna that I can cram into my small backyard, it works great.
> > On 80 through 10. It isn't a beam antenna, but I can and do operate contests
> > with it all the time. To get it to work, you need to have a tuner (AT-200)
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> > TS480HX and my Drake 4 line.
> > Sent via BlackBerry from T-Mobile
> >
> > -----Original Message-----
> > From: tnnyswy@...
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 19:28:19
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter movement

> >
> > Why does so many people think that a G5RV Antenna is a Miracle Antenna?
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> > Sorry about the off topic.
> >
> > (((73))) Milverton.
> > Sent from my Verizon Wireless BlackBerry
> >
> > -----Original Message-----
> > From: barrie@...
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 19:00:44
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter movement
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> > Without an antenna tuner,a G5RV does not perform.
> > Jim
> > WA8SDF
> > Long time G5 user
> >
> >
> > Sent via BlackBerry from T-Mobile
> >
> > -----Original Message-----
> > From: Joe Loverti <ww8x.joe@...>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 14:52:26
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
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> > Terry, Mark: Thanks for the replies. I'm going to get into it this
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> > I have the Service manual and some basic tools, hopefully with your
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> >
> >
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31547. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:37:00 UTC
From: barrie@eos.net
Topic: 31519 Message: 31547

Please re-read my original post. If you are *not* using an antenna tuner with your rig with a G5, you'll get what you are describing. Low signals. Been there done that. Beats tearing into your rig. Jim
WA8SDF

Sent via BlackBerry from T-Mobile

-----Original Message-----
From: Joe Loverti <ww8x.joe@gmail.com>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 28 May 2011 16:59:11
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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subject of the thread is about a low receive issue inside the TS-830S. While
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Continuing with the subject of the thread: After opening the case, I can see
getting at the RF board to make tests or repairs is going to take quite a
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that board without messing it up. Frankly, I'm used to working on Drake
Twins or my FT-101B, where getting at the components is quite a bit easier
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73
Joe
WW8X

On Sat, May 28, 2011 at 4:28 PM, <barrie@eos.net> wrote:

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> -----Original Message-----
> From: tnnyswy@yahoo.com
> Sender: TS-520_820_530_830@yahoogroups.com

> Date: Sat, 28 May 2011 19:28:19
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
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> From: barrie@eos.net
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 28 May 2011 19:00:44
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
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> From: Joe Loverti <ww8x.joe@gmail.com>
> Sender: TS-520_820_530_830@yahoogroups.com
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> To: <TS-520_820_530_830@yahoogroups.com>
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Yahoo! Groups Links

31548. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:39:29 UTC
From: Jim Goldring
Topic: 31535 Message: 31548

Thanks for the replies. This symptom happened before I removed the VFO for cleaning/lubricating. The screen voltage switch is ON and everytghing seems OK except for getting no Ip indication in TUN mode. I'll continue to work on this when I get it all put back together.
73,
Jim, AK7R

31549. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:44:14 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31549

I find L41 shorted quite often. I have found them burnt to a crisp to
some that just slightly overheated.

73,
Gordon
N6WK

On 5/28/2011 2:20 PM, Terry Wagoner wrote:
>
> Joe-Unfortunately you are correct the RF board is the hardest board to
> remove and reinstall. Sure helps if you have done it before. I guess
> it depends on your confidence level. It may be worth seeing if Gordon
> has the time to repair it? I think you should troubleshoot to
> determine if there is failed component on the board first and then see
> if you want someone to talk your thru the removal and install. That
> probably should be done off list. Terry
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> <ww8x.joe@...> wrote:
> >
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> > > From: tnnyswy@...
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> <mailto:TS-520_820_530_830%40yahoogroups.com>>
> > > Reply-To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
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> > > 73
> > > Joe
> > > WW8X
> > >
> > >
>

31550. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:47:59 UTC
From: w5rkl
Topic: 31535 Message: 31550

Well I'll be, you're right Robert. It appears I missed the section where CW mode works fine. I'll have to give it some more thought and respond in a little while.

Thanks for pointing out my mistake Robert. I should have seen that.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Mike:
>
> Note that Jim says that everything is FB in CW mode and he can dip the plate. I assume that means he has some plate current in CW Mode but not in Tune mode. And he can peak the ALC as well.
>
> I guess that eliminates the SG Switch, the relay, the driver tube, and the finals as problems, as well as the usual burned out resistors.
>
> Can't figure out what this problem could be other than a Mode Switch Problem, as unlikely as that sounds. Could he have messed up something when he pulled the VFO to clean it? I pulled the VFO in my 820S and nothing comes to mind. What do you think?
>
> I suppose cleaning the Mode Switch would be a good idea. In fact, clean all the switches, given that the set has been sitting for a long time
>
> Robert
> WB5WSV
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Jim,
> >
> > Look on the rear of the 820, there's a slide switch labeled "SG". Make sure it's in the "ON" position. If it's in the "OFF" position, there will be zero IP current indication in any mode.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "jim.goldring" <jimgoldring@> wrote:

> > >
> > > I recently acquired a really nice TS-820S from an estate sale. It's been off air for probably at least 2 years (SK died about 2 years ago or more). In going through the tune-up spelled out in the manual, I can't get a meter reading plate current (Ip) after peaking the ALC reading with the drive control, mode switch in TUN. When I come back to dip the final with meter reading Ip and mode still in TUN, there's no plate current induication, even when CAR is increased. But putting it in CW mode I can dip the plate normally, and the rig seems to work just fine. So far all I've done to this rig is to remove the VFO, lubricate its front bearing and use DeOxit on its rear bearing. I'm about to reassemble it but still am puzzled about the above symptom. Is this a problem, or am I just missing something? THANKS!
> > >
> > > 73,
> > > Jim, AK7R
> > >
> >
>

31551. TS-520_820_530_830-unsubscribe@yahoogroups.com

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 21:56:04 UTC
From: Dennis
Topic: 31551 Message: 31551

[Body unavailable in the source archive]

31552. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 22:10:58 UTC
From: Joe Loverti
Topic: 31519 Message: 31552

Terry here's what I get with your suggestions:

Set your rig for 40 mtrs, turn RF gain to max, peak the drive with the xtal calibrator on and then turn it off.

On right side of rig is the RF board. You will see 3 chain driven air variable capacitors. VC-1 is the first one. You will see 2 solder lugs standing upright on top right hand side of VC-1. There is nothing landed on these lugs. Touch either one of these lugs with your finger or a test lead and you should get a large increase in signal. *Touching VC-1 lugs increases the signal slightly, not much. Touching VC-2 lugs greatly increases the signal.*

This proves that Q1 RF Amp is working. If you get no increase in signal then locate TP-4 a square upright post close to Connector 10. Touch there with screwdriver with clip lead on it. Be careful not to slip off. You should get increase in noise but not as dramatic proving that Q2 Buffer Amp is working. *Touching TP-4 greatly increases the signal.*

I could copy signals on 40 meters with just 18 inch clip lead touched to either of one these two points. *I can copy some sigs with a test lead connected to VC-2 or TP-4*. I guess my money is still on L41 being shorted. If either L41 or Q1 are bad you will need to remove the RF board to replace them. Hope this helps. Terry

Thanks,
Joe
WW8X

>
>
>
>

[Non-text portions of this message have been removed]

31553. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 22:26:27 UTC
From: Joe Loverti
Topic: 31519 Message: 31553

Jim: Thanks for your comment. I didn't explain in my original post that I tried other antenna's both thru the match and direct with no difference it signal strength. I thought it unnecessary to cloud the issue with extraneous data. When my TS-830S was working, it picks up signals even connected to a dummy load!! Now it's deaf, through a tuner or not.
Regards,
Joe
WW8X

On Sat, May 28, 2011 at 5:37 PM, <barrie@...> wrote:

>
>
> Please re-read my original post. If you are *not* using an antenna tuner
> with your rig with a G5, you'll get what you are describing. Low signals.
> Been there done that. Beats tearing into your rig. Jim
> WA8SDF
>
> Sent via BlackBerry from T-Mobile
>
> -----Original Message-----
> From: Joe Loverti <ww8x.joe@...>
> Sender: TS-520_820_530_830@yahoogroups.com
> Date: Sat, 28 May 2011 16:59:11
> To: <TS-520_820_530_830@yahoogroups.com>
> Reply-To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter movement
>
> *Please* don't high-jack the thread with a discussion of antenna's. The
> subject of the thread is about a low receive issue inside the TS-830S.
> While
> antenna discussions can be interesting... it's not going to help much with
> my original question. Thanks.
>
> Continuing with the subject of the thread: After opening the case, I can
> see
> getting at the RF board to make tests or repairs is going to take quite a
> bit of disassembly. Any suggestions for a newbie on the best way to get at
> that board without messing it up. Frankly, I'm used to working on Drake
> Twins or my FT-101B, where getting at the components is quite a bit easier
> to say the least. Thanks in advance.
>
> 73

> Joe
> WW8X
>
>
> On Sat, May 28, 2011 at 4:28 PM, <barrie@...> wrote:
>
> >
> >
> > As the only antenna that I can cram into my small backyard, it works
> great.
> > On 80 through 10. It isn't a beam antenna, but I can and do operate
> contests
> > with it all the time. To get it to work, you need to have a tuner
> (AT-200)
> > and be at least 1/4 wave up. (60 ft in my case). I use it with my TS-830,
>
> > TS480HX and my Drake 4 line.
> > Sent via BlackBerry from T-Mobile
> >
> > -----Original Message-----
> > From: tnnyswy@...
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 19:28:19
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter movement
> >
> > Why does so many people think that a G5RV Antenna is a Miracle Antenna?
> > A G5RV antenna was design to work on the 20m band, yet I see on numerous
> > occasions it is expected to perform wonders on other bands.
> > Sorry about the off topic.
> >
> > (((73))) Milverton.
> > Sent from my Verizon Wireless BlackBerry
> >
> > -----Original Message-----
> > From: barrie@...
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 19:00:44
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter movement
> >
> > Without an antenna tuner,a G5RV does not perform.
> > Jim
> > WA8SDF
> > Long time G5 user
> >

> >
> > Sent via BlackBerry from T-Mobile
> >
> > -----Original Message-----
> > From: Joe Loverti <ww8x.joe@...>
> > Sender: TS-520_820_530_830@yahoogroups.com
> > Date: Sat, 28 May 2011 14:52:26
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter movement
> >
> > Terry, Mark: Thanks for the replies. I'm going to get into it this
> > afternoon
> > and see what's up...thanks for the tips on what to look for.
> >
> > Connected directly to a G5RV with RF gain and AF gain turned up full, I'm
>
> > hearing no signals on any band...only noise. I can hear the marker audio
> in
> >
> > the speaker fairly loud, but the S-meter readings are way down. The
> S-meter
> >
> > readings with the calibrator on vary from band to band: 1.5 Mhz = S3, 3.5
>
> > Mhz = S6, 7 Mhz = S2, 14 Mhz = S1, 21 Mhz = S0.
> >
> > I have the Service manual and some basic tools, hopefully with your
> > guidance
> > I can locate the problem.
> >
> > 73
> > Joe
> > WW8X
> >
> >
> > [Non-text portions of this message have been removed]
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31554. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 22:45:29 UTC
From: Terry Wagoner
Topic: 31519 Message: 31554

Joe--VC-2 and TP-4 are essentially the same place. You are coupling a signal to the base of Q2 the buffer amp and proving it and the downstream mixer are working to produce your receive IF signal. The gate of Q1 is probably being shorted by the shorted L41 transformer. Difficult to tell without taking voltage readings at Q1 which is nearly impossible from top side of board. I think it is time to think about board removal to rewind L41. Lets see what Mike thinks. I dont know if Bob Mansker has any spare RF boards or not? Terry

---
From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 6:10:58 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry here's what I get with your suggestions:

Set your rig for 40 mtrs, turn RF gain to max, peak the drive with the xtal calibrator on and then turn it off.

On right side of rig is the RF board. You will see 3 chain driven air variable capacitors. VC-1 is the first one. You will see 2 solder lugs standing upright on top right hand side of VC-1. There is nothing landed on these lugs. Touch either one of these lugs with your finger or a test lead and you should get a large increase in signal. *Touching VC-1 lugs increases the signal slightly, not much. Touching VC-2 lugs greatly increases the signal.*

This proves that Q1 RF Amp is working. If you get no increase in signal then locate TP-4 a square upright post close to Connector 10. Touch there with screwdriver with clip lead on it. Be careful not to slip off. You should get increase in noise but not as dramatic proving that Q2 Buffer Amp is working. *Touching TP-4 greatly increases the signal.*

I could copy signals on 40 meters with just 18 inch clip lead touched to either of one these two points. *I can copy some sigs with a test lead connected to VC-2 or TP-4*. I guess my money is still on L41 being shorted. If either L41 or Q1 are bad you will need to remove the RF board to replace them. Hope this helps. Terry

Thanks,
Joe
WW8X

>
>
>
>

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

31555. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 22:57:52 UTC
From: Terry Wagoner
Topic: 31519 Message: 31555

Joe--one more thing if you take the board out to replace L41 be sure to test Q1 and diode D2. If in doubt replace them. There are subs available for the mosfet. Terry

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Joe--VC-2 and TP-4 are essentially the same place. You are coupling a signal to
> the base of Q2 the buffer amp and proving it and the downstream mixer are
> working to produce your receive IF signal. The gate of Q1 is probably being
> shorted by the shorted L41 transformer. Difficult to tell without taking voltage
> readings at Q1 which is nearly impossible from top side of board. I think it is
> time to think about board removal to rewind L41. Lets see what Mike thinks. I
> dont know if Bob Mansker has any spare RF boards or not? Terry
>
>
>
> _____
> From: Joe Loverti <ww8x.joe@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, May 28, 2011 6:10:58 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
> movement
>
> Terry here's what I get with your suggestions:
>
> Set your rig for 40 mtrs, turn RF gain to max, peak the drive with the xtal
> calibrator on and then turn it off.
>
> On right side of rig is the RF board. You will see 3 chain driven air
> variable capacitors. VC-1 is the first one. You will see 2 solder lugs
> standing upright on top right hand side of VC-1. There is nothing landed on
> these lugs. Touch either one of these lugs with your finger or a test lead
> and you should get a large increase in signal. *Touching VC-1 lugs increases
> the signal slightly, not much. Touching VC-2 lugs greatly increases the
> signal.*
>
> This proves that Q1 RF Amp is working. If you get no increase in signal then
> locate TP-4 a square upright post close to Connector 10. Touch there with
> screwdriver with clip lead on it. Be careful not to slip off. You should get
> increase in noise but not as dramatic proving that Q2 Buffer Amp is working.
> *Touching TP-4 greatly increases the signal.*
>
> I could copy signals on 40 meters with just 18 inch clip lead touched to
> either of one these two points. *I can copy some sigs with a test lead
> connected to VC-2 or TP-4*. I guess my money is still on L41 being shorted.
> If either L41 or Q1 are bad you will need to remove the RF board to replace

> them. Hope this helps. Terry
>
> Thanks,
> Joe
> WW8X
>
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31556. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 23:04:07 UTC
From: roberteleazer@rocketmail.com
Topic: 31535 Message: 31556

Well, here is a thought or two.

With my TS-820S I had a problem with being unable to get low enough idling current in SSB mode. I could not get down to 60 ma. You told me that was wrong and I concluded that it was the carrier supression not being adjustd correctly. I adjusted that and that fixed pit.

When that condition existed I also had a problem with the finals being "over-neutalized." During the neutalization procedure I could adjust the capacitor so there was no oscillation in the output. Mimimum voltage on neutralization equated to no output. When I got the carrier suppression adjusted then minimum voltage on neutralization was in fact a minimum as viewed on the Oscope. There was still RF output in Tune Mode when so adjusted.

So, is it possible that the carrier supression is misadjusted and that someone has adjusted the neutalization so that there is no output and no Ip with the voltage turned down as it is during Tune mode?

Regards,

Robert

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Well I'll be, you're right Robert. It appears I missed the section where CW mode works fine. I'll have to give it some more thought and respond in a little while.
>
> Thanks for pointing out my mistake Robert. I should have seen that.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@" <roberteleazer@> wrote:
> >
> > Mike:
> >
> > Note that Jim says that everything is FB in CW mode and he can dip the plate. I assume that means he has some plate current in CW Mode but not in Tune mode. And he can peak the ALC as well.
> >
> > I guess that eliminates the SG Switch, the relay, the driver tube, and the finals as problems, as well as the usual burned out resistors.
> >
> > Can't figure out what this problem could be other than a Mode Switch Problem, as unlikely as that sounds. Could he have messed up something when he pulled the VFO to clean it? I pulled the VFO in my 820S and nothing comes to mind. What do you think?

> >
> > I suppose cleaning the Mode Switch would be a good idea. In fact, clean all the switches, given that the set has been sitting for a long time
> >
> > Robert
> > WB5WSV
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hi Jim,
> > >
> > > Look on the rear of the 820, there's a slide switch labeled "SG". Make sure it's in the "ON" position. If it's in the "OFF" position, there will be zero IP current indication in any mode.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "jim.goldring" <jimgoldring@> wrote:
> > > >
> > > > I recently acquired a really nice TS-820S from an estate sale. It's been off air for probably at least 2 years (SK died about 2 years ago or more). In going through the tune-up spelled out in the manual, I can't get a meter reading plate current (Ip) after peaking the ALC reading with the drive control, mode switch in TUN. When I come back to dip the final with meter reading Ip and mode still in TUN, there's no plate current induication, even when CAR is increased. But putting it in CW mode I can dip the plate normally, and the rig seems to work just fine. So far all I've done to this rig is to remove the VFO, lubricate its front bearing and use DeOxit on its rear bearing. I'm about to reassemble it but still am puzzled about the above symptom. Is this a problem, or am I just missing something? THANKS!
> > > >
> > > > 73,
> > > > Jim, AK7R
> > > >
> > >
> >
>

31557. Re: [TS-520_820_530_830] Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 23:23:14 UTC
From: Sandy
Topic: 31535 Message: 31557

Jim,

I had the same issue with my 830s. No IP in tune mode. I found that the voltage divider resistors on the rectifier board were bad. R15 and R16 (56K). One was completely open and the other was very high. I used to peak the alc in tune and then have to switch to cw and dip etc. Now tuning is as it should be. I don't know if the 820 is the same circuit - but I would think that it would have something similar...just a thought.

Sandy - n9pgo

On 5/28/2011 4:39 PM, Jim Goldring wrote:
>
> Thanks for the replies. This symptom happened before I removed the VFO
> for cleaning/lubricating. The screen voltage switch is ON and
> everytghing seems OK except for getting no Ip indication in TUN mode.
> I'll continue to work on this when I get it all put back together.
> 73,
> Jim, AK7R
>
>

[Non-text portions of this message have been removed]

31558. Re: [TS-520_820_530_830] Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-28 23:28:37 UTC
From: Terry Wagoner
Topic: 31535 Message: 31558

Jim: Where is the Plate Load cap at? You can try less loading (more capacitance) by turning the load control CCW while in tune. Isnt this fun getting bombarded with suggestions? Terry K9TW

From: Sandy <n9pgo@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, May 28, 2011 7:23:14 PM
Subject: Re: [TS-520_820_530_830] Re: TS-820S no meter reading in TUN position

Jim,

I had the same issue with my 830s. No IP in tune mode. I found that the voltage divider resistors on the rectifier board were bad. R15 and R16 (56K). One was completely open and the other was very high. I used to peak the alc in tune and then have to switch to cw and dip etc. Now tuning is as it should be. I don't know if the 820 is the same circuit - but I would think that it would have something similar...just a thought.

Sandy - n9pgo

On 5/28/2011 4:39 PM, Jim Goldring wrote:
>
> Thanks for the replies. This symptom happened before I removed the VFO
> for cleaning/lubricating. The screen voltage switch is ON and
> everytghing seems OK except for getting no Ip indication in TUN mode.
> I'll continue to work on this when I get it all put back together.
> 73,
> Jim, AK7R
>
>

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31559. Memorial Day Six-Meter Net

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 02:53:55 UTC
From: Allan C
Topic: 31559 Message: 31559

Norman Hams Rag-Chew Net

Monday May 30, 2011 at 8:00PM on 50.200MHz USB the Norman Hams Rag-Chew Net will be held, All Norman Hams and All Hams everywhere are invited to participate on this Net.

Norman Hams Rag-Chew Net. is affiliated with the South Canadian Amateur Radio Society and originates from Norman, Oklahoma EM15 Grid, join us and become a regular on the Norman Hams Net., Since it is Memorial day invite a Veteran to join you on this Net.

Net Control KB5DOH Allan listed on QRZ.

73 & God Bless Everyone and God Bless our Military Service Personnel.

[Non-text portions of this message have been removed]

31560. Re: TS-820S no meter reading in TUN position

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 03:30:08 UTC
From: w5rkl
Topic: 31535 Message: 31560

Hello Jim,

You say the 820, in TUNE mode does not show any IP current. Do you get the same loss of IP current in both USB and LSB as well?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "jim.goldring" <jimgoldring@...> wrote:
>
> I recently acquired a really nice TS-820S from an estate sale. It's been off air for probably at least 2 years (SK died about 2 years ago or more). In going through the tune-up spelled out in the manual, I can't get a meter reading plate current (Ip) after peaking the ALC reading with the drive control, mode switch in TUN. When I come back to dip the final with meter reading Ip and mode still in TUN, there's no plate current induication, even when CAR is increased. But putting it in CW mode I can dip the plate normally, and the rig seems to work just fine. So far all I've done to this rig is to remove the VFO, lubricate its front bearing and use DeOxit on its rear bearing. I'm about to reassemble it but still am puzzled about the above symptom. Is this a problem, or am I just missing something? THANKS!
>
> 73,
> Jim, AK7R
>

31561. 530 hand mic?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 05:02:33 UTC
From: km5wx@bellsouth.net
Topic: 31561 Message: 31561

Can anyone recommend a good hand mic for my 530/820? I've never seen the factory mic so I'm not real sure what I'm looking for. Thanks in advance. Richard KM5WX

31562. Re: 530 hand mic?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 05:59:20 UTC
From: ktwhy2003
Topic: 31561 Message: 31562

I bought a Workman DM-507-4 hand mic for my TS-830S, had to completely rewire it of course but works fine. You can find them for $15 on ebay.. found that out after buying mine for $25 at the CB shop at the truck stop south of the city..

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, "km5wx@..." <km5wx@...> wrote:
>
> Can anyone recommend a good hand mic for my 530/820? I've never seen the factory mic so I'm not real sure what I'm looking for. Thanks in advance. Richard KM5WX
>

31563. Re: [TS-520_820_530_830] Re: 530 hand mic?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 06:28:47 UTC
From: jeffrey lord
Topic: 31561 Message: 31563

I have an old ELECTROPHONE CB mic on my TS 520S, and find it works well and I only had to re wire the plug to suit the TS520S.

Jeff
vk4fnrs

From: ktwhy2003 <ktwhy2003@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, 28 May, 2011 9:59:20 PM
Subject: [TS-520_820_530_830] Re: 530 hand mic?

I bought a Workman DM-507-4 hand mic for my TS-830S, had to completely rewire it of course but works fine. You can find them for $15 on ebay.. found that out after buying mine for $25 at the CB shop at the truck stop south of the city..

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, "km5wx@..." <km5wx@...> wrote:
>
> Can anyone recommend a good hand mic for my 530/820? I've never seen the
>factory mic so I'm not real sure what I'm looking for. Thanks in advance.
>Richard KM5WX
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31564. NEW pod-cast info

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 07:30:38 UTC
From: ktwhy2003
Topic: 31564 Message: 31564

Ok, a bit off topic here, but there's a new ham podcast available from http://twit.tv/hn hosted by Bob Heil and Joe Walsh (Eagles)

It's download-able in both sound (MP3) and video (MP4/QuickTime) formats.

31565. TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 10:48:24 UTC
From: Will
Topic: 31565 Message: 31565

Hi everyone, my TS830s has a narrow 250hz CW filter installed.
Question: When I switch between CW Wide to CW Narrow, there is a considerable reduction in AF !! Certainly the filter does its job and isolates the CW I am trying to capture but the received audio overall seems to drop away. I also have to adjust my IF shift counter clockwise by approximately a quarter turn to bring the signal in to what I am assuming is the centre of the filter pass band. If I leave the IF shift in its 12 oclock position, I cannot hear the signal in the narrow filter position. Any thoughts ? Will

31566. Re: [TS-520_820_530_830] TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 11:39:50 UTC
From: Terry Wagoner
Topic: 31565 Message: 31566

Hi Will--If you leave the IF shift at 1200 can you carefully re-tune VFO or RIT and get signal in? It sounds like you also have the YC-455C cw filter installed as well? I experience some insertion loss in CW-N position. I have the YK-88C and the YG-455C installed and it allows me to use the VBT to narrow the passband for CW work that I do. I think Kenwood recommends using the CW filter combination that is the widest and then use the VBT to give you needed flexibility. Maybe one of the serious high speed CW operators on here will have better idea if your condition is normal. The owners manual (pg 24) states that you can have a combination that results in the passband being narrow on one side. You need a frequency counter to measure the IF Shift at TP3 on the IF board (+/- 1.1 khz). It is possible that you have Trimmers TC2 and TC3 set too thin, These are user adjustments accessed thru the bottom of the rig. The Survivors guide Section 8.4 details a procedure using the Xtal Calibrator to align the USB/LSB Carrier Oscillator, Also, Ken K4EAA describes how to do it on his website under the FAQs and Tech Question sections. He does it by ear and Survivors guide does it using S-meter. You can adjust the trimmers to shift passband lower.
Terry K9TW

From: Will <gm0hks@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 29, 2011 6:48:24 AM
Subject: [TS-520_820_530_830] TS830s_ CW filter installation & operation

Hi everyone, my TS830s has a narrow 250hz CW filter installed.
Question: When I switch between CW Wide to CW Narrow, there is a considerable reduction in AF !! Certainly the filter does its job and isolates the CW I am trying to capture but the received audio overall seems to drop away. I also have to adjust my IF shift counter clockwise by approximately a quarter turn to bring the signal in to what I am assuming is the centre of the filter pass band. If I leave the IF shift in its 12 oclock position, I cannot hear the signal in the narrow filter position. Any thoughts ? Will

[Non-text portions of this message have been removed]

31567. Re: TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 12:21:25 UTC
From: Will
Topic: 31565 Message: 31567

Hi Terry,
great stuff ! I have a frequency counter here so will start by measuring the IF Shift at TP3 on the IF board. thanks for the advice 73 Will

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Will--If you leave the IF shift at 1200 can you carefully re-tune VFO or RIT
> and get signal in? It sounds like you also have the YC-455C cw filter installed
> as well? I experience some insertion loss in CW-N position. I have the YK-88C
> and the YG-455C installed and it allows me to use the VBT to narrow the passband
> for CW work that I do. I think Kenwood recommends using the CW filter
> combination that is the widest and then use the VBT to give you needed
> flexibility. Maybe one of the serious high speed CW operators on here will have
> better idea if your condition is normal. The owners manual (pg 24) states that
> you can have a combination that results in the passband being narrow on one
> side. You need a frequency counter to measure the IF Shift at TP3 on the IF
> board (+/- 1.1 khz). It is possible that you have Trimmers TC2 and TC3 set too
> thin, These are user adjustments accessed thru the bottom of the rig. The
> Survivors guide Section 8.4 details a procedure using the Xtal Calibrator to
> align the USB/LSB Carrier Oscillator, Also, Ken K4EAA describes how to do it on
> his website under the FAQs and Tech Question sections. He does it by ear and
> Survivors guide does it using S-meter. You can adjust the trimmers to shift
> passband lower.
> Terry K9TW
>
>
>
> _____
> From: Will <gm0hks@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, May 29, 2011 6:48:24 AM
> Subject: [TS-520_820_530_830] TS830s_ CW filter installation & operation
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>
>

>
> [Non-text portions of this message have been removed]
>

31568. Re: TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 12:40:44 UTC
From: Terry Wagoner
Topic: 31565 Message: 31568

Will--If the covers are on I think I would start by adjusting TC2 and TC3 accessed thru bottom holes to shift the passband down a little. If you dont have copy of Survivors Guide it is readily available on line. The TC2 and TC3 adjustments are kind of user preference. I check mine occasionally as they tend to drift. An insulated tuning stick with small thin metal tip is needed as these are ceramic trimmer caps. Terry
--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
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>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Hi Will--If you leave the IF shift at 1200 can you carefully re-tune VFO or RIT
> > and get signal in? It sounds like you also have the YC-455C cw filter installed
> > as well? I experience some insertion loss in CW-N position. I have the YK-88C
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> > To: TS-520_820_530_830@yahoogroups.com
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> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31569. Re: TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 13:37:44 UTC
From: Terry Wagoner
Topic: 31565 Message: 31569

Will--One more thing. Regards AF being down. Have you tried running with your AGC off? I do that sometimes especially when I am copying CW with the Narrow Filter. You may have to ride the RF and AF gain a little, but that is called operating a rig! Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Will--If the covers are on I think I would start by adjusting TC2 and TC3 accessed thru bottom holes to shift the passband down a little. If you dont have copy of Survivors Guide it is readily available on line. The TC2 and TC3 adjustments are kind of user preference. I check mine occasionally as they tend to drift. An insulated tuning stick with small thin metal tip is needed as these are ceramic trimmer caps. Terry
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> > >
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> > > as well? I experience some insertion loss in CW-N position. I have the YK-88C
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> > > Subject: [TS-520_820_530_830] TS830s_ CW filter installation & operation

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> > >
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> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

31570. Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 14:45:15 UTC
From: ki4ax
Topic: 31570 Message: 31570

A few of us are going to try 15m today at 17:00 UTC (1:00 PM EDT) on 21.285 +/- a few kc. Anyone that would like to join in are welcome. This will be an informal gathering and there will be no control operator. I'll try calling CQ a few times... if you can't hear me try calling CQ your self and see what happens. Perhaps we can get something going on the air today... who knows.

Dan KI4AX

31571. Re: TS830s_ CW filter installation & operation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 14:56:50 UTC
From: w5rkl
Topic: 31565 Message: 31571

The IF Shift control "varies" the "Carrier Oscillator" frequency, 8831.5Khz (USB and CW) or 8828.5Khz (LSB), that is applied to the PLL Unit (see the 830's service manual page 4 for details).

By varying the Carrier Oscillator frequencies you also cause a variation in the PLL Unit's "VCO" (Voltage Control Oscillator) frequency that is applied to the RF Unit.

The PLL Unit's "VCO" signal is applied to the RF Unit where it is mixed with the incoming signal frequency to produce the 8.830Mhz "RIF" signal. The RIF signal is then applied to the IF Unit where it is then applied to the first crystal filter (8.830Mhz center frequency).

Placement of the 8Mhz "RIF" IF signal in the filter's bandpass varies the filter's ability to reduce/eliminate adjacent frequency interference. Depending on which direction the IF shift control is rotated determines where in the crystal filter's bandpass the 8Mhz RIF signal will be placed.

If you rotate the IF shift completely CW or CCW you will notice in one direction the audio will become high pitched while rotating in the opposite direction the audio becomes muffled or low pitched. That an "audio" way of hearing the 8Mhz IF signal being moved from one side of the crystal filter's bandpass to the other. If you tune in the Marker signal with the IF shift control centered and a beat note is heard, adjust the IF shift throughout it's travel, CW and/or CCW. You will notice at one point during the rotation the beat note will or almost disappear yet in the opposite direction you will hear the beat note much more clear. Try this while receiving an incoming signal and you will see/hear that you can "tune out" or "significantly reduce" other signals so you hear only the Marker beat note.

If the Carrier Oscillators are misaligned and the IF Shift control is centered, the 8Mhz RIF signal will fall in the wrong place in the crystal filter. I recommend checking the Carrier Oscillator alignment to ensure it's correct with the IF Shift control centered. Again, see the 830 service manual's alignment steps for details on performing the checks and, if necessary, any adjustments to the Carrier Oscillator.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Will--One more thing. Regards AF being down. Have you tried running with your AGC off? I do that sometimes especially when I am copying CW with the Narrow Filter. You may have to ride the RF and AF gain a little, but that is called operating a rig! Terry
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> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@> wrote:
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bottom holes to shift the passband down a little. If you dont have copy of Survivors Guide it is readily available on line. The TC2 and TC3 adjustments are kind of user preference. I check mine occasionally as they tend to drift. An insulated tuning stick with small thin metal tip is needed as these are ceramic trimmer caps. Terry
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> > > >
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> > > > _____
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> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Sun, May 29, 2011 6:48:24 AM
> > > > Subject: [TS-520_820_530_830] TS830s_ CW filter installation & operation
> > > >
> > > >
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> > > >

> > > >
> > > > [Non-text portions of this message have been removed]
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> > >
> >
>

31572. Re: [TS-520_820_530_830] Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:18:08 UTC
From: n6wk@n6wk.com
Topic: 31570 Message: 31572

I listened on 21.285 +/- but never heard a thing from the West coast.

73,
Gordon

On 5/29/2011 7:45 AM, ki4ax wrote:
>
> A few of us are going to try 15m today at 17:00 UTC (1:00 PM EDT) on
> 21.285 +/- a few kc. Anyone that would like to join in are welcome.
> This will be an informal gathering and there will be no control
> operator. I'll try calling CQ a few times... if you can't hear me try
> calling CQ your self and see what happens. Perhaps we can get
> something going on the air today... who knows.
>
> Dan KI4AX
>
>

31573. Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:34:22 UTC
From: James P Greenwood
Topic: 31570 Message: 31573

Hi Dan,
Thanks for the effort on 21.285. You were 5-3, 5-5 with QSB in RI.
Didn't hear any Gordon, N6WK, or any other callers.

73, Jim W1WIU

[Non-text portions of this message have been removed]

31574. Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:24:33 UTC
From: kd0fds
Topic: 31570 Message: 31574

I listened in Denver, CO, and called CQ a couple of times. Nothing heard.
I can hear CA and OR running over CW mode at the bottom of the band.
Want to try again at 1730UTC, Gordon?

-Stephen kd0fds.

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> I listened on 21.285 +/- but never heard a thing from the West coast.
>
> 73,
> Gordon
>
> On 5/29/2011 7:45 AM, ki4ax wrote:
> >
> > A few of us are going to try 15m today at 17:00 UTC (1:00 PM EDT) on
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> > something going on the air today... who knows.
> >
> > Dan KI4AX
> >
> >
>

31575. Re: [TS-520_820_530_830] Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:41:27 UTC
From: Sandy
Topic: 31570 Message: 31575

I listened (chicagoland area) heard nothing. Called CQ, heard nothing.

Band (15m) not in good shape today. I did hear something now that I
think about it -

lightning crashes!

73

Sandy - n9pgo

On 5/29/2011 12:24 PM, kd0fds wrote:
>
> I listened in Denver, CO, and called CQ a couple of times. Nothing heard.
> I can hear CA and OR running over CW mode at the bottom of the band.
> Want to try again at 1730UTC, Gordon?
>
> -Stephen kd0fds.
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > I listened on 21.285 +/- but never heard a thing from the West coast.
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> > 73,
> > Gordon
> >
> > On 5/29/2011 7:45 AM, ki4ax wrote:
> > >
> > > A few of us are going to try 15m today at 17:00 UTC (1:00 PM EDT) on
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> > >
> > > Dan KI4AX
> > >
> > >
> >
>
>

[Non-text portions of this message have been removed]

31576. Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:44:17 UTC
From: roberteleazer@rocketmail.com
Topic: 31570 Message: 31576

I listened from Florida, put out some calls on 21.285 but only heard a faint QSO going on 21.275. Sound like the station I could almost hear was one of them ferriners, and they have been about the only people I have talked to on 15M in the past.

Okay, so where do we try next? The TS-520 loaded up superbly on 21.285, using my new MFJ-969, 100W CW out with an SWR of 1.5.

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> A few of us are going to try 15m today at 17:00 UTC (1:00 PM EDT) on 21.285 +/- a few kc. Anyone that would like to join in are welcome. This will be an informal gathering and there will be no control operator. I'll try calling CQ a few times... if you can't hear me try calling CQ your self and see what happens. Perhaps we can get something going on the air today... who knows.
>
> Dan KI4AX
>

31577. Re: [TS-520_820_530_830] Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:48:19 UTC
From: n6wk@n6wk.com
Topic: 31570 Message: 31577

I missed 17:30 but I will listen there until 18:00

73,
Gordon
N6WK

On 5/29/2011 10:24 AM, kd0fds wrote:
>
> I listened in Denver, CO, and called CQ a couple of times. Nothing heard.
> I can hear CA and OR running over CW mode at the bottom of the band.
> Want to try again at 1730UTC, Gordon?
>
> -Stephen kd0fds.
>
> --- In TS-520_820_530_830@yahoogroups.com
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> > Gordon
> >
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> > >
> > > Dan KI4AX
> > >
> > >
> > >
> >
>
>

31578. Re: [TS-520_820_530_830] Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:49:18 UTC
From: AB9MS
Topic: 31570 Message: 31578

Thunderstorms with lightning again. Sorry I missed it.
AB9MS
LewisB

--- On Sun, 5/29/11, ki4ax <dan8barb@...> wrote:

> From: ki4ax <dan8barb@gte.net>
> Subject: [TS-520_820_530_830] Hybrid Net?
> To: TS-520_820_530_830@yahoogroups.com
> Date: Sunday, May 29, 2011, 9:45 AM
> A few of us are going to try 15m
> today at 17:00 UTC (1:00 PM EDT) on 21.285 +/- a few kc.
> Anyone that would like to join in are welcome. This will be
> an informal gathering and there will be no control operator.
> I'll try calling CQ a few times... if you can't hear me try
> calling CQ your self and see what happens. Perhaps we can
> get something going on the air today... who knows.
>
> Dan KI4AX
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

31579. Re: [TS-520_820_530_830] Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 17:57:21 UTC
From: Sandy
Topic: 31570 Message: 31579

Same here!

Nasty stuff out there - shut down eveything! Maybe next time.
I really like the idea of the informal gathering though.

73

Sandy - n9pgo

On 5/29/2011 12:49 PM, AB9MS wrote:
>
> Thunderstorms with lightning again. Sorry I missed it.
> AB9MS
> LewisB
>
> --- On Sun, 5/29/11, ki4ax <dan8barb@...
> <mailto:dan8barb%40gte.net>> wrote:
>
> > From: ki4ax <dan8barb@... <mailto:dan8barb%40gte.net>>
> > Subject: [TS-520_820_530_830] Hybrid Net?
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Date: Sunday, May 29, 2011, 9:45 AM
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> > Dan KI4AX
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> > TS-520_820_530_830-fullfeatured@yahoogroups.com
> <mailto:TS-520_820_530_830-fullfeatured%40yahoogroups.com>
> >
> >
> >
>

>

[Non-text portions of this message have been removed]

31580. Re: [TS-520_820_530_830] Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 18:13:54 UTC
From: Chuck Goelz
Topic: 31570 Message: 31580

I only heard one weak signal from 4-land here in SE PA...

73,
Chuck, WA3CEJ

On 5/29/2011 1:57 PM, Sandy wrote:
>
> Same here!
>
> Nasty stuff out there - shut down eveything! Maybe next time.
> I really like the idea of the informal gathering though.
>
> 73
>
> Sandy - n9pgo
>
> On 5/29/2011 12:49 PM, AB9MS wrote:
> >
> > Thunderstorms with lightning again. Sorry I missed it.
> > AB9MS
> > LewisB
> >
> > --- On Sun, 5/29/11, ki4ax <dan8barb@...
> <mailto:dan8barb%40gte.net>
> > <mailto:dan8barb%40gte.net>> wrote:
> >
> > > From: ki4ax <dan8barb@... <mailto:dan8barb%40gte.net>
> <mailto:dan8barb%40gte.net>>
> > > Subject: [TS-520_820_530_830] Hybrid Net?
> > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Date: Sunday, May 29, 2011, 9:45 AM
> > > A few of us are going to try 15m
> > > today at 17:00 UTC (1:00 PM EDT) on 21.285 +/- a few kc.
> > > Anyone that would like to join in are welcome. This will be
> > > an informal gathering and there will be no control operator.
> > > I'll try calling CQ a few times... if you can't hear me try
> > > calling CQ your self and see what happens. Perhaps we can
> > > get something going on the air today... who knows.
> > >
> > > Dan KI4AX
> > >
> > >
> > >

> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > >
> > > TS-520_820_530_830-fullfeatured@yahoogroups.com
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31581. Re: [TS-520_820_530_830] NEW pod-cast info

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 22:09:07 UTC
From: Chris Parnell
Topic: 31564 Message: 31581

Excellent .... I for one will be looking at these.

Cheers
Chris, ZL1CDP

On 29/05/2011, at 7:30 PM, ktwhy2003 wrote:

> Ok, a bit off topic here, but there's a new ham podcast available from http://twit.tv/hn hosted by Bob Heil and Joe Walsh (Eagles)
>
> It's download-able in both sound (MP3) and video (MP4/QuickTime) formats.
>
>

[Non-text portions of this message have been removed]

31582. Re: Hybrid Net?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 23:22:16 UTC
From: ki4ax
Topic: 31570 Message: 31582

It was about the same for me as it was for everyone else. I called CQ and did hear W1WIU down in the static. We just barely had a qso. Again, I think 20 meters is the place to try this... at least until the bands open up a bit more. However, I can not try it right now because I need to get an antenna up for 20m.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Chuck Goelz <c.goelz@...> wrote:
>
> I only heard one weak signal from 4-land here in SE PA...
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> 73,
> Chuck, WA3CEJ
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> > > > Subject: [TS-520_820_530_830] Hybrid Net?
> > > > To: TS-520_820_530_830@yahoogroups.com
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> > [Non-text portions of this message have been removed]
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>

31583. Another TS-820 display issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-29 23:47:30 UTC
From: kb0asq
Topic: 31583 Message: 31583

Hi all,

I have a TS-820 and a TS-820S that I am getting ready to sell and I want to get some of the bugs out before I put them up for sale.

Starting with the TS-820, it has the optional display unit. I had it recapped about 18 months ago, and it has been setting pretty much unused since then.

On all bands, after it sits for about 15 minutes the Display will start to move up and down on the last 2 digits of the display. If I move the band selection back an forth rapidly a few times it will quit. This behavior is exhibited on all bands.

I have taken the display unit out and cleaned all the contacts with Deoxit D100 and also the band wafers. I have checked the 9 and 3.3 volt power source and they are all well within specs and do not move more than .05 volts when left on.

Do I just need to clean the band switches some more? Is this just the usual operation of the Display unit?

I let a friend try the TS-820S that I got at a local auction last fall and he says it exhibits the same behavior. I haven't had the case off of it yet.

73
Allen
KBØASQ
http://kb0asq.com

31584. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 01:34:56 UTC
From: ww8x_joe
Topic: 31519 Message: 31584

Terry:
Taking the RF board out was less of a problem than I anticipated. It took about 45 minutes and I had the board free. I located L4 and removed it from the board. My initial readings were no short between the primary and secondary -- and I had continuity on the windings themselves. Later on I retook readings and this time there was no continuity on the windings??? Very strange. So, I proceeded to disassemble L4 and have a look and the whole thing came apart in my hands. I'm not sure I'll have success in trying to rebuild it. Seems like you'd need to be a brain surgeon to do it right. If I can figure out how to post a few photos I will. I'm out of ideas and kind of brain dead for this evening.
WW8X
JOe

31585. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 01:43:57 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31585

Why did you remove L4 ?
I think you should have been looking at L41

Gordon
N6WK

On 5/29/2011 6:34 PM, ww8x_joe wrote:
>
> Terry:
> Taking the RF board out was less of a problem than I anticipated. It
> took about 45 minutes and I had the board free. I located L4 and
> removed it from the board. My initial readings were no short between
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> WW8X
> JOe
>
>

31586. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 01:48:04 UTC
From: Terry Wagoner
Topic: 31519 Message: 31586

Joe --Gordon is right--we both hope you removed L41? Terry

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, May 29, 2011 9:43:57 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Why did you remove L4 ?
I think you should have been looking at L41

Gordon
N6WK

On 5/29/2011 6:34 PM, ww8x_joe wrote:
>
> Terry:
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> brain dead for this evening.
> WW8X
> JOe
>
>

Yahoo! Groups Links

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31587. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 01:49:15 UTC
From: ww8x_joe
Topic: 31519 Message: 31587

Well... good question. I posted photos in the photo section. Not a good evening at all. :-(

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Why did you remove L4 ?
> I think you should have been looking at L41
>
> Gordon
> N6WK
>
> On 5/29/2011 6:34 PM, ww8x_joe wrote:
> >
> > Terry:
> > Taking the RF board out was less of a problem than I anticipated. It
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> > WW8X
> > JOe
> >
> >
>

31588. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 02:04:28 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31588

Hmmm, That pic doesn't look like any L41 I have ever taken apart.

Gordon
N6WK

On 5/29/2011 6:49 PM, ww8x_joe wrote:
>
> Well... good question. I posted photos in the photo section. Not a
> good evening at all. :-(
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Why did you remove L4 ?
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> > Gordon
> > N6WK
> >
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> > > brain dead for this evening.
> > > WW8X
> > > JOe
> > >
> > >
> >
>
>

31589. Switch paddles for ts-820s needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 03:07:30 UTC
From: MD
Topic: 31589 Message: 31589

I am in the middle of restoring a ts-820s and am in need of 3 of the switch paddle covers for the send,vox,agc etc switches. Anybody got any or know of a source?

Marty
N5KBP

31590. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 11:20:00 UTC
From: Terry Wagoner
Topic: 31519 Message: 31590

Joe--All is not lost. L4 is not a transformer. It is a simple tuned core coil...an inductor. It is shunted by C7 1200pf cap. Together they form a parallel resonant circuit that offers Hi-Z to 8.83 mhz. In short, it blocks the 8.83 Mhz IF from getting into RF amp. So, in a pinch you could install a miniature axial lead RF choke in its place. It would be better to have a slug tuned coil form so you could adjust it to resonance at 8.83mhz, but after rewinding L41 you could get your rig back on the air with installation of a choke coil at L4. There are a couple of other series resonant traps in this string including one at L4/C7 junction that you can tune later to address any 8.83.

I did the math and you need a .270 uh coil. There are a lot of combinations to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch core. Of course it would be best if you had LC bridge to adjust coil. If you are not up to winding a new L4 I would try the fixed RF choke approach.

The good news is that .270 uh is a standard value rf choke. Mouser and Digi Key sell them for literally pennies. I took a brief look and Surplus of Nebraska has some miniature IF cans and slug tuned coils and they have one that would tune in the range you need and is thru hole mount. So in absence of a replacement L4 or a replacement RF board, I would install a miniature .270uh axial lead choke and get rig back on the air. Best I can do for you. Keep smiling. Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Hmmm, That pic doesn't look like any L41 I have ever taken apart.
>
> Gordon
> N6WK
>
> On 5/29/2011 6:49 PM, ww8x_joe wrote:
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31591. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 12:27:35 UTC
From: Joe Loverti
Topic: 31519 Message: 31591

Terry:
That's real good information. N6WK has kindly offered me a replacement L4...
which would be great given my experience level. I will next move on to L41
and check it's condition, rewinding it as needed -- hoping to keep self
inflicted damage to a minimum. :?)
Thanks,
Joe
WW8X

On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--All is not lost. L4 is not a transformer. It is a simple tuned core
> coil...an inductor. It is shunted by C7 1200pf cap. Together they form a
> parallel resonant circuit that offers Hi-Z to 8.83 mhz. In short, it blocks
> the 8.83 Mhz IF from getting into RF amp. So, in a pinch you could install a
> miniature axial lead RF choke in its place. It would be better to have a
> slug tuned coil form so you could adjust it to resonance at 8.83mhz, but
> after rewinding L41 you could get your rig back on the air with installation
> of a choke coil at L4. There are a couple of other series resonant traps in
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[Non-text portions of this message have been removed]

31592. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 12:34:55 UTC
From: Terry Wagoner
Topic: 31519 Message: 31592

Joe--That is great! Maybe before he ships it he can bridge it and see if my calc @ .270 uh was close. Well--as you found out you will need a steady hand and magnifier head set. L41 is very fine wire and not sure my old eyes and hands would be up to the task. As you noted "brain surgery". 73s Terry

---

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 8:27:35 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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Yahoo! Groups Links

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31593. Re: Switch paddles for ts-820s needed

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 15:00:38 UTC
From: w5rkl
Topic: 31589 Message: 31593

Marty,

Check with Bob Mansker, ke5ftf at mail.com, he may be able to help you.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "MD" <martyduplissey@...> wrote:
>
> I am in the middle of restoring a ts-820s and am in need of 3 of the switch paddle covers for the send,vox,agc etc switches. Anybody got any or know of a source?
>
> Marty
> N5KBP
>

31594. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 17:44:36 UTC
From: n6wk_skcc3
Topic: 31519 Message: 31594

Hi Terry,
I measured the coil L4 and it measures out at .290uh
Joe, I have the coil in the padded envelope and will ship it tomorrow to you.
I don't have any spare L41 coils to send though LOL
Any other small parts you need before I seal the envelope?

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Joe--That is great! Maybe before he ships it he can bridge it and see if my calc
> @ .270 uh was close. Well--as you found out you will need a steady hand and
> magnifier head set. L41 is very fine wire and not sure my old eyes and hands
> would be up to the task. As you noted "brain surgery". 73s Terry
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> From: Joe Loverti <ww8x.joe@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Mon, May 30, 2011 8:27:35 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
> movement
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> Terry:
> That's real good information. N6WK has kindly offered me a replacement L4...
> which would be great given my experience level. I will next move on to L41
> and check it's condition, rewinding it as needed -- hoping to keep self
> inflicted damage to a minimum. :â□")
> Thanks,
> Joe
> WW8X
>
> On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@...> wrote:
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> > >
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> > > Joe--All is not lost. L4 is not a transformer. It is a simple tuned core
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> > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In short, it blocks
> > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you could install a
> > > miniature axial lead RF choke in its place. It would be better to have a
> > > slug tuned coil form so you could adjust it to resonance at 8.83mhz, but
> > > after rewinding L41 you could get your rig back on the air with installation

> > of a choke coil at L4. There are a couple of other series resonant traps in
> > this string including one at L4/C7 junction that you can tune later to
> > address any 8.83.
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> > I did the math and you need a .270 uh coil. There are a lot of combinations
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> > The good news is that .270 uh is a standard value rf choke. Mouser and Digi
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> > Nebraska has some miniature IF cans and slug tuned coils and they have one
> > that would tune in the range you need and is thru hole mount. So in absence
> > of a replacement L4 or a replacement RF board, I would install a miniature
> > .270uh axial lead choke and get rig back on the air. Best I can do for you.
> > Keep smiling. Terry K9TW
> > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >
> > > Hmmm, That pic doesn't look like any L41 I have ever taken apart.
> > >
> > > Gordon
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> > >
> > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > >
> > > > Well... good question. I posted photos in the photo section. Not a
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31595. Re: Another TS-820 display issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 19:00:29 UTC
From: roberteleazer@rocketmail.com
Topic: 31583 Message: 31595

Reportedly, according to an article over at Mods.DK, the electrolytic capacitors in the carrier unit can cause this. They recommend replacing them and using a larger cap for the 9V input to the lower carrier board.

On the other hand, the Kenwood TS-820 service bulletin says that noise can be caused by a bad tantalum cap on the PD board in the VCO/PD module. I thought I had noise and so I replaced the tantalum cap with a ceramic bead cap of the same value. And then I found I had the type of instability you describe. I replaced the assembly with a spare and have not investigated why the other module develoepd that problem. But - it appears that the caps on the PD board can cause this too.

Good luck!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "kb0asq" <kb0asq@...> wrote:
>
> Hi all,
>
> I have a TS-820 and a TS-820S that I am getting ready to sell and I want to get some of the bugs out before I put them up for sale.
>
> Starting with the TS-820, it has the optional display unit. I had it recapped about 18 months ago, and it has been setting pretty much unused since then.
>
> On all bands, after it sits for about 15 minutes the Display will start to move up and down on the last 2 digits of the display. If I move the band selection back an forth rapidly a few times it will quit. This behavior is exhibited on all bands.
>
> I have taken the display unit out and cleaned all the contacts with Deoxit D100 and also the band wafers. I have checked the 9 and 3.3 volt power source and they are all well within specs and do not move more than .05 volts when left on.
>
> Do I just need to clean the band switches some more? Is this just the usual operation of the Display unit?
>
> I let a friend try the TS-820S that I got at a local auction last fall and he says it exhibits the same behavior. I haven't had the case off of it yet.
>
> 73
> Allen
> KBØASQ
> http://kb0asq.com
>

31596. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 20:14:09 UTC
From: Terry Wagoner
Topic: 31519 Message: 31596

Thanks Gordon-- Close enough considering I used all my fingers and toes! I suspect tuning the slug would have seen .270uh somewhere in the range. Kind of has to inorder to resonate at 8.83 mhz with 1200 pf cap. Maybe Bob Mansker has a L41? I suspect he has spare RF board but not individual components off the boards? If I ever get a spare RF board I think I will guard it like gold! 73s Terry

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From: n6wk_skcc3 <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 1:44:36 PM
Subject: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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Joe, I have the coil in the padded envelope and will ship it tomorrow to you.
I don't have any spare L41 coils to send though LOL
Any other small parts you need before I seal the envelope?

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
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> Joe--That is great! Maybe before he ships it he can bridge it and see if my
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> Terry:
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> and check it's condition, rewinding it as needed -- hoping to keep self

> inflicted damage to a minimum. :â€")
> Thanks,
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31597. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 21:19:11 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31597

Hi Terry,
Yes, I am sure the slug would allow it to move down to .270 uh.
I didn't run the slug in or out to check. I just checked it as it was
when I removed it.
I have TWO RF boards for the 830.
One is good and complete, the other is one I rob parts from such as this
L4 that Joe needs.
Last time I spoke with bob, he was out of RF boards.

73,
Gordon

On 5/30/2011 1:14 PM, Terry Wagoner wrote:
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> Sent: Mon, May 30, 2011 1:44:36 PM
> Subject: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
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31598. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 22:48:11 UTC
From: Terry Wagoner
Topic: 31519 Message: 31598

Yes-- I had a guy call me the other evening asking me if I had a spare RF board. I directed him to Bob. Surprised he hadnt heard of him. I do have another TS-830 I bought down in Florida this winter and brought back. It is a 2 million series and a little rough cosmetically and you know about the connector problems I had on the IF board. I do not plan to part it out. Right now it is working well. It is nice to be able to take comparison measurements etc. Someone took a chisel and carved their soc number on rear panel. I bought a replacement panel off fellow in Florida and havent got around yet to replacing it. I did sell my beautiful TS-530SP and already miss it! 73s Terry

---

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 5:19:11 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

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> <mailto:TS-520_820_530_830%40yahoogroups.com>, Terry Wagoner
> <wagstw46@...> wrote:
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> > From: Joe Loverti <ww8x.joe@...>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, May 30, 2011 8:27:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> > movement
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Yahoo! Groups Links

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31599. RE: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 22:58:49 UTC
From: Rick Hicks
Topic: 31519 Message: 31599

I bought a TS-530SP just before I got my General. I cannot tell you how many times I have heard people say that it was the best radio ever and that they are sorry they ever sold it. On this basis, I have vowed never to let mine out of my sight. Why do the rest of you sell yours and then say how much you miss it and how sorry you are to have sold it?

I’m glad I have been able to learn from the experience of others and I recommend it highly. ;-)

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Monday, May 30, 2011 3:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yes-- I had a guy call me the other evening asking me if I had a spare RF board.
I directed him to Bob. Surprised he hadnt heard of him. I do have another TS-830
I bought down in Florida this winter and brought back. It is a 2 million series
and a little rough cosmetically and you know about the connector problems I had
on the IF board. I do not plan to part it out. Right now it is working well. It
is nice to be able to take comparison measurements etc. Someone took a chisel
and carved their soc number on rear panel. I bought a replacement panel off
fellow in Florida and havent got around yet to replacing it. I did sell my
beautiful TS-530SP and already miss it! 73s Terry

From: "n6wk@n6wk.com <mailto:n6wk%40n6wk.com> " <n6wk@... <mailto:n6wk%40n6wk.com> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Mon, May 30, 2011 5:19:11 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Hi Terry,
Yes, I am sure the slug would allow it to move down to .270 uh.
I didn't run the slug in or out to check. I just checked it as it was
when I removed it.
I have TWO RF boards for the 830.
One is good and complete, the other is one I rob parts from such as this
L4 that Joe needs.
Last time I spoke with bob, he was out of RF boards.

73,
Gordon

On 5/30/2011 1:14 PM, Terry Wagoner wrote:
>
> Thanks Gordon-- Close enough considering I used all my fingers and
> toes! I
> suspect tuning the slug would have seen .270uh somewhere in the range.
> Kind of
> has to inorder to resonate at 8.83 mhz with 1200 pf cap. Maybe Bob
> Mansker has a
> L41? I suspect he has spare RF board but not individual components off
> the
> boards? If I ever get a spare RF board I think I will guard it like
> gold! 73s
> Terry
>
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> From: n6wk_skcc3 <n6wk@... <mailto:n6wk%40n6wk.com> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, May 30, 2011 1:44:36 PM
> Subject: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
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> Any other small parts you need before I seal the envelope?
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> > To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>

> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, May 30, 2011 8:27:35 AM
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> > > Yahoo! Groups Links
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Yahoo! Groups Links

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No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3669 - Release Date: 05/30/11

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31600. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 23:02:50 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31600

2 million series, wow, that is an early Silver version.
I have a cure for the loose connector problems on the IF board.
When I get those that are really loose, What I do is unsolder them,
one at a time, and epoxy the connector to the board. Then I go back and
solder all the terminals again. Makes for a nice mechanical connection
and a great electrical connection. Once you do that, no more wiggly
connectors and when you plug in the connecting cables, all stays secure.
One of the errors guys make is trying to unsolder from these boards
using too little heat. Therefore the iron has to stay on too long and
sometimes lifts the trace.
I use more heat and get in and out fast.
Yes, I hate it when I buy a rig that has some guys call, soc number or
license number engraved into it.

73,'s
Gordon

On 5/30/2011 3:48 PM, Terry Wagoner wrote:
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> Yes-- I had a guy call me the other evening asking me if I had a spare
> RF board.
> I directed him to Bob. Surprised he hadnt heard of him. I do have
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31601. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 01:30:17 UTC
From: Joe Loverti
Topic: 31519 Message: 31601

Gordon: Thanks very much for sending the L4... I am in the process of checking out L41 ? when I pulled the cover off I noticed a clean break in one of the wires. I think I'll have to rewind the coil. Right now I'm trying to figure out which side is the primary and which side is the secondary. For the life of me I can't find the darn thing on the schematic to double check which end is which -- must be blind. I'm also wondering how important it is use exactly #42 enameled wire? I have some old RF chokes I can get wire from if the size isn't super critical.

No other parts needed!! Thank you.

Joe
WW8X

On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@...> wrote:

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> Hi Terry,
> I measured the coil L4 and it measures out at .290uh
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> > Yahoo! Groups Links
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31602. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 02:06:23 UTC
From: Terry Wagoner
Topic: 31519 Message: 31602

Because we upgrade to TS-830s (in my case 2 of them) and we cannot justify having that many rigs. Besides I promised my wife I would sell one after testing sensitivity and selectivity. I think they were equal in sensitivity but the VBT and full filters in the 830s win out on selectivity. Just anecdotal no measurements. I am of course my own man and my wife cant tell me what to do! Hang on to your 530SP as long as you can. Terry

---

From: Rick Hicks <rick@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 6:58:49 PM
Subject: RE: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

I bought a TS-530SP just before I got my General. I cannot tell you how many times I have heard people say that it was the best radio ever and that they are sorry they ever sold it. On this basis, I have vowed never to let mine out of my sight. Why do the rest of you sell yours and then say how much you miss it and how sorry you are to have sold it?

I'm glad I have been able to learn from the experience of others and I recommend it highly. ;-)

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Monday, May 30, 2011 3:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yes-- I had a guy call me the other evening asking me if I had a spare RF board.

I directed him to Bob. Surprised he hadnt heard of him. I do have another TS-830

I bought down in Florida this winter and brought back. It is a 2 million series and a little rough cosmetically and you know about the connector problems I had on the IF board. I do not plan to part it out. Right now it is working well. It is nice to be able to take comparison measurements etc. Someone took a chisel and carved their soc number on rear panel. I bought a replacement panel off fellow in Florida and havent got around yet to replacing it. I did sell my beautiful TS-530SP and already miss it! 73s Terry

---

From: "n6wk@n6wk.com <mailto:n6wk%40n6wk.com> " <n6wk@...

<mailto:n6wk%40n6wk.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Mon, May 30, 2011 5:19:11 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Hi Terry,
Yes, I am sure the slug would allow it to move down to .270 uh.
I didn't run the slug in or out to check. I just checked it as it was when I removed it.
I have TWO RF boards for the 830.
One is good and complete, the other is one I rob parts from such as this L4 that Joe needs.
Last time I spoke with bob, he was out of RF boards.

73,
Gordon

On 5/30/2011 1:14 PM, Terry Wagoner wrote:
>
> Thanks Gordon-- Close enough considering I used all my fingers and
> toes! I
> suspect tuning the slug would have seen .270uh somewhere in the range.
> Kind of
> has to inorder to resonate at 8.83 mhz with 1200 pf cap. Maybe Bob
> Mansker has a
> L41? I suspect he has spare RF board but not individual components off
> the
> boards? If I ever get a spare RF board I think I will guard it like
> gold! 73s
> Terry
>
> _____
> From: n6wk_skcc3 <n6wk@... <mailto:n6wk%40n6wk.com>
><mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, May 30, 2011 1:44:36 PM
> Subject: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
> movement
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> Hi Terry,
> I measured the coil L4 and it measures out at .290uh
> Joe, I have the coil in the padded envelope and will ship it tomorrow
> to you.
> I don't have any spare L41 coils to send though LOL
> Any other small parts you need before I seal the envelope?

>
> 73,
> Gordon
>
> --- In TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Terry Wagoner
> <wagstw46@...> wrote:
> >
> > Joe--That is great! Maybe before he ships it he can bridge it and
> see if my
> >calc
> >
> > @ .270 uh was close. Well--as you found out you will need a steady
> hand and
> > magnifier head set. L41 is very fine wire and not sure my old eyes
> and hands
> > would be up to the task. As you noted "brain surgery". 73s Terry
> >
> >
> >
> > _____
> > From: Joe Loverti <ww8x.joe@...>
> > To: TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, May 30, 2011 8:27:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> > movement
> >
> > Terry:
> > That's real good information. N6WK has kindly offered me a
> replacement L4...
> > which would be great given my experience level. I will next move on
> to L41
> > and check it's condition, rewinding it as needed -- hoping to keep self
> > inflicted damage to a minimum. :Ã¢â,¬")
> > Thanks,
> > Joe
> > WW8X
> >
> > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > >
> > >
> > > Joe--All is not lost. L4 is not a transformer. It is a simple
> tuned core

> > > coil...an inductor. It is shunted by C7 1200pf cap. Together they
> form a
> > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In short,
> it blocks
> > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you could
> install a
> > > miniature axial lead RF choke in its place. It would be better to
> have a
> > > slug tuned coil form so you could adjust it to resonance at
> 8.83mhz, but
> > > after rewinding L41 you could get your rig back on the air with
> installation
> > > of a choke coil at L4. There are a couple of other series resonant
> traps in
> > > this string including one at L4/C7 junction that you can tune later to
> > > address any 8.83.
> > >
> > > I did the math and you need a .270 uh coil. There are a lot of
> combinations
> > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch core.
> Of course
> > > it would be best if you had LC bridge to adjust coil. If you are
> not up to
> > > winding a new L4 I would try the fixed RF choke approach.
> > >
> > > The good news is that .270 uh is a standard value rf choke. Mouser
> and Digi
> > > Key sell them for literally pennies. I took a brief look and
> Surplus of
> > > Nebraska has some miniature IF cans and slug tuned coils and they
> have one
> > > that would tune in the range you need and is thru hole mount. So
> in absence
> > > of a replacement L4 or a replacement RF board, I would install a
> miniature
> > > .270uh axial lead choke and get rig back on the air. Best I can do
> for you.
> > > Keep smiling. Terry K9TW
> > > --- In TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Hmmm, That pic doesn't look like any L41 I have ever taken apart.
> > > >
> > > > Gordon
> > > > N6WK
> > > >
> > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > >

> > > > > Well... good question. I posted photos in the photo section. Not a
> > > > > good evening at all. :-(
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > > > >
> > > > > > Why did you remove L4 ?
> > > > > > I think you should have been looking at L41
> > > > > >
> > > > > > Gordon
> > > > > > N6WK
> > > > > >
> > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > >
> > > > > > > Terry:
> > > > > > > Taking the RF board out was less of a problem than I
> anticipated.
> > > It
> > > > > > > took about 45 minutes and I had the board free. I located
> L4 and
> > > > > > > removed it from the board. My initial readings were no short
> > > between
> > > > > > > the primary and secondary -- and I had continuity on the
> windings
> > > > > > > themselves. Later on I retook readings and this time there
> was no
> > > > > > > continuity on the windings??? Very strange. So, I proceeded to
> > > > > > > disassemble L4 and have a look and the whole thing came
> apart in my
> > > > > > > hands. I'm not sure I'll have success in trying to rebuild it.
> > > Seems
> > > > > > > like you'd need to be a brain surgeon to do it right. If I can
> > > figure
> > > > > > > out how to post a few photos I will. I'm out of ideas and
> kind of
> > > > > > > brain dead for this evening.
> > > > > > > WW8X
> > > > > > > JOe
> > > > > > >
> > > > > > >
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Yahoo! Groups Links

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No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3669 - Release Date: 05/30/11

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31603. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 02:08:46 UTC
From: Terry Wagoner
Topic: 31519 Message: 31603

Yes-- I got my IF board connectors (3 of them) repaired using your method and
you have converted me to the high heat and get out quick camp. Thanks

_____
From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 7:02:50 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
movement

2 million series, wow, that is an early Silver version.
I have a cure for the loose connector problems on the IF board.
When I get those that are really loose, What I do is unsolder them,
one at a time, and epoxy the connector to the board. Then I go back and
solder all the terminals again. Makes for a nice mechanical connection
and a great electrical connection. Once you do that, no more wiggly
connectors and when you plug in the connecting cables, all stays secure.
One of the errors guys make is trying to unsolder from these boards
using too little heat. Therefore the iron has to stay on too long and
sometimes lifts the trace.
I use more heat and get in and out fast.
Yes, I hate it when I buy a rig that has some guys call, soc number or
license number engraved into it.

73,'s
Gordon

On 5/30/2011 3:48 PM, Terry Wagoner wrote:
>
> Yes-- I had a guy call me the other evening asking me if I had a spare
> RF board.
> I directed him to Bob. Surprised he hadnt heard of him. I do have
> another TS-830
> I bought down in Florida this winter and brought back. It is a 2
> million series
> and a little rough cosmetically and you know about the connector
> problems I had
> on the IF board. I do not plan to part it out. Right now it is working
> well. It
> is nice to be able to take comparison measurements etc. Someone took a
> chisel
> and carved their soc number on rear panel. I bought a replacement
> panel off
> fellow in Florida and havent got around yet to replacing it. I did
> sell my

> beautiful TS-530SP and already miss it! 73s Terry
>
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> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, May 30, 2011 5:19:11 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> Hi Terry,
> Yes, I am sure the slug would allow it to move down to .270 uh.
> I didn't run the slug in or out to check. I just checked it as it was
> when I removed it.
> I have TWO RF boards for the 830.
> One is good and complete, the other is one I rob parts from such as this
> L4 that Joe needs.
> Last time I spoke with bob, he was out of RF boards.
>
> 73,
> Gordon
>

[Non-text portions of this message have been removed]

31604. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 02:12:47 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31604

Terry,
Be sure to tell your wife that! Hi Hi
She who must be obeyed, might have a different answer LOL

73,
Gordon

On 5/30/2011 7:06 PM, Terry Wagoner wrote:
>
> Because we upgrade to TS-830s (in my case 2 of them) and we cannot
> justify
> having that many rigs. Besides I promised my wife I would sell one
> after testing
> sensitivity and selectivity. I think they were equal in sensitivity
> but the VBT
> and full filters in the 830s win out on selectivity. Just anecdotal no
> measurements. *I am of course my own man and my wife cant tell me what
> to do! *
> Hang on to your 530SP as long as you can. Terry
>
> _____
> From: Rick Hicks <rick@... <mailto:rick%40haggisbag.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, May 30, 2011 6:58:49 PM
> Subject: RE: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> I bought a TS-530SP just before I got my General. I cannot tell you
> how many
> times I have heard people say that it was the best radio ever and that
> they are
> sorry they ever sold it. On this basis, I have vowed never to let mine
> out of
> my sight. Why do the rest of you sell yours and then say how much you
> miss it
> and how sorry you are to have sold it?
>
> I'm glad I have been able to learn from the experience of others and
> I recommend
> it highly. ;-)
>
> Rick KF7JFU

>
> From: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> [mailto:TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Terry Wagoner
> Sent: Monday, May 30, 2011 3:48 PM
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
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> <mailto:n6wk%40n6wk.com> >
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> On 5/30/2011 1:14 PM, Terry Wagoner wrote:
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> > > Joe--That is great! Maybe before he ships it he can bridge it and
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> > > To: TS-520_820_530_830@yahoogroups.com
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> > > > > > > > WW8X
> > > > > > > > JOe
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> _____
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> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 10.0.1375 / Virus Database: 1509/3669 - Release Date: 05/30/11
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E-Mail Disclaimer This communication and any documents, files, or previous e-mail messages attached to it constitute an electronic communication within the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This communication may contain non-public, confidential, or legally privileged information intended for the sole use of the intended recipient(s). The unlawful interception, use or disclosure of such information is strictly prohibited under 18 USCA 2511. Any review, reliance, or distribution by others or forwarding without expressed permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.

31605. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 02:44:39 UTC
From: tnnyswy@yahoo.com
Topic: 31519 Message: 31605

>> I am of course my own man and my wife cant tell me what to do! <<

Where should we send the get well card? :-D (big grin)

>> Besides I promised my wife I would sell one after testing

sensitivity and selectivity. <<

The Dept of Homeland Security (wife) has Spoken!
That's the LAW!

(((73))) Milverton.

Sent from my Verizon Wireless BlackBerry

-----Original Message-----
From: Terry Wagoner <wagstw46@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Mon, 30 May 2011 19:06:23
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Because we upgrade to TS-830s (in my case 2 of them) and we cannot justify
having that many rigs. Besides I promised my wife I would sell one after testing
sensitivity and selectivity. I think they were equal in sensitivity but the VBT
and full filters in the 830s win out on selectivity. Just anecdotal no
measurements. I am of course my own man and my wife cant tell me what to do!
Hang on to your 530SP as long as you can. Terry

_____
From: Rick Hicks <rick@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, May 30, 2011 6:58:49 PM
Subject: RE: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
movement

I bought a TS-530SP just before I got my General. I cannot tell you how many
times I have heard people say that it was the best radio ever and that they are
sorry they ever sold it. On this basis, I have vowed never to let mine out of
my sight. Why do the rest of you sell yours and then say how much you miss it
and how sorry you are to have sold it?

I’m glad I have been able to learn from the experience of others and I recommend
it highly. ;-)

Rick KF7JFU

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Monday, May 30, 2011 3:48 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yes-- I had a guy call me the other evening asking me if I had a spare RF board.

I directed him to Bob. Surprised he hadnt heard of him. I do have another TS-830

I bought down in Florida this winter and brought back. It is a 2 million series and a little rough cosmetically and you know about the connector problems I had on the IF board. I do not plan to part it out. Right now it is working well. It is nice to be able to take comparison measurements etc. Someone took a chisel and carved their soc number on rear panel. I bought a replacement panel off fellow in Florida and havent got around yet to replacing it. I did sell my beautiful TS-530SP and already miss it! 73s Terry

---
From: "n6wk@... <mailto:n6wk%40n6wk.com> " <n6wk@...
<mailto:n6wk%40n6wk.com> >
To: TS-520_820_530_830@yahoogroups.com
<mailto:TS-520_820_530_830%40yahoogroups.com>

Sent: Mon, May 30, 2011 5:19:11 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Hi Terry,
Yes, I am sure the slug would allow it to move down to .270 uh.
I didn't run the slug in or out to check. I just checked it as it was
when I removed it.
I have TWO RF boards for the 830.
One is good and complete, the other is one I rob parts from such as this
L4 that Joe needs.
Last time I spoke with bob, he was out of RF boards.

73,
Gordon

On 5/30/2011 1:14 PM, Terry Wagoner wrote:
>
> Thanks Gordon-- Close enough considering I used all my fingers and
> toes! I
> suspect tuning the slug would have seen .270uh somewhere in the range.
> Kind of
> has to inorder to resonate at 8.83 mhz with 1200 pf cap. Maybe Bob
> Mansker has a
> L41? I suspect he has spare RF board but not individual components off
> the

> boards? If I ever get a spare RF board I think I will guard it like
> gold! 73s
> Terry
>
>_____
> From: n6wk_skcc3 <n6wk@... <mailto:n6wk%40n6wk.com>
><mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Mon, May 30, 2011 1:44:36 PM
> Subject: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
> movement
>
> Hi Terry,
> I measured the coil L4 and it measures out at .290uh
> Joe, I have the coil in the padded envelope and will ship it tomorrow
> to you.
> I don't have any spare L41 coils to send though LOL
> Any other small parts you need before I seal the envelope?
>
> 73,
> Gordon
>
> --- In TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Terry Wagoner
> <wagstw46@...> wrote:
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> > Joe--That is great! Maybe before he ships it he can bridge it and
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> > @ .270 uh was close. Well--as you found out you will need a steady
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> > magnifier head set. L41 is very fine wire and not sure my old eyes
> and hands
> > would be up to the task. As you noted "brain surgery". 73s Terry
> >
> >
> >
> >_____
> > From: Joe Loverti <ww8x.joe@...>
> > To: TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
>
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Mon, May 30, 2011 8:27:35 AM

> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> > movement
> >
> > Terry:
> > That's real good information. N6WK has kindly offered me a
> replacement L4...
> > which would be great given my experience level. I will next move on
> to L41
> > and check it's condition, rewinding it as needed -- hoping to keep self
> > inflicted damage to a minimum. :Ã¢â,¬")
> > Thanks,
> > Joe
> > WW8X
> >
> > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > >
> > >
> > > Joe--All is not lost. L4 is not a transformer. It is a simple
> tuned core
> > > coil...an inductor. It is shunted by C7 1200pf cap. Together they
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> > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In short,
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> > >
> > > I did the math and you need a .270 uh coil. There are a lot of
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> > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch core.
> Of course
> > > it would be best if you had LC bridge to adjust coil. If you are
> not up to
> > > winding a new L4 I would try the fixed RF choke approach.
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> > > The good news is that .270 uh is a standard value rf choke. Mouser
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> > > Key sell them for literally pennies. I took a brief look and
> Surplus of

> > > Nebraska has some miniature IF cans and slug tuned coils and they
> have one
> > > that would tune in the range you need and is thru hole mount. So
> in absence
> > > of a replacement L4 or a replacement RF board, I would install a
> miniature
> > > .270uh axial lead choke and get rig back on the air. Best I can do
> for you.
> > > Keep smiling. Terry K9TW
> > > --- In TS-520_820_530_830@yahoogroups.com
><mailto:TS-520_820_530_830%40yahoogroups.com>
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> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Hmmm, That pic doesn't look like any L41 I have ever taken apart.
> > > >
> > > > Gordon
> > > > N6WK
> > > >
> > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > >
> > > > > Well... good question. I posted photos in the photo section. Not a
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> > > > > > Why did you remove L4 ?
> > > > > > I think you should have been looking at L41
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> > > > > > Gordon
> > > > > > N6WK
> > > > > >
> > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
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> > > > > > > Terry:
> > > > > > > Taking the RF board out was less of a problem than I
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Yahoo! Groups Links

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No virus found in this message.
Checked by AVG - www.avg.com
Version: 10.0.1375 / Virus Database: 1509/3669 - Release Date: 05/30/11

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31606. QSO

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-30 19:45:04 UTC
From: kcid51
Topic: 31606 Message: 31606

Is anyone going to be on today? I just got back from camping and was wondering? I have not had time to listen to see what is open yet, but will be around the radio the remainder of the day!

Ka7ayt
Dick

31607. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 11:22:49 UTC
From: Terry Wagoner
Topic: 31519 Message: 31607

Hi Joe--Did you get an answer to location of L41? If not, on schematic look on right side for the RF Unit bounded by dashed line. Find Connector 3 on left side of RF unit. Find ANT terminal and follow Bold Black line from ANT down to L41. You will see Primary on left side and Secondary on right side. So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary has 26 turns (per K4EAA FAQs). If you have the Service Manual look at X-ray view of RF board on Page 12. Look down at L41. You can see on Left Side it has 2 Pins and Right Side has 3 Pins. The center pin on Right Side is Not Connected (NC). The Secondary winding is connected to the Top 2 pins. The Top Left goes to C42 and the Top Right goes to L12. The Primary Winding is connected to the Bottom 2 pins. The Bottom Left goes to ground and the Bottom Right goes to junction of C7/L4. As I mentioned to you I have never wound an L41. Per Kens K4EAA web site he says to try to solenoid wind and not scramble wind. When you unwind the wire you will be able to tell which winding was wound on the bobbin first. I guess if I were doing it I would wind secondary first and then put primary over it, but it shouldnt really matter. Gordon will have some tips for you as he has wound new L41 xfmrs. Good Luck Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Gordon: Thanks very much for sending the L4... I am in the process of
> checking out L41 ☐ when I pulled the cover off I noticed a clean break in
> one of the wires. I think I'll have to rewind the coil. Right now I'm trying
> to figure out which side is the primary and which side is the secondary. For
> the life of me I can't find the darn thing on the schematic to double check
> which end is which -- must be blind. I'm also wondering how important it is
> use exactly #42 enameled wire? I have some old RF chokes I can get wire from
> if the size isn't super critical.
>
> No other parts needed!! Thank you.
>
> Joe
> WW8X
>
> On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@...> wrote:
>
> >
> >
> > Hi Terry,
> > I measured the coil L4 and it measures out at .290uh
> > Joe, I have the coil in the padded envelope and will ship it tomorrow to
> > you.
> > I don't have any spare L41 coils to send though LOL
> > Any other small parts you need before I seal the envelope?
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> > 73,

> > Gordon
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> > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > wrote:
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> > > Joe--That is great! Maybe before he ships it he can bridge it and see if
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> > > _____
> > > From: Joe Loverti <ww8x.joe@>
> >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter
> > > movement
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> > > Terry:
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31608. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 13:58:29 UTC
From: Joe Loverti
Topic: 31519 Message: 31608

Terry:
Thanks... found it!! What do you think about the wire gauge? Do you think that would be critical? Even with enlarging goggles on, that is a mighty small piece to work with -- That wire is like a human hair width. I wonder why the designer's used such a small gauge in the input circuit if not for it to also serve as fuse to protect the front end.
Joe
WW8X

On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Hi Joe--Did you get an answer to location of L41? If not, on schematic look
> on right side for the RF Unit bounded by dashed line. Find Connector 3 on
> left side of RF unit. Find ANT terminal and follow Bold Black line from ANT
> down to L41. You will see Primary on left side and Secondary on right side.
> So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary has 26
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> > > > From: Joe Loverti <ww8x.joe@>
> > > >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > S-meter
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> > > > Terry:
> > > > That's real good information. N6WK has kindly offered me a
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31609. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 15:33:22 UTC
From: Terry Wagoner
Topic: 31519 Message: 31609

Joe--I dont think they had fusing in mind. At that stage of the receiver you are dealing with micro-volt signals so current will be miniscule so you dont need heavy gage wire. Yes--that wire will be very hard to see and very easy to break if too much tension during winding.That is why I suggested you ask Gordon about any lessons learned.

If you increase the wire gage it will have an effect on the inductance of the winding for same number of turns. If you change the inductance you will change the impedance ratio of the Xfmr. I dont think it would be real critical. The Xfmr turns ratio is about 4.34 to 1. That is the more important characteristic to maintain. Changing wire guage wont effect the turns ratio unless you cant get same number of turns.

So long winded answer is I would try to wind it with 46 guage and if you cant then consider going up in guage as long as you can still get 26 turns wound on the bobbin.

I have looked for miniature and sub-miniature RF xfmrs (via Google) and I find several that come close in value but not sure about correct dimensions for PC board thru hole mounting. It looks like a wide band 4:1 xfmr would work just fine. If I find a close sub, I will buy a couple to experiment with as they are low cost . I am searching Mouser and Digi-key. 73s Terry

---

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 31, 2011 9:58:29 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry:
Thanks... found it!! What do you think about the wire gauge? Do you think that would be critical? Even with enlarging goggles on, that is a mighty small piece to work with -- That wire is like a human hair width. I wonder why the designer's used such a small gauge in the input circuit if not for it to also serve as fuse to protect the front end.
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On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:

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> Hi Joe--Did you get an answer to location of L41? If not, on schematic look
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> RF board on Page 12. Look down at L41. You can see on Left Side it has 2
> Pins and Right Side has 3 Pins. The center pin on Right Side is Not
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Yahoo! Groups Links

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31610. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 16:45:34 UTC
From: Joe Loverti
Topic: 31519 Message: 31610

Terry -- I was wondering why L41 is prone to these problems? What would cause the transformer to one day go bad? Lightening static? Stray RF? As I said in my original post, one day it was receiving great -- next day it was deaf. I leave no antennas connected when I'm not operating the radios.

I think I could get a slightly heavier gauge to make 26 wraps -- though they may need to overlap somewhat. From what I read the wrap technique isn't super critical... but, I do understand your point of maintaining the winding ratio. On the other hand, I may go ahead at look for the #42 gauge enameled wire since I have time waiting on the L4 from Gordon.

Gordon, if you're reading this, please add to my knowledge base concerning the re-wrap of the L41. I'd be interested in anything not covered by K4EAA's website.

73
Joe
WW8X

On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@...> wrote:

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> Joe--I dont think they had fusing in mind. At that stage of the receiver
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> > > > 73,
> > > > Gordon
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> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > > > wrote:
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> > > > > Joe--That is great! Maybe before he ships it he can bridge it and
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> > > > >
> > > > >
> > > > > _____
> > > > > From: Joe Loverti <ww8x.joe@>
> > > >
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> Little
> > > > S-meter
> > > > > movement
> > > > >
> > > > > Terry:
> > > > > That's real good information. N6WK has kindly offered me a
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> > > > L41
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> > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@> wrote:

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31611. Re: Another TS-820 display issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 18:32:22 UTC
From: kb0asq
Topic: 31583 Message: 31611

Interestingly, I had it on all weekend and on Monday it was rock solid.

I shut it off last night and this morning, I am back to the same problem. Out of frustration, I checked the voltage on the 9v and 3.3v power supplies again. They were both at spec. So then I checked the voltage on the socket jumper on the back and it read 8.83v. So I took it out and put it back in. Now it reads 8.98v and it seems to be solid again.

So I am going the get the schematic out and trace it again to see if I can find a loose connection somewhere.

Allen
KB0ASQ
http://kb0asq.com

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Reportedly, according to an article over at Mods.DK, the electrolytic capacitors in the carrier unit can cause this. They recommend replacing them and using a larger cap for the 9V input to the lower carrier board.
>
> On the other hand, the Kenwood TS-820 service bulletin says that noise can be caused by a bad tantalum cap on the PD board in the VCO/PD module. I thought I had noise and so I replaced the tantalum cap with a ceramic bead cap of the same value. And then I found I had the type of instability you describe. I replaced the assembly with a spare and have not investigated why the other module develoepd that problem. But - it appears that the caps on the PD board can cause this too.
>
> Good luck!
>
> Robert
> WB5WSV
>
> --- In TS-520_820_530_830@yahoogroups.com, "kb0asq" <kb0asq@> wrote:
> >
> > Hi all,
> >
> > I have a TS-820 and a TS-820S that I am getting ready to sell and I want to get some of the bugs out before I put them up for sale.
> >
> > Starting with the TS-820, it has the optional display unit. I had it recapped about 18 months ago, and it has been setting pretty much unused since then.
> >
> > On all bands, after it sits for about 15 minutes the Display will start to move up and down on the last 2 digits of the display. If I move the band selection back an forth rapidly a few times it will quit. This behavior is exhibited on all bands.
> >

> > I have taken the display unit out and cleaned all the contacts with Deoxit D100 and also the band wafers. I have checked the 9 and 3.3 volt power source and they are all well within specs and do not move more than .05 volts when left on.
> >
> > Do I just need to clean the band switches some more? Is this just the usual operation of the Display unit?
> >
> > I let a friend try the TS-820S that I got at a local auction last fall and he says it exhibits the same behavior. I haven't had the case off of it yet.
> >
> > 73
> > Allen
> > KBØASQ
> > http://kb0asq.com
> >
>

31612. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 19:03:52 UTC
From: Terry Wagoner
Topic: 31519 Message: 31612

Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know why L41 fails like that. Certainly inadvertant transmit RF into the SO-239 jack would do it. Induced lighting? Maybe it is a design weakness? Ken Kempski talks about finding D2 shorted saving the Mosfet and maybe taking out L41? I have seen post where the person said the windings appeared burned black and/or fused together. That almost has to be xmit RF or lighting? What did you see when you took yours apart? If a lead was broken off that sounds like a weakness from day one that just finally gave up? I dont think you did anything based on what you have told us. Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry -- I was wondering why L41 is prone to these problems? What would
> cause the transformer to one day go bad? Lightening static? Stray RF? As I
> said in my original post, one day it was receiving great -- next day it was
> deaf. I leave no antennas connected when I'm not operating the radios.
>
> I think I could get a slightly heavier gauge to make 26 wraps -- though they
> may need to overlap somewhat. From what I read the wrap technique isn't
> super critical... but, I do understand your point of maintaining the winding
> ratio. On the other hand, I may go ahead at look for the #42 gauge enameled
> wire since I have time waiting on the L4 from Gordon.
>
> Gordon, if you're reading this, please add to my knowledge base concerning
> the re-wrap of the L41. I'd be interested in anything not covered by
> K4EAA's website.
>
> 73
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@...> wrote:
>
> >
> >
> > Joe--I dont think they had fusing in mind. At that stage of the receiver
> > you are
> > dealing with micro-volt signals so current will be miniscule so you dont
> > need
> > heavy gage wire. Yes--that wire will be very hard to see and very easy to
> > break
> > if too much tension during winding.That is why I suggested you ask Gordon
> > about
> > any lessons learned.
> >

> > If you increase the wire gage it will have an effect on the inductance of
> > the
> > winding for same number of turns. If you change the inductance you will
> > change
> > the impedance ratio of the Xfmr. I dont think it would be real critical.
> > The
> > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > characteristic
> > to maintain. Changing wire guage wont effect the turns ratio unless you
> > cant get
> > same number of turns.
> >
> > So long winded answer is I would try to wind it with 46 guage and if you
> > cant
> > then consider going up in guage as long as you can still get 26 turns wound
> > on
> > the bobbin.
> >
> > I have looked for miniature and sub-miniature RF xfmrs (via Google) and I
> > find
> > several that come close in value but not sure about correct dimensions for
> > PC
> > board thru hole mounting. It looks like a wide band 4:1 xfmr would work
> > just
> > fine. If I find a close sub, I will buy a couple to experiment with as they
> > are
> > low cost . I am searching Mouser and Digi-key. 73s Terry
> >
> > _____
> > From: Joe Loverti <ww8x.joe@...>
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tue, May 31, 2011 9:58:29 AM
> >
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter
> > movement
> >
> > Terry:
> > Thanks... found it!! What do you think about the wire gauge? Do you think
> > that would be critical? Even with enlarging goggles on, that is a mighty
> > small piece to work with -- That wire is like a human hair width. I wonder
> > why the designer's used such a small gauge in the input circuit if not for
> > it to also serve as fuse to protect the front end.
> > Joe
> > WW8X
> >
> > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:
> >

> > >
> > >
> > > Hi Joe--Did you get an answer to location of L41? If not, on schematic
> > look
> > > on right side for the RF Unit bounded by dashed line. Find Connector 3 on
> > > left side of RF unit. Find ANT terminal and follow Bold Black line from
> > ANT
> > > down to L41. You will see Primary on left side and Secondary on right
> > side.
> > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary has
> > 26
> > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray view
> > of
> > > RF board on Page 12. Look down at L41. You can see on Left Side it has 2
> > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > Connected (NC). The Secondary winding is connected to the Top 2 pins. The
> > > Top Left goes to C42 and the Top Right goes to L12. The Primary Winding
> > is
> > > connected to the Bottom 2 pins. The Bottom Left goes to ground and the
> > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > never
> > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind and
> > > not scramble wind. When you unwind the wire you will be able to tell
> > which
> > > winding was wound on the bobbin first. I guess if I were doing it I would
> > > wind secondary first and then put primary over it, but it shouldnt really
> > > matter. Gordon will have some tips for you as he has wound new L41 xfmrs.
> > > Good Luck Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > wrote:
> > > >
> > > > Gordon: Thanks very much for sending the L4... I am in the process of
> > > > checking out L41 ☐ when I pulled the cover off I noticed a clean break
> > in
> > > > one of the wires. I think I'll have to rewind the coil. Right now I'm
> > > trying
> > > > to figure out which side is the primary and which side is the
> > secondary.
> > > For
> > > > the life of me I can't find the darn thing on the schematic to double
> > > check
> > > > which end is which -- must be blind. I'm also wondering how important
> > it
> > > is
> > > > use exactly #42 enameled wire? I have some old RF chokes I can get wire
> > > from
> > > > if the size isn't super critical.
> > > >

> > > > No other parts needed!! Thank you.
> > > >
> > > > Joe
> > > > WW8X
> > > >
> > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > >
> > > > >
> > > > > >
> > > > > > Hi Terry,
> > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > Joe, I have the coil in the padded envelope and will ship it tomorrow
> > > to
> > > > > > you.
> > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > Any other small parts you need before I seal the envelope?
> > > > > >
> > > > > > 73,
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31613. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 21:21:31 UTC
From: Joe Loverti
Topic: 31519 Message: 31613

Terry: Here's a close-up photo of my L41. The windings appear still bright and shiny. No evidence of burning. But if you look closely on the right side there's a section of wire missing above where it connects to the pin on the right. Later when I touched the upper piece gently with a tweezer, it broke again. Now the upper end is buried in the windings... which was why was having trouble figuring out primary and secondary without unwinding it.
Joe
WW8X

On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know why
> L41 fails like that. Certainly inadvertant transmit RF into the SO-239 jack
> would do it. Induced lighting? Maybe it is a design weakness? Ken Kempski
> talks about finding D2 shorted saving the Mosfet and maybe taking out L41? I
> have seen post where the person said the windings appeared burned black
> and/or fused together. That almost has to be xmit RF or lighting? What did
> you see when you took yours apart? If a lead was broken off that sounds like
> a weakness from day one that just finally gave up? I dont think you did
> anything based on what you have told us. Terry
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> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
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> > Terry -- I was wondering why L41 is prone to these problems? What would
> > cause the transformer to one day go bad? Lightening static? Stray RF? As
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> > said in my original post, one day it was receiving great -- next day it
> was
> > deaf. I leave no antennas connected when I'm not operating the radios.
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> > I think I could get a slightly heavier gauge to make 26 wraps -- though
> they
> > may need to overlap somewhat. From what I read the wrap technique isn't
> > super critical... but, I do understand your point of maintaining the
> winding
> > ratio. On the other hand, I may go ahead at look for the #42 gauge
> enameled
> > wire since I have time waiting on the L4 from Gordon.
> >
> > Gordon, if you're reading this, please add to my knowledge base
> concerning

> > the re-wrap of the L41. I'd be interested in anything not covered by
> > K4EAA's website.
> >
> > 73
> > Joe
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> >
> > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@...> wrote:
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> > >
> > >
> > > Joe--I dont think they had fusing in mind. At that stage of the
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> > > need
> > > heavy gage wire. Yes--that wire will be very hard to see and very easy
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> > > break
> > > if too much tension during winding.That is why I suggested you ask
> Gordon
> > > about
> > > any lessons learned.
> > >
> > > If you increase the wire gage it will have an effect on the inductance
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> > > the
> > > winding for same number of turns. If you change the inductance you will
> > > change
> > > the impedance ratio of the Xfmr. I dont think it would be real
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> > > The
> > > Xfmr turns ratio is about 4.34 to 1. That is the more important
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> > > So long winded answer is I would try to wind it with 46 guage and if
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> > > then consider going up in guage as long as you can still get 26 turns
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> > > the bobbin.
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> > > I have looked for miniature and sub-miniature RF xfmrs (via Google) and
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> > > board thru hole mounting. It looks like a wide band 4:1 xfmr would work
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> they
> > > are
> > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > >
> > > _____
> > > From: Joe Loverti <ww8x.joe@...>
>
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Tue, May 31, 2011 9:58:29 AM
> > >
> > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > S-meter
> > > movement
> > >
> > > Terry:
> > > Thanks... found it!! What do you think about the wire gauge? Do you
> think
> > > that would be critical? Even with enlarging goggles on, that is a
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> > > small piece to work with -- That wire is like a human hair width. I
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> > > why the designer's used such a small gauge in the input circuit if not
> for
> > > it to also serve as fuse to protect the front end.
> > > Joe
> > > WW8X
> > >
> > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > >
> > > >
> > > > Hi Joe--Did you get an answer to location of L41? If not, on
> schematic
> > > look
> > > > > on right side for the RF Unit bounded by dashed line. Find Connector
> 3 on
> > > > > left side of RF unit. Find ANT terminal and follow Bold Black line
> from
> > > ANT
> > > > > down to L41. You will see Primary on left side and Secondary on right
> > > side.
> > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary
> has

> > > 26
> > > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray
> view
> > > of
> > > > RF board on Page 12. Look down at L41. You can see on Left Side it
> has 2
> > > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > > Connected (NC). The Secondary winding is connected to the Top 2 pins.
> The
> > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> Winding
> > > is
> > > > connected to the Bottom 2 pins. The Bottom Left goes to ground and
> the
> > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > > never
> > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind
> and
> > > > not scramble wind. When you unwind the wire you will be able to tell
> > > which
> > > > winding was wound on the bobbin first. I guess if I were doing it I
> would
> > > > wind secondary first and then put primary over it, but it shouldnt
> really
> > > > matter. Gordon will have some tips for you as he has wound new L41
> xfmrs.
> > > > Good Luck Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Gordon: Thanks very much for sending the L4... I am in the process
> of
> > > > > checking out L41 ? when I pulled the cover off I noticed a clean
> break
> > > in
> > > > > one of the wires. I think I'll have to rewind the coil. Right now
> I'm
> > > > trying
> > > > > to figure out which side is the primary and which side is the
> > > secondary.
> > > > For
> > > > > the life of me I can't find the darn thing on the schematic to
> double
> > > > check
> > > > > which end is which -- must be blind. I'm also wondering how
> important
> > > it
> > > > is
> > > > > use exactly #42 enameled wire? I have some old RF chokes I can get

> wire
> > > > from
> > > > > if the size isn't super critical.
> > > > >
> > > > > No other parts needed!! Thank you.
> > > > >
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > >
> > > > > >
> > > > > >
> > > > > > Hi Terry,
> > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > Joe, I have the coil in the padded envelope and will ship it
> tomorrow
> > > > to
> > > > > > you.
> > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > Any other small parts you need before I seal the envelope?
> > > > > >
> > > > > > 73,
> > > > > > Gordon
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> <wagstw46@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Joe--That is great! Maybe before he ships it he can bridge it
> and
> > > see
> > > > > > if
> > > > > > > my calc
> > > > > > > @ .270 uh was close. Well--as you found out you will need a
> steady
> > > hand
> > > > > > and
> > > > > > > magnifier head set. L41 is very fine wire and not sure my old
> eyes
> > > and
> > > > > > hands
> > > > > > > would be up to the task. As you noted "brain surgery". 73s
> Terry
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > _____
> > > > > > > From: Joe Loverti <ww8x.joe@>

> > > > > >
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > > Little
> > > > > > S-meter
> > > > > > > movement
> > > > > > >
> > > > > > > Terry:
> > > > > > > That's real good information. N6WK has kindly offered me a
> > > > replacement
> > > > > > L4...
> > > > > > > which would be great given my experience level. I will next
> move on
> > > > to
> > > > > > L41
> > > > > > > and check it's condition, rewinding it as needed -- hoping to
> keep
> > > > self
> > > > > > > inflicted damage to a minimum. :??")
> > > > > > > Thanks,
> > > > > > > Joe
> > > > > > > WW8X
> > > > > >
> > > > > > >
> > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > >
> > > > > > >
> > > > > > > Joe--All is not lost. L4 is not a transformer. It is a simple
> > > tuned
> > > > > > core
> > > > > > > coil...an inductor. It is shunted by C7 1200pf cap. Together
> they
> > > > form
> > > > > > a
> > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In
> short,
> > > > it
> > > > > > blocks
> > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you
> > > could
> > > > > > install a
> > > > > > > miniature axial lead RF choke in its place. It would be
> better to
> > > > have
> > > > > > a
> > > > > > > slug tuned coil form so you could adjust it to resonance at
> > > > 8.83mhz,

> > > > > > but
> > > > > > > > after rewinding L41 you could get your rig back on the air
> with
> > > > > > installation
> > > > > > > > of a choke coil at L4. There are a couple of other series
> > > resonant
> > > > > > traps in
> > > > > > > > this string including one at L4/C7 junction that you can tune
> > > later
> > > > > to
> > > > > > > > address any 8.83.
> > > > > > > > >
> > > > > > > > I did the math and you need a .270 uh coil. There are a lot
> of
> > > > > > combinations
> > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch
> core.
> > > > Of
> > > > > > course
> > > > > > > > it would be best if you had LC bridge to adjust coil. If you
> are
> > > > not up
> > > > > > to
> > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > > >
> > > > > > > > The good news is that .270 uh is a standard value rf choke.
> > > Mouser
> > > > and
> > > > > > Digi
> > > > > > > > Key sell them for literally pennies. I took a brief look and
> > > > Surplus of
> > > > > > > > Nebraska has some miniature IF cans and slug tuned coils and
> they
> > > > have
> > > > > > one
> > > > > > > > that would tune in the range you need and is thru hole mount.
> So
> > > in
> > > > > > absence
> > > > > > > > of a replacement L4 or a replacement RF board, I would
> install a
> > > > > > miniature
> > > > > > > > .270uh axial lead choke and get rig back on the air. Best I
> can
> > > do
> > > > for
> > > > > > you.
> > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > > >

> > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever taken
> > > apart.
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Well... good question. I posted photos in the photo
> section.
> > > > Not a
> > > > > > > > > > good evening at all. :-(
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@wrote:
> > > > > > > > > >
> > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Terry:
> > > > > > > > > > Taking the RF board out was less of a problem than I
> > > > > > anticipated.
> > > > > > > > > > It
> > > > > > > > > > took about 45 minutes and I had the board free. I
> located
> > > > > L4
> > > > > > > > > > and
> > > > > > > > > > removed it from the board. My initial readings were
> no
> > > > > short
> > > > > > > > > > between
> > > > > > > > > > the primary and secondary -- and I had continuity on
> the
> > > > > windings
> > > > > > > > > > themselves. Later on I retook readings and this time
> > > there
> > > > > was
> > > > > > > > > > no
> > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > proceeded
> > > > > to
> > > > > > > > > > disassemble L4 and have a look and the whole thing
> came
> > > > > apart
> > > > > > > > > > in my

> > > > > > > > > > > > > hands. I'm not sure I'll have success in trying to
> > > rebuild
> > > > it.
> > > > > > > > Seems
> > > > > > > > > > > > like you'd need to be a brain surgeon to do it right.
> If
> > > I
> > > > can
> > > > > > > > figure
> > > > > > > > > > > > out how to post a few photos I will. I'm out of ideas
> and
> > > > kind
> > > > > > > of
> > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > WW8X
> > > > > > > > > > > > JOe
> > > > > > > > > > > >
> > > > > > > > > > > >
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31614. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 23:34:15 UTC
From: ki4ax
Topic: 31519 Message: 31614

Terry,

Would you, or one of the others in the group, have an old L41 that is basically trash? I would like to obtain one that is not going to be used/rewound to examine. I would like to know more about pin spacings etc. and how the thing is put together in general. I can see the pictures on line but that doesen't do much for me.

Thanks,

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry: Here's a close-up photo of my L41. The windings appear still bright
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> > > >
> > > > _____
> > > > From: Joe Loverti <ww8x.joe@>
> > >
> > > >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > >
> > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > > S-meter
> > > > movement
> > > >
> > > > Terry:
> > > > Thanks... found it!! What do you think about the wire gauge? Do you
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> > > > WW8X
> > > >
> > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@> wrote:

> > > >
> > > > >
> > > > >
> > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > schematic
> > > > > look
> > > > > on right side for the RF Unit bounded by dashed line. Find Connector
> > 3 on
> > > > > left side of RF unit. Find ANT terminal and follow Bold Black line
> > from
> > > > > ANT
> > > > > down to L41. You will see Primary on left side and Secondary on right
> > > > > side.
> > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary
> > has
> > > > > 26
> > > > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray
> > view
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> > > > > RF board on Page 12. Look down at L41. You can see on Left Side it
> > has 2
> > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > > > Connected (NC). The Secondary winding is connected to the Top 2 pins.
> > The
> > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
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> > > > > is
> > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground and
> > the
> > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > > > > never
> > > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind
> > and
> > > > > not scramble wind. When you unwind the wire you will be able to tell
> > > > > which
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> > > > > wind secondary first and then put primary over it, but it shouldnt
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> > > > > matter. Gordon will have some tips for you as he has wound new L41
> > xfmrs.
> > > > > Good Luck Terry
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> > > > > wrote:
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> > > > > > > if the size isn't super critical.
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> > > > > > > No other parts needed!! Thank you.
> > > > > > >
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> > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > Joe, I have the coil in the padded envelope and will ship it
> > tomorrow
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> > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Gordon
> > > > > > > >
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > > > > Little
> > > > > > > > S-meter
> > > > > > > > > movement
> > > > > > > > >
> > > > > > > > > Terry:
> > > > > > > > > That's real good information. N6WK has kindly offered me a
> > > > > replacement
> > > > > > > > L4...
> > > > > > > > > which would be great given my experience level. I will next
> > move on
> > > > > > to
> > > > > > > > L41
> > > > > > > > > and check it's condition, rewinding it as needed -- hoping to
> > keep
> > > > > > self
> > > > > > > > > inflicted damage to a minimum. :â□")
> > > > > > > > > Thanks,
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> > wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a simple
> > > > > tuned

> > > > > > > core
> > > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap. Together
> > they
> > > > > form
> > > > > > > a
> > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In
> > short,
> > > > > it
> > > > > > > > blocks
> > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you
> > > > could
> > > > > > > install a
> > > > > > > > > miniature axial lead RF choke in its place. It would be
> > better to
> > > > > have
> > > > > > > > a
> > > > > > > > > slug tuned coil form so you could adjust it to resonance at
> > > > 8.83mhz,
> > > > > > > but
> > > > > > > > > after rewinding L41 you could get your rig back on the air
> > with
> > > > > installation
> > > > > > > > > of a choke coil at L4. There are a couple of other series
> > > resonant
> > > > > > > traps in
> > > > > > > > > this string including one at L4/C7 junction that you can tune
> > > later
> > > > > to
> > > > > > > > > address any 8.83.
> > > > > > > > > >
> > > > > > > > > I did the math and you need a .270 uh coil. There are a lot
> > of
> > > > > combinations
> > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch
> > core.
> > > > > Of
> > > > > > > course
> > > > > > > > > it would be best if you had LC bridge to adjust coil. If you
> > are
> > > > > not up
> > > > > > > > to
> > > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > > > >
> > > > > > > > > The good news is that .270 uh is a standard value rf choke.
> > > > Mouser
> > > > > > > and
> > > > > > > > Digi
> > > > > > > > > Key sell them for literally pennies. I took a brief look and
> > > > > Surplus of

> > > > > > > > > Nebraska has some miniature IF cans and slug tuned coils and
> > they
> > > > > > have
> > > > > > > > one
> > > > > > > > > > that would tune in the range you need and is thru hole mount.
> > So
> > > > > in
> > > > > > > > absence
> > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > install a
> > > > > > > miniature
> > > > > > > > > > .270uh axial lead choke and get rig back on the air. Best I
> > can
> > > > > do
> > > > > > for
> > > > > > > > you.
> > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > > > >
> > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever taken
> > > > > apart.
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Well... good question. I posted photos in the photo
> > section.
> > > > > > Not a
> > > > > > > > > > good evening at all. :-(
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@wrote:
> > > > > > > > > >
> > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Terry:
> > > > > > > > > > Taking the RF board out was less of a problem than I
> > > > > > > > anticipated.
> > > > > > > > > > It
> > > > > > > > > > took about 45 minutes and I had the board free. I
> > located

> > > > > L4
> > > > > > > > and
> > > > > > > > > > > > > > removed it from the board. My initial readings were
> > no
> > > > > short
> > > > > > > > > between
> > > > > > > > > > > > > > the primary and secondary -- and I had continuity on
> > the
> > > > > > > windings
> > > > > > > > > > > > > > themselves. Later on I retook readings and this time
> > > > there
> > > > > was
> > > > > > > > no
> > > > > > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > > proceeded
> > > > > to
> > > > > > > > > > > > > > disassemble L4 and have a look and the whole thing
> > came
> > > > > apart
> > > > > > > > in my
> > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying to
> > > > rebuild
> > > > > it.
> > > > > > > > > Seems
> > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it right.
> > If
> > > > > I
> > > > > > > > can
> > > > > > > > > figure
> > > > > > > > > > > > > > out how to post a few photos I will. I'm out of ideas
> > and
> > > > > kind
> > > > > > > > of
> > > > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > > > WW8X
> > > > > > > > > > > > > > JOe
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
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> > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
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> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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31615. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 23:35:48 UTC
From: Terry Wagoner
Topic: 31519 Message: 31615

Joe--From the picture it looks like there are two different guage windings? It looks like a heavy guage over a smaller guage? I have never seen one. Is it possible you may be able to leave one winding in place? Terry
--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry: Here's a close-up photo of my L41. The windings appear still bright
> and shiny. No evidence of burning. But if you look closely on the right side
> there's a section of wire missing above where it connects to the pin on the
> right. Later when I touched the upper piece gently with a tweezer, it broke
> again. Now the upper end is buried in the windings... which was why was
> having trouble figuring out primary and secondary without unwinding it.
> Joe
> WW8X
>
>
> On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
>
> > >
> > >
> > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know why
> > > L41 fails like that. Certainly inadvertant transmit RF into the SO-239 jack
> > > would do it. Induced lighting? Maybe it is a design weakness? Ken Kempski
> > > talks about finding D2 shorted saving the Mosfet and maybe taking out L41? I
> > > have seen post where the person said the windings appeared burned black
> > > and/or fused together. That almost has to be xmit RF or lighting? What did
> > > you see when you took yours apart? If a lead was broken off that sounds like
> > > a weakness from day one that just finally gave up? I dont think you did
> > > anything based on what you have told us. Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > wrote:
> > > >
> > > > Terry -- I was wondering why L41 is prone to these problems? What would
> > > > cause the transformer to one day go bad? Lightening static? Stray RF? As
> > > I
> > > > said in my original post, one day it was receiving great -- next day it
> > > was
> > > > deaf. I leave no antennas connected when I'm not operating the radios.
> > > >
> > > > I think I could get a slightly heavier gauge to make 26 wraps -- though
> > > they
> > > > may need to overlap somewhat. From what I read the wrap technique isn't
> > > > super critical... but, I do understand your point of maintaining the
> > > winding
> > > > ratio. On the other hand, I may go ahead at look for the #42 gauge

> > enameled
> > > wire since I have time waiting on the L4 from Gordon.
> > >
> > > Gordon, if you're reading this, please add to my knowledge base
> > concerning
> > > the re-wrap of the L41. I'd be interested in anything not covered by
> > > K4EAA's website.
> > >
> > > 73
> > > Joe
> > > WW8X
> > >
> > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > >
> > > >
> > > >
> > > > Joe--I dont think they had fusing in mind. At that stage of the
> > receiver
> > > > you are
> > > > dealing with micro-volt signals so current will be miniscule so you
> > dont
> > > > need
> > > > heavy gage wire. Yes--that wire will be very hard to see and very easy
> > to
> > > > break
> > > > if too much tension during winding.That is why I suggested you ask
> > Gordon
> > > > about
> > > > any lessons learned.
> > > >
> > > > If you increase the wire gage it will have an effect on the inductance
> > of
> > > > the
> > > > winding for same number of turns. If you change the inductance you will
> > > > change
> > > > the impedance ratio of the Xfmr. I dont think it would be real
> > critical.
> > > > The
> > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > characteristic
> > > > to maintain. Changing wire guage wont effect the turns ratio unless you
> > > > cant get
> > > > same number of turns.
> > > >
> > > > So long winded answer is I would try to wind it with 46 guage and if
> > you
> > > > cant
> > > > then consider going up in guage as long as you can still get 26 turns
> > wound

> > > > on
> > > > the bobbin.
> > > >
> > > > I have looked for miniature and sub-miniature RF xfmrs (via Google) and
> > I
> > > > find
> > > > several that come close in value but not sure about correct dimensions
> > for
> > > > PC
> > > > board thru hole mounting. It looks like a wide band 4:1 xfmr would work
> > > > just
> > > > fine. If I find a close sub, I will buy a couple to experiment with as
> > they
> > > > are
> > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > >
> > > > _____
> > > > From: Joe Loverti <ww8x.joe@>
> >
> > > >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > >
> > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > > S-meter
> > > > movement
> > > >
> > > > Terry:
> > > > Thanks... found it!! What do you think about the wire gauge? Do you
> > think
> > > > that would be critical? Even with enlarging goggles on, that is a
> > mighty
> > > > small piece to work with -- That wire is like a human hair width. I
> > wonder
> > > > why the designer's used such a small gauge in the input circuit if not
> > for
> > > > it to also serve as fuse to protect the front end.
> > > > Joe
> > > > WW8X
> > > >
> > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@> wrote:
> > > >
> > > > >
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> > > > > Hi Joe--Did you get an answer to location of L41? If not, on
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> > > > > Good Luck Terry
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> > > > > > from
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> > > > > > > No other parts needed!! Thank you.
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> > > > > > > Joe
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> > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
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> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
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> > > > > > > > S-meter
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> > > > > > > > Terry:
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> > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
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> > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@wrote:
> > > > > > > > > >
> > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
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> > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
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> > > > > > Yahoo! Groups Links
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31616. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 23:37:06 UTC
From: ki4ax
Topic: 31519 Message: 31616

Joe,

I would be curious as to where to get the #42 wire if you are able to locate some.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry -- I was wondering why L41 is prone to these problems? What would
> cause the transformer to one day go bad? Lightening static? Stray RF? As I
> said in my original post, one day it was receiving great -- next day it was
> deaf. I leave no antennas connected when I'm not operating the radios.
>
> I think I could get a slightly heavier gauge to make 26 wraps -- though they
> may need to overlap somewhat. From what I read the wrap technique isn't
> super critical... but, I do understand your point of maintaining the winding
> ratio. On the other hand, I may go ahead at look for the #42 gauge enameled
> wire since I have time waiting on the L4 from Gordon.
>
> Gordon, if you're reading this, please add to my knowledge base concerning
> the re-wrap of the L41. I'd be interested in anything not covered by
> K4EAA's website.
>
> 73
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@...> wrote:
>
> > >
> > >
> > > Joe--I dont think they had fusing in mind. At that stage of the receiver
> > > you are
> > > dealing with micro-volt signals so current will be miniscule so you dont
> > > need
> > > heavy gage wire. Yes--that wire will be very hard to see and very easy to
> > > break
> > > if too much tension during winding.That is why I suggested you ask Gordon
> > > about
> > > any lessons learned.
> > >
> > > If you increase the wire gage it will have an effect on the inductance of
> > > the
> > > winding for same number of turns. If you change the inductance you will
> > > change

> > the impedance ratio of the Xfmr. I dont think it would be real critical.
> > The
> > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > characteristic
> > to maintain. Changing wire guage wont effect the turns ratio unless you
> > cant get
> > same number of turns.
> >
> > So long winded answer is I would try to wind it with 46 guage and if you
> > cant
> > then consider going up in guage as long as you can still get 26 turns wound
> > on
> > the bobbin.
> >
> > I have looked for miniature and sub-miniature RF xfmrs (via Google) and I
> > find
> > several that come close in value but not sure about correct dimensions for
> > PC
> > board thru hole mounting. It looks like a wide band 4:1 xfmr would work
> > just
> > fine. If I find a close sub, I will buy a couple to experiment with as they
> > are
> > low cost . I am searching Mouser and Digi-key. 73s Terry
> >
> > _____
> > From: Joe Loverti <ww8x.joe@...>
> >
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tue, May 31, 2011 9:58:29 AM
> >
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter
> > movement
> >
> > Terry:
> > Thanks... found it!! What do you think about the wire gauge? Do you think
> > that would be critical? Even with enlarging goggles on, that is a mighty
> > small piece to work with -- That wire is like a human hair width. I wonder
> > why the designer's used such a small gauge in the input circuit if not for
> > it to also serve as fuse to protect the front end.
> > Joe
> > WW8X
> >
> > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > >
> > >
> > > Hi Joe--Did you get an answer to location of L41? If not, on schematic
> > look

> > > on right side for the RF Unit bounded by dashed line. Find Connector 3 on
> > > left side of RF unit. Find ANT terminal and follow Bold Black line from
> > ANT
> > > down to L41. You will see Primary on left side and Secondary on right
> > side.
> > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary has
> > 26
> > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray view
> > of
> > > RF board on Page 12. Look down at L41. You can see on Left Side it has 2
> > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > Connected (NC). The Secondary winding is connected to the Top 2 pins. The
> > > Top Left goes to C42 and the Top Right goes to L12. The Primary Winding
> > is
> > > connected to the Bottom 2 pins. The Bottom Left goes to ground and the
> > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > never
> > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind and
> > > not scramble wind. When you unwind the wire you will be able to tell
> > which
> > > winding was wound on the bobbin first. I guess if I were doing it I would
> > > wind secondary first and then put primary over it, but it shouldnt really
> > > matter. Gordon will have some tips for you as he has wound new L41 xfmrs.
> > > Good Luck Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > wrote:
> > > >
> > > > Gordon: Thanks very much for sending the L4... I am in the process of
> > > > checking out L41 ☐ when I pulled the cover off I noticed a clean break
> > in
> > > > one of the wires. I think I'll have to rewind the coil. Right now I'm
> > > trying
> > > > to figure out which side is the primary and which side is the
> > secondary.
> > > For
> > > > the life of me I can't find the darn thing on the schematic to double
> > > check
> > > > which end is which -- must be blind. I'm also wondering how important
> > it
> > > is
> > > > use exactly #42 enameled wire? I have some old RF chokes I can get wire
> > > from
> > > > if the size isn't super critical.
> > > >
> > > > No other parts needed!! Thank you.
> > > >
> > > > Joe
> > > > WW8X

> > > >
> > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > >
> > > > >
> > > > > >
> > > > > > Hi Terry,
> > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > Joe, I have the coil in the padded envelope and will ship it tomorrow
> > > to
> > > > > > you.
> > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > Any other small parts you need before I seal the envelope?
> > > > > >
> > > > > > 73,
> > > > > > Gordon
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Joe--That is great! Maybe before he ships it he can bridge it and
> > see
> > > if
> > > > > > > my calc
> > > > > > > @ .270 uh was close. Well--as you found out you will need a steady
> > > hand
> > > > > > > and
> > > > > > > magnifier head set. L41 is very fine wire and not sure my old eyes
> > > and
> > > > > > > hands
> > > > > > > would be up to the task. As you noted "brain surgery". 73s Terry
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > >
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
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31617. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 00:13:01 UTC
From: Terry Wagoner
Topic: 31519 Message: 31617

Dan- I dont have one and hope to never have to wind one! Terry
--- In TS-520_820_530_830@yahoogroups.com, "ki4ax" <dan8barb@...> wrote:
>
> Terry,
>
> Would you, or one of the others in the group, have an old L41 that is basically trash? I would like to obtain one that is not going to be used/rewound to examine. I would like to know more about pin spacings etc. and how the thing is put together in general. I can see the pictures on line but that doesen't do much for me.
>
> Thanks,
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@> wrote:
> >
> > Terry: Here's a close-up photo of my L41. The windings appear still bright
> > and shiny. No evidence of burning. But if you look closely on the right side
> > there's a section of wire missing above where it connects to the pin on the
> > right. Later when I touched the upper piece gently with a tweezer, it broke
> > again. Now the upper end is buried in the windings... which was why was
> > having trouble figuring out primary and secondary without unwinding it.
> > Joe
> > WW8X
> >
> >
> > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@> wrote:
> >
> > >
> > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know why
> > > L41 fails like that. Certainly inadvertant transmit RF into the SO-239 jack
> > > would do it. Induced lighting? Maybe it is a design weakness? Ken Kempski
> > > talks about finding D2 shorted saving the Mosfet and maybe taking out L41? I
> > > have seen post where the person said the windings appeared burned black
> > > and/or fused together. That almost has to be xmit RF or lighting? What did
> > > you see when you took yours apart? If a lead was broken off that sounds like
> > > a weakness from day one that just finally gave up? I dont think you did
> > > anything based on what you have told us. Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > wrote:
> > > >
> > > > Terry -- I was wondering why L41 is prone to these problems? What would
> > > > cause the transformer to one day go bad? Lightening static? Stray RF? As

> > > I
> > > > said in my original post, one day it was receiving great -- next day it
> > > was
> > > > deaf. I leave no antennas connected when I'm not operating the radios.
> > > >
> > > > I think I could get a slightly heavier gauge to make 26 wraps -- though
> > > they
> > > > may need to overlap somewhat. From what I read the wrap technique isn't
> > > > super critical... but, I do understand your point of maintaining the
> > > winding
> > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > enameled
> > > > wire since I have time waiting on the L4 from Gordon.
> > > >
> > > > Gordon, if you're reading this, please add to my knowledge base
> > > concerning
> > > > the re-wrap of the L41. I'd be interested in anything not covered by
> > > > K4EAA's website.
> > > >
> > > > 73
> > > > Joe
> > > > WW8X
> > > >
> > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > > >
> > > > >
> > > > >
> > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > receiver
> > > > > you are
> > > > > dealing with micro-volt signals so current will be miniscule so you
> > > dont
> > > > > need
> > > > > heavy gage wire. Yes--that wire will be very hard to see and very easy
> > > to
> > > > > break
> > > > > if too much tension during winding.That is why I suggested you ask
> > > Gordon
> > > > > about
> > > > > any lessons learned.
> > > > >
> > > > > If you increase the wire gage it will have an effect on the inductance
> > > of
> > > > > the
> > > > > winding for same number of turns. If you change the inductance you will
> > > > > change
> > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > critical.
> > > > > The

> > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > characteristic
> > > > > to maintain. Changing wire guage wont effect the turns ratio unless you
> > > > > cant get
> > > > > same number of turns.
> > > > >
> > > > > So long winded answer is I would try to wind it with 46 guage and if
> > > you
> > > > > cant
> > > > > then consider going up in guage as long as you can still get 26 turns
> > > wound
> > > > > on
> > > > > the bobbin.
> > > > >
> > > > > I have looked for miniature and sub-miniature RF xfmrs (via Google) and
> > > I
> > > > > find
> > > > > several that come close in value but not sure about correct dimensions
> > > for
> > > > > PC
> > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr would work
> > > > > just
> > > > > fine. If I find a close sub, I will buy a couple to experiment with as
> > > they
> > > > > are
> > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > >
> > > > > _____
> > > > > From: Joe Loverti <ww8x.joe@>
> > >
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > >
> > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > > > S-meter
> > > > > movement
> > > > >
> > > > > Terry:
> > > > > Thanks... found it!! What do you think about the wire gauge? Do you
> > > think
> > > > > that would be critical? Even with enlarging goggles on, that is a
> > > mighty
> > > > > small piece to work with -- That wire is like a human hair width. I
> > > wonder
> > > > > why the designer's used such a small gauge in the input circuit if not
> > > for
> > > > > it to also serve as fuse to protect the front end.
> > > > > Joe

> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > > >
> > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > schematic
> > > > > > look
> > > > > > > on right side for the RF Unit bounded by dashed line. Find Connector
> > > 3 on
> > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black line
> > > from
> > > > > > ANT
> > > > > > > down to L41. You will see Primary on left side and Secondary on right
> > > > > side.
> > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary
> > > has
> > > > > > 26
> > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray
> > > view
> > > > > > of
> > > > > > > RF board on Page 12. Look down at L41. You can see on Left Side it
> > > has 2
> > > > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > > > > > Connected (NC). The Secondary winding is connected to the Top 2 pins.
> > > The
> > > > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> > > Winding
> > > > > > is
> > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground and
> > > the
> > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > > > > > never
> > > > > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind
> > > and
> > > > > > > not scramble wind. When you unwind the wire you will be able to tell
> > > > > > which
> > > > > > > winding was wound on the bobbin first. I guess if I were doing it I
> > > would
> > > > > > > wind secondary first and then put primary over it, but it shouldnt
> > > really
> > > > > > > matter. Gordon will have some tips for you as he has wound new L41
> > > xfmrs.
> > > > > > > Good Luck Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > > > > > wrote:
> > > > > > >

> > > > > > > Gordon: Thanks very much for sending the L4... I am in the process
> > > of
> > > > > > > checking out L41 ☐ when I pulled the cover off I noticed a clean
> > > break
> > > > > > in
> > > > > > > > one of the wires. I think I'll have to rewind the coil. Right now
> > > I'm
> > > > > > trying
> > > > > > > > to figure out which side is the primary and which side is the
> > > > > secondary.
> > > > > > For
> > > > > > > > the life of me I can't find the darn thing on the schematic to
> > > double
> > > > > > check
> > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > important
> > > > > it
> > > > > > is
> > > > > > > > use exactly #42 enameled wire? I have some old RF chokes I can get
> > > wire
> > > > > > from
> > > > > > > > if the size isn't super critical.
> > > > > > >
> > > > > > > No other parts needed!! Thank you.
> > > > > > >
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > Joe, I have the coil in the padded envelope and will ship it
> > > tomorrow
> > > > > > to
> > > > > > > > you.
> > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Gordon
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > <wagstw46@>
> > > > > > > > wrote:
> > > > > > > >

> > > > > > > > > Joe--That is great! Maybe before he ships it he can bridge it
> > > and
> > > > > see
> > > > > > if
> > > > > > > > > my calc
> > > > > > > > > > @ .270 uh was close. Well--as you found out you will need a
> > > steady
> > > > > hand
> > > > > > > > and
> > > > > > > > > magnifier head set. L41 is very fine wire and not sure my old
> > > eyes
> > > > > and
> > > > > > > > hands
> > > > > > > > > would be up to the task. As you noted "brain surgery". 73s
> > > Terry
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > > > > Little
> > > > > > > > S-meter
> > > > > > > > > movement
> > > > > > > > >
> > > > > > > > > Terry:
> > > > > > > > > That's real good information. N6WK has kindly offered me a
> > > > > replacement
> > > > > > > > L4...
> > > > > > > > > which would be great given my experience level. I will next
> > > move on
> > > > > > to
> > > > > > > > L41
> > > > > > > > > and check it's condition, rewinding it as needed -- hoping to
> > > keep
> > > > > > self
> > > > > > > > > inflicted damage to a minimum. :â□")
> > > > > > > > > Thanks,
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > >
> > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> > > wrote:
> > > > > > > >
> > > > > > > > >

> > > > > > > > > > >
> > > > > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a simple
> > > > > tuned
> > > > > > > > > core
> > > > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap. Together
> > > they
> > > > > form
> > > > > > > > a
> > > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In
> > > short,
> > > > > it
> > > > > > > > > blocks
> > > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you
> > > > > could
> > > > > > > > install a
> > > > > > > > > > miniature axial lead RF choke in its place. It would be
> > > better to
> > > > > have
> > > > > > > > a
> > > > > > > > > > slug tuned coil form so you could adjust it to resonance at
> > > > > 8.83mhz,
> > > > > > > > but
> > > > > > > > > > after rewinding L41 you could get your rig back on the air
> > > with
> > > > > > > > installation
> > > > > > > > > > of a choke coil at L4. There are a couple of other series
> > > > > resonant
> > > > > > > > traps in
> > > > > > > > > > this string including one at L4/C7 junction that you can tune
> > > > > later
> > > > > > > > to
> > > > > > > > > > address any 8.83.
> > > > > > > > > > >
> > > > > > > > > > > I did the math and you need a .270 uh coil. There are a lot
> > > of
> > > > > > > > combinations
> > > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch
> > > core.
> > > > > > > > Of
> > > > > > > > > course
> > > > > > > > > > it would be best if you had LC bridge to adjust coil. If you
> > > are
> > > > > > > > not up
> > > > > > > > > to
> > > > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > > > > >
> > > > > > > > > > > The good news is that .270 uh is a standard value rf choke.
> > > > > Mouser
> > > > > > > > and

> > > > > > > > Digi
> > > > > > > > > > Key sell them for literally pennies. I took a brief look and
> > > > > > Surplus of
> > > > > > > > > > Nebraska has some miniature IF cans and slug tuned coils and
> > > they
> > > > > > have
> > > > > > > > one
> > > > > > > > > > that would tune in the range you need and is thru hole mount.
> > > So
> > > > > > in
> > > > > > > > > absence
> > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > > install a
> > > > > > > > miniature
> > > > > > > > > > .270uh axial lead choke and get rig back on the air. Best I
> > > can
> > > > > > do
> > > > > > > > for
> > > > > > > > > you.
> > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > > > >
> > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever taken
> > > > > > apart.
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Well... good question. I posted photos in the photo
> > > section.
> > > > > > Not a
> > > > > > > > > > good evening at all. :-(
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@wrote:
> > > > > > > > > >
> > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Terry:
> > > > > > > > > > Taking the RF board out was less of a problem than I
> > > > > > > > anticipated.

> > > > > > > > > > It
> > > > > > > > > > > > > > took about 45 minutes and I had the board free. I
> > > located
> > > > > L4
> > > > > > > > and
> > > > > > > > > > > > > > removed it from the board. My initial readings were
> > > no
> > > > > short
> > > > > > > > > between
> > > > > > > > > > > > > > the primary and secondary -- and I had continuity on
> > > the
> > > > > > > windings
> > > > > > > > > > > > > > themselves. Later on I retook readings and this time
> > > > > there
> > > > > > was
> > > > > > > > no
> > > > > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > > > proceeded
> > > > > > to
> > > > > > > > > > > > > > disassemble L4 and have a look and the whole thing
> > > came
> > > > > > apart
> > > > > > > > > in my
> > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying to
> > > > > rebuild
> > > > > > it.
> > > > > > > > > > Seems
> > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it right.
> > > If
> > > > > I
> > > > > > > > can
> > > > > > > > > > figure
> > > > > > > > > > > > > > out how to post a few photos I will. I'm out of ideas
> > > and
> > > > > > kind
> > > > > > > > > > of
> > > > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > > > WW8X
> > > > > > > > > > > > > > JOe
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
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> > > > > > > > > > ---------------------------------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
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> > > > > >

31618. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 00:15:48 UTC
From: Joe Loverti
Topic: 31519 Message: 31618

Terry: The photo makes it look as if the gauge differs. In reality it looks like the same gauge. At this point after poking around on the wires, I think I'd rather just start from scratch with fresh wires. After disassembly, it looks like the primary's 6 windings are wound on the bottom section of the spool. And the secondary's 26 windings extent to the top.
Joe
WW8X

On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--From the picture it looks like there are two different guage windings?
> It looks like a heavy guage over a smaller guage? I have never seen one. Is
> it possible you may be able to leave one winding in place? Terry
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > Terry: Here's a close-up photo of my L41. The windings appear still
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> > Joe
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> >
> > >
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> > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know
> why
> > > L41 fails like that. Certainly inadvertant transmit RF into the SO-239
> jack
> > > would do it. Induced lighting? Maybe it is a design weakness? Ken
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> > > >
> > > > Gordon, if you're reading this, please add to my knowledge base
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> > > >
> > > > 73
> > > > Joe
> > > > WW8X
> > > >
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> > > >
> > > > >
> > > > >
> > > > > Joe--I dont think they had fusing in mind. At that stage of the
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> > > > > you are
> > > > > dealing with micro-volt signals so current will be miniscule so you

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> > > > > need
> > > > > heavy gage wire. Yes--that wire will be very hard to see and very
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> > > to
> > > > > break
> > > > > if too much tension during winding.That is why I suggested you ask
> > > Gordon
> > > > > about
> > > > > any lessons learned.
> > > > >
> > > > > If you increase the wire gage it will have an effect on the
> inductance
> > > of
> > > > > the
> > > > > winding for same number of turns. If you change the inductance you
> will
> > > > > change
> > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > critical.
> > > > > The
> > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > characteristic
> > > > > to maintain. Changing wire guage wont effect the turns ratio unless
> you
> > > > > cant get
> > > > > same number of turns.
> > > > >
> > > > > So long winded answer is I would try to wind it with 46 guage and
> if
> > > you
> > > > > cant
> > > > > then consider going up in guage as long as you can still get 26
> turns
> > > wound
> > > > > on
> > > > > the bobbin.
> > > > >
> > > > > I have looked for miniature and sub-miniature RF xfmrs (via Google)
> and
> > > I
> > > > > find
> > > > > several that come close in value but not sure about correct
> dimensions
> > > for
> > > > > PC
> > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr would
> work
> > > > > just
> > > > > fine. If I find a close sub, I will buy a couple to experiment with

> as
> > > they
> > > > > are
> > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > >
> > > > > _____
> > > > > From: Joe Loverti <ww8x.joe@>
> > >
> > > > >
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > >
> > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> Little
> > > > > S-meter
> > > > > movement
> > > > >
> > > > > Terry:
> > > > > Thanks... found it!! What do you think about the wire gauge? Do you
> > > think
> > > > > that would be critical? Even with enlarging goggles on, that is a
> > > mighty
> > > > > small piece to work with -- That wire is like a human hair width. I
> > > wonder
> > > > > why the designer's used such a small gauge in the input circuit if
> not
> > > for
> > > > > it to also serve as fuse to protect the front end.
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > schematic
> > > > > look
> > > > > > on right side for the RF Unit bounded by dashed line. Find
> Connector
> > > 3 on
> > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> line
> > > from
> > > > > ANT
> > > > > > down to L41. You will see Primary on left side and Secondary on
> right
> > > > > side.
> > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> Secondary

> > > has
> > > > > 26
> > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at
> X-ray
> > > view
> > > > > of
> > > > > > RF board on Page 12. Look down at L41. You can see on Left Side
> it
> > > has 2
> > > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is
> Not
> > > > > > Connected (NC). The Secondary winding is connected to the Top 2
> pins.
> > > The
> > > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> > > Winding
> > > > > > is
> > > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground
> and
> > > the
> > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I
> have
> > > > > > never
> > > > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid
> wind
> > > and
> > > > > > not scramble wind. When you unwind the wire you will be able to
> tell
> > > > > > which
> > > > > > winding was wound on the bobbin first. I guess if I were doing it
> I
> > > would
> > > > > > wind secondary first and then put primary over it, but it
> shouldnt
> > > really
> > > > > > matter. Gordon will have some tips for you as he has wound new
> L41
> > > xfmrs.
> > > > > > Good Luck Terry
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti
> <ww8x.joe@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> process
> > > of
> > > > > > > checking out L41 ? when I pulled the cover off I noticed a
> clean
> > > break

> > > > > in
> > > > > > > one of the wires. I think I'll have to rewind the coil. Right
> now
> > > I'm
> > > > > > trying
> > > > > > > to figure out which side is the primary and which side is the
> > > > > secondary.
> > > > > > For
> > > > > > > the life of me I can't find the darn thing on the schematic to
> > > double
> > > > > > check
> > > > > > > which end is which -- must be blind. I'm also wondering how
> > > important
> > > > > it
> > > > > > is
> > > > > > > use exactly #42 enameled wire? I have some old RF chokes I can
> get
> > > wire
> > > > > > from
> > > > > > > if the size isn't super critical.
> > > > > > >
> > > > > > > No other parts needed!! Thank you.
> > > > > > >
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > Hi Terry,
> > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > Joe, I have the coil in the padded envelope and will ship it
> > > tomorrow
> > > > > > to
> > > > > > > you.
> > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > >
> > > > > > > 73,
> > > > > > > Gordon
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > <wagstw46@>
> > > > > > > wrote:
> > > > > > >
> > > > > > > Joe--That is great! Maybe before he ships it he can bridge
> it
> > > and

> > > > > see
> > > > > > if
> > > > > > > > > my calc
> > > > > > > > > > > @ .270 uh was close. Well--as you found out you will need a
> > > steady
> > > > > > hand
> > > > > > > > > and
> > > > > > > > > > > magnifier head set. L41 is very fine wire and not sure my
> old
> > > eyes
> > > > > > and
> > > > > > > > > hands
> > > > > > > > > > > would be up to the task. As you noted "brain surgery". 73s
> > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > > >
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive
> and
> > > > > > Little
> > > > > > > > > S-meter
> > > > > > > > > > movement
> > > > > > > > > >
> > > > > > > > > > Terry:
> > > > > > > > > > That's real good information. N6WK has kindly offered me a
> > > > > > replacement
> > > > > > > > > L4...
> > > > > > > > > > which would be great given my experience level. I will next
> > > move on
> > > > > > > to
> > > > > > > > > L41
> > > > > > > > > > and check it's condition, rewinding it as needed -- hoping
> to
> > > keep
> > > > > > > self
> > > > > > > > > > inflicted damage to a minimum. :??")
> > > > > > > > > > Thanks,
> > > > > > > > > > Joe
> > > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> > > wrote:
> > > > > > > > >
> > > > > > > > > >

> > > > > > > > > >
> > > > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a
> simple
> > > > > tuned
> > > > > > > > > core
> > > > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap.
> Together
> > > they
> > > > > > form
> > > > > > > > > a
> > > > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz.
> In
> > > short,
> > > > > > it
> > > > > > > > > blocks
> > > > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch
> you
> > > > > could
> > > > > > > > > install a
> > > > > > > > > > > miniature axial lead RF choke in its place. It would be
> > > better to
> > > > > > have
> > > > > > > > > a
> > > > > > > > > > > slug tuned coil form so you could adjust it to resonance
> at
> > > > > > 8.83mhz,
> > > > > > > > > but
> > > > > > > > > > > after rewinding L41 you could get your rig back on the
> air
> > > with
> > > > > > > > > installation
> > > > > > > > > > > of a choke coil at L4. There are a couple of other series
> > > > > resonant
> > > > > > > > > traps in
> > > > > > > > > > > this string including one at L4/C7 junction that you can
> tune
> > > > > > later
> > > > > > > > > to
> > > > > > > > > > > address any 8.83.
> > > > > > > > > > >
> > > > > > > > > > > I did the math and you need a .270 uh coil. There are a
> lot
> > > of
> > > > > > > > > combinations
> > > > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8
> inch
> > > > > core.
> > > > > > > > > Of
> > > > > > > > > > > course
> > > > > > > > > > > it would be best if you had LC bridge to adjust coil. If

> you
> > > are
> > > > > > not up
> > > > > > > > to
> > > > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > > > > >
> > > > > > > > > > The good news is that .270 uh is a standard value rf
> choke.
> > > > > Mouser
> > > > > > and
> > > > > > > > Digi
> > > > > > > > > > Key sell them for literally pennies. I took a brief look
> and
> > > > > > Surplus of
> > > > > > > > > > Nebraska has some miniature IF cans and slug tuned coils
> and
> > > they
> > > > > > have
> > > > > > > > one
> > > > > > > > > > that would tune in the range you need and is thru hole
> mount.
> > > So
> > > > > in
> > > > > > > > absence
> > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > > install a
> > > > > > miniature
> > > > > > > > > > .270uh axial lead choke and get rig back on the air. Best
> I
> > > can
> > > > > > do
> > > > > > > for
> > > > > > > > > you.
> > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > > > >
> > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever
> taken
> > > > > > apart.
> > > > > > > > > >
> > > > > > > > > > Gordon
> > > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > >
> > > > > > > > > > Well... good question. I posted photos in the photo
> > > section.
> > > > > > Not a
> > > > > > > > > > good evening at all. :-(
> > > > > > > > > >

> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> n6wk@wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Gordon
> > > > > > > > > > > > > > N6WK
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Terry:
> > > > > > > > > > > > > > Taking the RF board out was less of a problem
> than I
> > > > > > > > anticipated.
> > > > > > > > > > > > > > It
> > > > > > > > > > > > > > took about 45 minutes and I had the board free. I
> > > located
> > > > > > > L4
> > > > > > > > > > > > and
> > > > > > > > > > > > > > removed it from the board. My initial readings
> were
> > > no
> > > > > > > short
> > > > > > > > > > > > between
> > > > > > > > > > > > > > the primary and secondary -- and I had continuity
> on
> > > the
> > > > > > > windings
> > > > > > > > > > > > > > themselves. Later on I retook readings and this
> time
> > > > > > there
> > > > > > > > > > > was
> > > > > > > > > > > > no
> > > > > > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > > > > proceeded
> > > > > > > > > > to
> > > > > > > > > > > > > > disassemble L4 and have a look and the whole
> thing
> > > came
> > > > > > > apart
> > > > > > > > > > > > in my
> > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying
> to
> > > > > > rebuild
> > > > > > > > > > > it.
> > > > > > > > > > > > > > Seems
> > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it
> right.

> > > If
> > > > > I
> > > > > > can
> > > > > > > > > > figure
> > > > > > > > > > > > > > > > > out how to post a few photos I will. I'm out of
> ideas
> > > and
> > > > > > kind
> > > > > > > > > of
> > > > > > > > > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > > > > > > > > WW8X
> > > > > > > > > > > > > > > > > > > JOe
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > > > > >

> > > > > Yahoo! Groups Links
> > > > >
> > > > > [Non-text portions of this message have been removed]
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[Non-text portions of this message have been removed]

31619. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 00:21:01 UTC
From: Joe Loverti
Topic: 31519 Message: 31619

Dan:
I found a guy on the antique radio forum who was willing to sell me about 15 ft. of #42 wire. When I get it, I can ask him he'd like to sell more. I don't know how much he has.
Joe
WW8X

On Tue, May 31, 2011 at 7:37 PM, ki4ax <dan8barb@...> wrote:

>
>
> Joe,
>
> I would be curious as to where to get the #42 wire if you are able to
> locate some.
>
> Dan KI4AX
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > Terry -- I was wondering why L41 is prone to these problems? What would
> > cause the transformer to one day go bad? Lightening static? Stray RF? As
> I
> > said in my original post, one day it was receiving great -- next day it
> was
> > deaf. I leave no antennas connected when I'm not operating the radios.
> >
> > I think I could get a slightly heavier gauge to make 26 wraps -- though
> they
> > may need to overlap somewhat. From what I read the wrap technique isn't
> > super critical... but, I do understand your point of maintaining the
> winding
> > ratio. On the other hand, I may go ahead at look for the #42 gauge
> enameled
> > wire since I have time waiting on the L4 from Gordon.
> >
> > Gordon, if you're reading this, please add to my knowledge base
> concerning
> > the re-wrap of the L41. I'd be interested in anything not covered by
> > K4EAA's website.
> >
> > 73

> > Joe
> > WW8X
> >
> > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > >
> > >
> > > Joe--I dont think they had fusing in mind. At that stage of the
> receiver
> > > you are
> > > dealing with micro-volt signals so current will be miniscule so you
> dont
> > > need
> > > heavy gage wire. Yes--that wire will be very hard to see and very easy
> to
> > > break
> > > if too much tension during winding.That is why I suggested you ask
> Gordon
> > > about
> > > any lessons learned.
> > >
> > > If you increase the wire gage it will have an effect on the inductance
> of
> > > the
> > > winding for same number of turns. If you change the inductance you will
> > > change
> > > the impedance ratio of the Xfmr. I dont think it would be real
> critical.
> > > The
> > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > characteristic
> > > to maintain. Changing wire guage wont effect the turns ratio unless you
> > > cant get
> > > same number of turns.
> > >
> > > So long winded answer is I would try to wind it with 46 guage and if
> you
> > > cant
> > > then consider going up in guage as long as you can still get 26 turns
> wound
> > > on
> > > the bobbin.
> > >
> > > I have looked for miniature and sub-miniature RF xfmrs (via Google) and
> I
> > > find
> > > several that come close in value but not sure about correct dimensions
> for
> > > PC
> > > board thru hole mounting. It looks like a wide band 4:1 xfmr would work

> > > just
> > > fine. If I find a close sub, I will buy a couple to experiment with as
> they
> > > are
> > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > >
> > > _____
> > > From: Joe Loverti <ww8x.joe@...>
>
> > >
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Tue, May 31, 2011 9:58:29 AM
> > >
> > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > S-meter
> > > movement
> > >
> > > Terry:
> > > Thanks... found it!! What do you think about the wire gauge? Do you
> think
> > > that would be critical? Even with enlarging goggles on, that is a
> mighty
> > > small piece to work with -- That wire is like a human hair width. I
> wonder
> > > why the designer's used such a small gauge in the input circuit if not
> for
> > > it to also serve as fuse to protect the front end.
> > > Joe
> > > WW8X
> > >
> > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > >
> > > >
> > > > Hi Joe--Did you get an answer to location of L41? If not, on
> schematic
> > > look
> > > > on right side for the RF Unit bounded by dashed line. Find Connector
> 3 on
> > > > left side of RF unit. Find ANT terminal and follow Bold Black line
> from
> > > ANT
> > > > down to L41. You will see Primary on left side and Secondary on right
> > > side.
> > > > So the Xfmr is a Step UP. The Primary has 6 turns and the Secondary
> has
> > > 26
> > > > turns (per K4EAA FAQs). If you have the Service Manual look at X-ray
> view
> > > of

> > > > RF board on Page 12. Look down at L41. You can see on Left Side it
> has 2
> > > > Pins and Right Side has 3 Pins. The center pin on Right Side is Not
> > > > Connected (NC). The Secondary winding is connected to the Top 2 pins.
> The
> > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> Winding
> > > is
> > > > connected to the Bottom 2 pins. The Bottom Left goes to ground and
> the
> > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I have
> > > never
> > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid wind
> and
> > > > not scramble wind. When you unwind the wire you will be able to tell
> > > which
> > > > winding was wound on the bobbin first. I guess if I were doing it I
> would
> > > > wind secondary first and then put primary over it, but it shouldnt
> really
> > > > matter. Gordon will have some tips for you as he has wound new L41
> xfmrs.
> > > > Good Luck Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Gordon: Thanks very much for sending the L4... I am in the process
> of
> > > > > checking out L41 ? when I pulled the cover off I noticed a clean
> break
> > > in
> > > > > one of the wires. I think I'll have to rewind the coil. Right now
> I'm
> > > > trying
> > > > > to figure out which side is the primary and which side is the
> > > secondary.
> > > > For
> > > > > the life of me I can't find the darn thing on the schematic to
> double
> > > > check
> > > > > which end is which -- must be blind. I'm also wondering how
> important
> > > it
> > > > is
> > > > > use exactly #42 enameled wire? I have some old RF chokes I can get
> wire
> > > > from
> > > > > if the size isn't super critical.
> > > > >

> > > > > No other parts needed!! Thank you.
> > > > >
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > >
> > > > > >
> > > > > >
> > > > > > Hi Terry,
> > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > Joe, I have the coil in the padded envelope and will ship it
> tomorrow
> > > > to
> > > > > > you.
> > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > Any other small parts you need before I seal the envelope?
> > > > > >
> > > > > > 73,
> > > > > > Gordon
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> <wagstw46@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Joe--That is great! Maybe before he ships it he can bridge it
> and
> > > see
> > > > > if
> > > > > > > my calc
> > > > > > > @ .270 uh was close. Well--as you found out you will need a
> steady
> > > hand
> > > > > > > and
> > > > > > > magnifier head set. L41 is very fine wire and not sure my old
> eyes
> > > and
> > > > > > > hands
> > > > > > > would be up to the task. As you noted "brain surgery". 73s
> Terry
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > _____
> > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > >
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and

> > > Little
> > > > > > S-meter
> > > > > > > movement
> > > > > > >
> > > > > > > Terry:
> > > > > > > That's real good information. N6WK has kindly offered me a
> > > > replacement
> > > > > > L4...
> > > > > > > which would be great given my experience level. I will next
> move on
> > > > to
> > > > > > L41
> > > > > > > and check it's condition, rewinding it as needed -- hoping to
> keep
> > > > self
> > > > > > > inflicted damage to a minimum. :??")
> > > > > > > Thanks,
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > >
> > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a simple
> > > tuned
> > > > > > core
> > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap. Together
> they
> > > > form
> > > > > > a
> > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz. In
> short,
> > > > it
> > > > > > blocks
> > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch you
> > > could
> > > > > > install a
> > > > > > > > > miniature axial lead RF choke in its place. It would be
> better to
> > > > have
> > > > > > a
> > > > > > > > > slug tuned coil form so you could adjust it to resonance at
> > > > 8.83mhz,
> > > > > > but
> > > > > > > > > after rewinding L41 you could get your rig back on the air
> with
> > > > > > installation

> > > > > > > > of a choke coil at L4. There are a couple of other series
> > > resonant
> > > > > > traps in
> > > > > > > > this string including one at L4/C7 junction that you can tune
> > > later
> > > > to
> > > > > > > > address any 8.83.
> > > > > > > >
> > > > > > > > I did the math and you need a .270 uh coil. There are a lot
> of
> > > > > > combinations
> > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8 inch
> core.
> > > Of
> > > > > > course
> > > > > > > > it would be best if you had LC bridge to adjust coil. If you
> are
> > > not up
> > > > > > to
> > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > >
> > > > > > > > The good news is that .270 uh is a standard value rf choke.
> > > Mouser
> > > > and
> > > > > > Digi
> > > > > > > > Key sell them for literally pennies. I took a brief look and
> > > Surplus of
> > > > > > > > Nebraska has some miniature IF cans and slug tuned coils and
> they
> > > have
> > > > > > one
> > > > > > > > that would tune in the range you need and is thru hole mount.
> So
> > > in
> > > > > > absence
> > > > > > > > of a replacement L4 or a replacement RF board, I would
> install a
> > > > > > miniature
> > > > > > > > .270uh axial lead choke and get rig back on the air. Best I
> can
> > > do
> > > > for
> > > > > > you.
> > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > >
> > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever taken
> > > apart.
> > > > > > > >
> > > > > > > > Gordon

> > > > > > > > > N6WK
> > > > > > > > > >
> > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > > >
> > > > > > > > > > > Well... good question. I posted photos in the photo
> section.
> > > > Not a
> > > > > > > > > > > good evening at all. :-(
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@wrote:
> > > > > > > > > > >
> > > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > > N6WK
> > > > > > > > > > >
> > > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > > >
> > > > > > > > > > > Terry:
> > > > > > > > > > > Taking the RF board out was less of a problem than I
> > > > > > anticipated.
> > > > > > > > > > > It
> > > > > > > > > > > took about 45 minutes and I had the board free. I
> located
> > > > L4
> > > > > > and
> > > > > > > > > > > removed it from the board. My initial readings were
> no
> > > > short
> > > > > > > > > > between
> > > > > > > > > > > the primary and secondary -- and I had continuity on
> the
> > > > > > windings
> > > > > > > > > > > themselves. Later on I retook readings and this time
> > > there
> > > > > > was
> > > > > > > > > > no
> > > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > proceeded
> > > > > > to
> > > > > > > > > > > disassemble L4 and have a look and the whole thing
> came
> > > > apart
> > > > > > > > > > in my
> > > > > > > > > > > hands. I'm not sure I'll have success in trying to
> > > rebuild
> > > > > > it.
> > > > > > > > > > > Seems

> > > > > > > > > > > > like you'd need to be a brain surgeon to do it right.
> If
> > > I
> > > > can
> > > > > > > > figure
> > > > > > > > > > > > out how to post a few photos I will. I'm out of ideas
> and
> > > > kind
> > > > > > of
> > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > WW8X
> > > > > > > > > > > > JOe
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
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> > > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > >
> > > > > [Non-text portions of this message have been removed]
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> > > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > > ------------------------------------
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31620. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 00:27:11 UTC
From: Terry Wagoner
Topic: 31519 Message: 31620

Joe- OK understand why you would want to rewind entirely. How will you remove the enamel insulation to make your termination? I have burned it off on larger guage magnet wire. Maybe we could talk Gordon into writing an L41 procedure and post it on his website?
One more thing dont forget to check diode D2 (ohmmeter forward and reverse test) and Q1 if you can. Hate to see you put board back in only to find out Q1 and/or D2 were bad. I dont have much dual gate mosfet experience. I know that you have to be careful with static charge. I suspect you could set Ohmmeter on 10k range and measure from gates to source and drain. If you get a reading I think it would indicate shorted device. Maybe Gordon can advise you on this? Maybe you should replace Q1 as a precaution? I would imagine there are NTE subs that would match specs especially noise figure. Good luck -Terry K9TW

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 31, 2011 8:15:48 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry: The photo makes it look as if the gauge differs. In reality it looks like the same gauge. At this point after poking around on the wires, I think I'd rather just start from scratch with fresh wires. After disassembly, it looks like the primary's 6 windings are wound on the bottom section of the spool. And the secondary's 26 windings extent to the top.
Joe
WW8X

On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--From the picture it looks like there are two different guage windings?
> It looks like a heavy guage over a smaller guage? I have never seen one. Is
> it possible you may be able to leave one winding in place? Terry
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > Terry: Here's a close-up photo of my L41. The windings appear still
> bright
> > and shiny. No evidence of burning. But if you look closely on the right
> side
> > there's a section of wire missing above where it connects to the pin on
> the
> > right. Later when I touched the upper piece gently with a tweezer, it

> broke
> > again. Now the upper end is buried in the windings... which was why was
> > having trouble figuring out primary and secondary without unwinding it.
> > Joe
> > WW8X
> >
> >
> > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> >
> > >
> > >
> > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont know
> why
> > > L41 fails like that. Certainly inadvertant transmit RF into the SO-239
> jack
> > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> Kempski
> > > talks about finding D2 shorted saving the Mosfet and maybe taking out
> L41? I
> > > have seen post where the person said the windings appeared burned black
> > > and/or fused together. That almost has to be xmit RF or lighting? What
> did
> > > you see when you took yours apart? If a lead was broken off that sounds
> like
> > > a weakness from day one that just finally gave up? I dont think you did
> > > anything based on what you have told us. Terry
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > wrote:
> > > >
> > > > Terry -- I was wondering why L41 is prone to these problems? What
> would
> > > > cause the transformer to one day go bad? Lightening static? Stray RF?
> As
> > > I
> > > > said in my original post, one day it was receiving great -- next day
> it
> > > was
> > > > deaf. I leave no antennas connected when I'm not operating the
> radios.
> > > >
> > > > I think I could get a slightly heavier gauge to make 26 wraps --
> though
> > > they
> > > > may need to overlap somewhat. From what I read the wrap technique
> isn't
> > > > super critical... but, I do understand your point of maintaining the
> > > winding
> > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > enameled

> > > > wire since I have time waiting on the L4 from Gordon.
> > > >
> > > > Gordon, if you're reading this, please add to my knowledge base
> > > concerning
> > > > the re-wrap of the L41. I'd be interested in anything not covered by
> > > > K4EAA's website.
> > > >
> > > > 73
> > > > Joe
> > > > WW8X
> > > >
> > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > > >
> > > > > >
> > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule so you
> > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and very
> easy
> > > to
> > > > > > break
> > > > > > if too much tension during winding.That is why I suggested you ask
> > > Gordon
> > > > > > about
> > > > > > any lessons learned.
> > > > > >
> > > > > > If you increase the wire gage it will have an effect on the
> inductance
> > > of
> > > > > > the
> > > > > > winding for same number of turns. If you change the inductance you
> will
> > > > > > change
> > > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > critical.
> > > > > > The
> > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > > characteristic
> > > > > > to maintain. Changing wire guage wont effect the turns ratio unless
> you
> > > > > > cant get
> > > > > > same number of turns.
> > > > > >
> > > > > > So long winded answer is I would try to wind it with 46 guage and
> if
> > > you

> > > > > cant
> > > > > then consider going up in guage as long as you can still get 26
> turns
> > > wound
> > > > > on
> > > > > the bobbin.
> > > > >
> > > > > I have looked for miniature and sub-miniature RF xfmrs (via Google)
> and
> > > I
> > > > > find
> > > > > several that come close in value but not sure about correct
> dimensions
> > > for
> > > > > PC
> > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr would
> work
> > > > > just
> > > > > fine. If I find a close sub, I will buy a couple to experiment with
> as
> > > they
> > > > > are
> > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > >
> > > > > _____
> > > > > From: Joe Loverti <ww8x.joe@>
> > >
> > > > >
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > >
> > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> Little
> > > > > S-meter
> > > > > movement
> > > > >
> > > > > Terry:
> > > > > Thanks... found it!! What do you think about the wire gauge? Do you
> > > think
> > > > > that would be critical? Even with enlarging goggles on, that is a
> > > mighty
> > > > > small piece to work with -- That wire is like a human hair width. I
> > > wonder
> > > > > why the designer's used such a small gauge in the input circuit if
> not
> > > for
> > > > > it to also serve as fuse to protect the front end.
> > > > > Joe
> > > > > WW8X
> > > > >

> > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > > >
> > > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > schematic
> > > > > > > look
> > > > > > > > on right side for the RF Unit bounded by dashed line. Find
> Connector
> > > 3 on
> > > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> line
> > > from
> > > > > > > > ANT
> > > > > > > > down to L41. You will see Primary on left side and Secondary on
> right
> > > > > > > side.
> > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> Secondary
> > > has
> > > > > > > > 26
> > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at
> X-ray
> > > view
> > > > > > > of
> > > > > > > > RF board on Page 12. Look down at L41. You can see on Left Side
> it
> > > has 2
> > > > > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is
> Not
> > > > > > > > Connected (NC). The Secondary winding is connected to the Top 2
> pins.
> > > The
> > > > > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> > > Winding
> > > > > > > > is
> > > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground
> and
> > > the
> > > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I
> have
> > > > > > > never
> > > > > > > > wound an L41. Per Kens K4EAA web site he says to try to solenoid
> wind
> > > and
> > > > > > > > not scramble wind. When you unwind the wire you will be able to
> tell
> > > > > > > which
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> I

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> shouldnt
> > > really
> > > > > > matter. Gordon will have some tips for you as he has wound new
> L41
> > > xfmrs.
> > > > > > Good Luck Terry
> > > > > >
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> > > > > > > checking out L41 – when I pulled the cover off I noticed a
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> > > > > > in
> > > > > > > one of the wires. I think I'll have to rewind the coil. Right
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> > > I'm
> > > > > > trying
> > > > > > > to figure out which side is the primary and which side is the
> > > > > > secondary.
> > > > > > > For
> > > > > > > the life of me I can't find the darn thing on the schematic to
> > > double
> > > > > > check
> > > > > > > which end is which -- must be blind. I'm also wondering how
> > > important
> > > > > > it
> > > > > > > is
> > > > > > > use exactly #42 enameled wire? I have some old RF chokes I can
> get
> > > wire
> > > > > > from
> > > > > > > if the size isn't super critical.
> > > > > > >
> > > > > > > No other parts needed!! Thank you.
> > > > > > >
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Hi Terry,

> > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > Joe, I have the coil in the padded envelope and will ship it
> > > tomorrow
> > > > > > to
> > > > > > > > you.
> > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Gordon
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > <wagstw46@>
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> > > > > > > >
> > > > > > > > Joe--That is great! Maybe before he ships it he can bridge
> it
> > > and
> > > > > > see
> > > > > > if
> > > > > > > > my calc
> > > > > > > > @ .270 uh was close. Well--as you found out you will need a
> > > steady
> > > > > > hand
> > > > > > > > and
> > > > > > > > magnifier head set. L41 is very fine wire and not sure my
> old
> > > eyes
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> > > > > > > > hands
> > > > > > > > would be up to the task. As you noted "brain surgery". 73s
> > > Terry
> > > > > > > >
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> > > > > > > >
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> > > > > > Little
> > > > > > > > S-meter
> > > > > > > > movement
> > > > > > > >
> > > > > > > > Terry:
> > > > > > > > That's real good information. N6WK has kindly offered me a
> > > > > > replacement

> > > > > > > > L4...
> > > > > > > > > > which would be great given my experience level. I will next
> > > move on
> > > > > > to
> > > > > > > > L41
> > > > > > > > > > and check it's condition, rewinding it as needed -- hoping
> to
> > > keep
> > > > > > self
> > > > > > > > > > inflicted damage to a minimum. :â€")
> > > > > > > > > > Thanks,
> > > > > > > > > > Joe
> > > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@>
> > > wrote:
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a
> simple
> > > > > tuned
> > > > > > > > > > core
> > > > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap.
> Together
> > > they
> > > > > > form
> > > > > > > > > > a
> > > > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz.
> In
> > > short,
> > > > > > it
> > > > > > > > > > blocks
> > > > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a pinch
> you
> > > > > could
> > > > > > > > > > install a
> > > > > > > > > > > miniature axial lead RF choke in its place. It would be
> > > better to
> > > > > > have
> > > > > > > > > > a
> > > > > > > > > > > slug tuned coil form so you could adjust it to resonance
> at
> > > > > 8.83mhz,
> > > > > > > > > > but
> > > > > > > > > > > after rewinding L41 you could get your rig back on the
> air
> > > with
> > > > > > > > > > installation

> > > > > > > > > > of a choke coil at L4. There are a couple of other series
> > > > > resonant
> > > > > > > > > traps in
> > > > > > > > > > this string including one at L4/C7 junction that you can
> tune
> > > > > later
> > > > > > to
> > > > > > > > > > address any 8.83.
> > > > > > > > > >
> > > > > > > > > > I did the math and you need a .270 uh coil. There are a
> lot
> > > of
> > > > > > > > combinations
> > > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8
> inch
> > > core.
> > > > > > Of
> > > > > > > > course
> > > > > > > > > > it would be best if you had LC bridge to adjust coil. If
> you
> > > are
> > > > > > not up
> > > > > > > > to
> > > > > > > > > > winding a new L4 I would try the fixed RF choke approach.
> > > > > > > > > >
> > > > > > > > > > The good news is that .270 uh is a standard value rf
> choke.
> > > > > Mouser
> > > > > > and
> > > > > > > > Digi
> > > > > > > > > > Key sell them for literally pennies. I took a brief look
> and
> > > > > Surplus of
> > > > > > > > > > Nebraska has some miniature IF cans and slug tuned coils
> and
> > > they
> > > > > > have
> > > > > > > > one
> > > > > > > > > > that would tune in the range you need and is thru hole
> mount.
> > > So
> > > > > > in
> > > > > > > > absence
> > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > > install a
> > > > > > miniature
> > > > > > > > > > .270uh axial lead choke and get rig back on the air. Best
> I
> > > can
> > > > > > do

> > > > > > for
> > > > > > > > > you.
> > > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever
> taken
> > > > > apart.
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > > N6WK
> > > > > > > > > > >
> > > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > > >
> > > > > > > > > > > Well... good question. I posted photos in the photo
> > > section.
> > > > > > Not a
> > > > > > > > > > > good evening at all. :-(
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> n6wk@wrote:
> > > > > > > > > > >
> > > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > > N6WK
> > > > > > > > > > >
> > > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > > >
> > > > > > > > > > > Terry:
> > > > > > > > > > > Taking the RF board out was less of a problem
> than I
> > > > > > anticipated.
> > > > > > > > > > > It
> > > > > > > > > > > took about 45 minutes and I had the board free. I
> > > located
> > > > > > L4
> > > > > > > > > > > and
> > > > > > > > > > > removed it from the board. My initial readings
> were
> > > no
> > > > > > short
> > > > > > > > > > > between
> > > > > > > > > > > the primary and secondary -- and I had continuity
> on
> > > the
> > > > > > windings
> > > > > > > > > > > themselves. Later on I retook readings and this

> time
> > > > > there
> > > > > > was
> > > > > > > > no
> > > > > > > > > > > > > > > > continuity on the windings??? Very strange. So, I
> > > > > proceeded
> > > > > > to
> > > > > > > > > > > > > > > > > > disassemble L4 and have a look and the whole
> thing
> > > came
> > > > > > apart
> > > > > > > > > in my
> > > > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying
> to
> > > > > rebuild
> > > > > > it.
> > > > > > > > > > Seems
> > > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it
> right.
> > > If
> > > > > I
> > > > > > can
> > > > > > > > > > figure
> > > > > > > > > > > > > > > out how to post a few photos I will. I'm out of
> ideas
> > > and
> > > > > > kind
> > > > > > > > > of
> > > > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > > > > WW8X
> > > > > > > > > > > > > > > JOe
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > ---------------------------------
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >

> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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Yahoo! Groups Links

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31621. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 00:39:45 UTC
From: Joe Loverti
Topic: 31519 Message: 31621

Terry: exactly what I'm thinking. I don't want to take it apart again! I'm going to order a new NTE222 (K4EAA) to be on the safe side. but I have no idea what to replace D1 and D2 with? They test OK in circuit, but I'd rather just replace them while I'm inside. Any ideas on substitutes?
Joe
WW8X

On Tue, May 31, 2011 at 8:27 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe- OK understand why you would want to rewind entirely. How will you
> remove
> the enamel insulation to make your termination? I have burned it off on
> larger
> guage magnet wire. Maybe we could talk Gordon into writing an L41 procedure
> and
> post it on his website?
> One more thing dont forget to check diode D2 (ohmmeter forward and reverse
> test)
> and Q1 if you can. Hate to see you put board back in only to find out Q1
> and/or
> D2 were bad. I dont have much dual gate mosfet experience. I know that you
> have
> to be careful with static charge. I suspect you could set Ohmmeter on 10k
> range
> and measure from gates to source and drain. If you get a reading I think it
>
> would indicate shorted device. Maybe Gordon can advise you on this? Maybe
> you
> should replace Q1 as a precaution? I would imagine there are NTE subs that
> would
> match specs especially noise figure. Good luck -Terry K9TW
>
> _____
> From: Joe Loverti <ww8x.joe@...>
>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, May 31, 2011 8:15:48 PM
>
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>

> Terry: The photo makes it look as if the gauge differs. In reality it looks
> like the same gauge. At this point after poking around on the wires, I
> think
> I'd rather just start from scratch with fresh wires. After disassembly, it
> looks like the primary's 6 windings are wound on the bottom section of the
> spool. And the secondary's 26 windings extent to the top.
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...> wrote:
>
> >
> >
> > Joe--From the picture it looks like there are two different guage
> windings?
> > It looks like a heavy guage over a smaller guage? I have never seen one.
> Is
> > it possible you may be able to leave one winding in place? Terry
> > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> > wrote:
> > >
> > > Terry: Here's a close-up photo of my L41. The windings appear still
> > bright
> > > and shiny. No evidence of burning. But if you look closely on the right
> > side
> > > there's a section of wire missing above where it connects to the pin on
> > the
> > > right. Later when I touched the upper piece gently with a tweezer, it
> > broke
> > > again. Now the upper end is buried in the windings... which was why was
> > > having trouble figuring out primary and secondary without unwinding it.
> > > Joe
> > > WW8X
> > >
> > >
> > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > >
> > > >
> > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont
> know
> > > why
> > > > > L41 fails like that. Certainly inadvertant transmit RF into the
> SO-239
> > > jack
> > > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > > Kempski
> > > > > talks about finding D2 shorted saving the Mosfet and maybe taking out
> > > L41? I
> > > > > have seen post where the person said the windings appeared burned

> black
> > > > and/or fused together. That almost has to be xmit RF or lighting?
> What
> > did
> > > > you see when you took yours apart? If a lead was broken off that
> sounds
> > like
> > > > a weakness from day one that just finally gave up? I dont think you
> did
> > > > anything based on what you have told us. Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > would
> > > > > cause the transformer to one day go bad? Lightening static? Stray
> RF?
> > As
> > > > I
> > > > > said in my original post, one day it was receiving great -- next
> day
> > it
> > > > was
> > > > > deaf. I leave no antennas connected when I'm not operating the
> > radios.
> > > > >
> > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > though
> > > > they
> > > > > may need to overlap somewhat. From what I read the wrap technique
> > isn't
> > > > > super critical... but, I do understand your point of maintaining
> the
> > > > winding
> > > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > > enameled
> > > > > wire since I have time waiting on the L4 from Gordon.
> > > > >
> > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > concerning
> > > > > the re-wrap of the L41. I'd be interested in anything not covered
> by
> > > > > K4EAA's website.
> > > > >
> > > > > 73
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:

> > > > >
> > > > > >
> > > > > >
> > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule so
> you
> > > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and very
> > easy
> > > > to
> > > > > > break
> > > > > > if too much tension during winding.That is why I suggested you
> ask
> > > > Gordon
> > > > > > about
> > > > > > any lessons learned.
> > > > > >
> > > > > > If you increase the wire gage it will have an effect on the
> > inductance
> > > > of
> > > > > > the
> > > > > > winding for same number of turns. If you change the inductance
> you
> > will
> > > > > > change
> > > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > > critical.
> > > > > > The
> > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > > characteristic
> > > > > > to maintain. Changing wire guage wont effect the turns ratio
> unless
> > you
> > > > > > cant get
> > > > > > same number of turns.
> > > > > >
> > > > > > So long winded answer is I would try to wind it with 46 guage and
> > if
> > > > you
> > > > > > cant
> > > > > > then consider going up in guage as long as you can still get 26
> > turns
> > > > wound
> > > > > > on
> > > > > > the bobbin.
> > > > > >
> > > > > > I have looked for miniature and sub-miniature RF xfmrs (via

> Google)
> > and
> > > > I
> > > > > > find
> > > > > > several that come close in value but not sure about correct
> > dimensions
> > > > for
> > > > > > PC
> > > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr
> would
> > work
> > > > > > just
> > > > > > fine. If I find a close sub, I will buy a couple to experiment
> with
> > as
> > > > they
> > > > > > are
> > > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > > >
> > > > > > _____
> > > > > > From: Joe Loverti <ww8x.joe@>
> > > >
> > > > > >
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > >
> > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > Little
> > > > > > S-meter
> > > > > > movement
> > > > > >
> > > > > > Terry:
> > > > > > Thanks... found it!! What do you think about the wire gauge? Do
> you
> > > > think
> > > > > > that would be critical? Even with enlarging goggles on, that is a
> > > > mighty
> > > > > > small piece to work with -- That wire is like a human hair width.
> I
> > > > wonder
> > > > > > why the designer's used such a small gauge in the input circuit
> if
> > not
> > > > for
> > > > > > it to also serve as fuse to protect the front end.
> > > > > > Joe
> > > > > > WW8X
> > > > > >
> > > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@>
> wrote:

> > > > > >
> > > > > > >
> > > > > > >
> > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > > schematic
> > > > > > look
> > > > > > > on right side for the RF Unit bounded by dashed line. Find
> > Connector
> > > > 3 on
> > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > line
> > > > from
> > > > > > ANT
> > > > > > > down to L41. You will see Primary on left side and Secondary on
> > right
> > > > > side.
> > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > Secondary
> > > > has
> > > > > > 26
> > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at
> > X-ray
> > > > view
> > > > > > of
> > > > > > > RF board on Page 12. Look down at L41. You can see on Left Side
> > it
> > > > has 2
> > > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is
> > Not
> > > > > > Connected (NC). The Secondary winding is connected to the Top 2
> > pins.
> > > > The
> > > > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> > > > Winding
> > > > > > is
> > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground
> > and
> > > > the
> > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I
> > have
> > > > > > never
> > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> solenoid
> > wind
> > > > and
> > > > > > > not scramble wind. When you unwind the wire you will be able to
> > tell
> > > > > > which
> > > > > > > winding was wound on the bobbin first. I guess if I were doing
> it

> > I
> > > > would
> > > > > > > wind secondary first and then put primary over it, but it
> > shouldnt
> > > > really
> > > > > > > matter. Gordon will have some tips for you as he has wound new
> > L41
> > > > xfmrs.
> > > > > > Good Luck Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti
> > <ww8x.joe@>
> > > > > > wrote:
> > > > > > > >
> > > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> > process
> > > > of
> > > > > > > > checking out L41 ? when I pulled the cover off I noticed a
> > clean
> > > > break
> > > > > > in
> > > > > > > > one of the wires. I think I'll have to rewind the coil. Right
> > now
> > > > I'm
> > > > > > > > trying
> > > > > > > > to figure out which side is the primary and which side is the
> > > > secondary.
> > > > > > > > For
> > > > > > > > the life of me I can't find the darn thing on the schematic
> to
> > > > double
> > > > > > > > check
> > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > important
> > > > > > it
> > > > > > > > is
> > > > > > > > use exactly #42 enameled wire? I have some old RF chokes I
> can
> > get
> > > > wire
> > > > > > > > from
> > > > > > > > if the size isn't super critical.
> > > > > > > >
> > > > > > > > No other parts needed!! Thank you.
> > > > > > > >
> > > > > > > > Joe
> > > > > > > > WW8X
> > > > > > > >
> > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > >

> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Hi Terry,
> > > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > > Joe, I have the coil in the padded envelope and will ship
> it
> > > > tomorrow
> > > > > > > > to
> > > > > > > > > > you.
> > > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > > > Gordon
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > <wagstw46@>
> > > > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > > > Joe--That is great! Maybe before he ships it he can
> bridge
> > it
> > > > > and
> > > > > > > > > see
> > > > > > > > > if
> > > > > > > > > > my calc
> > > > > > > > > > @ .270 uh was close. Well--as you found out you will need
> a
> > > > steady
> > > > > > > > hand
> > > > > > > > > > and
> > > > > > > > > > magnifier head set. L41 is very fine wire and not sure my
> > old
> > > > > eyes
> > > > > > > > and
> > > > > > > > > > hands
> > > > > > > > > > would be up to the task. As you noted "brain surgery".
> 73s
> > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > > >
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive
> > and

> > > > > > Little
> > > > > > > > > > S-meter
> > > > > > > > > > > movement
> > > > > > > > > > >
> > > > > > > > > > > Terry:
> > > > > > > > > > > That's real good information. N6WK has kindly offered me
> a
> > > > > > > > replacement
> > > > > > > > > > L4...
> > > > > > > > > > > which would be great given my experience level. I will
> next
> > > > move on
> > > > > > > to
> > > > > > > > > > L41
> > > > > > > > > > > and check it's condition, rewinding it as needed --
> hoping
> > to
> > > > > keep
> > > > > > > > self
> > > > > > > > > > > inflicted damage to a minimum. :??")
> > > > > > > > > > > Thanks,
> > > > > > > > > > > Joe
> > > > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@
> >
> > > > wrote:
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a
> > simple
> > > > > > tuned
> > > > > > > > > > core
> > > > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap.
> > Together
> > > > > they
> > > > > > > > form
> > > > > > > > > > a
> > > > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz.
> > In
> > > > > short,
> > > > > > > it
> > > > > > > > > > blocks
> > > > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a
> pinch
> > you
> > > > > > could
> > > > > > > > > > install a

> > > > > > > > > > > > miniature axial lead RF choke in its place. It would be
> > > > better to
> > > > > > > have
> > > > > > > > > a
> > > > > > > > > > > slug tuned coil form so you could adjust it to
> resonance
> > at
> > > > > > > 8.83mhz,
> > > > > > > > > but
> > > > > > > > > > > after rewinding L41 you could get your rig back on the
> > air
> > > > with
> > > > > > > > > installation
> > > > > > > > > > > of a choke coil at L4. There are a couple of other
> series
> > > > > resonant
> > > > > > > > > traps in
> > > > > > > > > > > this string including one at L4/C7 junction that you
> can
> > tune
> > > > > > later
> > > > > > > > to
> > > > > > > > > > address any 8.83.
> > > > > > > > > > >
> > > > > > > > > > > I did the math and you need a .270 uh coil. There are a
> > lot
> > > > of
> > > > > > > > combinations
> > > > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8
> > inch
> > > > core.
> > > > > > > Of
> > > > > > > > course
> > > > > > > > > > > it would be best if you had LC bridge to adjust coil.
> If
> > you
> > > > > are
> > > > > > > not up
> > > > > > > > to
> > > > > > > > > > > winding a new L4 I would try the fixed RF choke
> approach.
> > > > > > > > > >
> > > > > > > > > > > The good news is that .270 uh is a standard value rf
> > choke.
> > > > > > Mouser
> > > > > > > and
> > > > > > > > > Digi
> > > > > > > > > > > Key sell them for literally pennies. I took a brief
> look
> > and

> > > > > > > Surplus of
> > > > > > > > > > > > Nebraska has some miniature IF cans and slug tuned
> coils
> > and
> > > > they
> > > > > > > have
> > > > > > > > > one
> > > > > > > > > > > that would tune in the range you need and is thru hole
> > mount.
> > > > So
> > > > > > in
> > > > > > > > > absence
> > > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > > > install a
> > > > > > > > > miniature
> > > > > > > > > > > .270uh axial lead choke and get rig back on the air.
> Best
> > I
> > > > can
> > > > > > do
> > > > > > > for
> > > > > > > > > you.
> > > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever
> > taken
> > > > > > apart.
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > > N6WK
> > > > > > > > > > >
> > > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > > >
> > > > > > > > > > > Well... good question. I posted photos in the photo
> > > > section.
> > > > > > > Not a
> > > > > > > > > > > good evening at all. :-(
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> > n6wk@wrote:
> > > > > > > > > > >
> > > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > > >
> > > > > > > > > > > Gordon
> > > > > > > > > > > N6WK
> > > > > > > > > > >
> > > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:

> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Terry:
> > > > > > > > > > > > > > > Taking the RF board out was less of a problem
> > than I
> > > > > > > > > anticipated.
> > > > > > > > > > > It
> > > > > > > > > > > > > > > took about 45 minutes and I had the board free.
> I
> > > > > located
> > > > > > > > L4
> > > > > > > > > and
> > > > > > > > > > > > > > > removed it from the board. My initial readings
> > were
> > > > > no
> > > > > > > > short
> > > > > > > > > > > between
> > > > > > > > > > > > > > > the primary and secondary -- and I had
> continuity
> > on
> > > > > the
> > > > > > > > > windings
> > > > > > > > > > > > > > > themselves. Later on I retook readings and this
> > time
> > > > > > > there
> > > > > > > > was
> > > > > > > > > no
> > > > > > > > > > > > > > > continuity on the windings??? Very strange. So,
> I
> > > > > > > proceeded
> > > > > > > > to
> > > > > > > > > > > > > > > disassemble L4 and have a look and the whole
> > thing
> > > > > came
> > > > > > > > apart
> > > > > > > > > in my
> > > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying
> > to
> > > > > > > rebuild
> > > > > > > > it.
> > > > > > > > > > > Seems
> > > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it
> > right.
> > > > > If
> > > > > > > I
> > > > > > > > can
> > > > > > > > > > > figure
> > > > > > > > > > > > > > > out how to post a few photos I will. I'm out of
> > ideas
> > > > > and
> > > > > > > > kind

> > > > > > > > > of
> > > > > > > > > > > > > > > > > > brain dead for this evening.
> > > > > > > > > > > > > > > > > > WW8X
> > > > > > > > > > > > > > > > > > JOe
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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31622. Re: Another TS-820 display issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 01:54:34 UTC
From: kb0asq
Topic: 31583 Message: 31622

Well that didn't help. It ran all afternoon real solid and then this evening, I had to run the band switch again to get it to stabilize.

Couple of questions.

1. I see most of you are using Deoxit D5. Is that a better option then the D100 I am using?

2. Is this kind of par for the course for the TS-820? Do you just have to run the band switch back and forth every once and a while?

Allen
KBØASQ
http://kb0asq.com

--- In TS-520_820_530_830@yahoogroups.com, "kb0asq" <kb0asq@...> wrote:
>
> Interestingly, I had it on all weekend and on Monday it was rock solid.
>
> I shut it off last night and this morning, I am back to the same problem. Out of frustration, I checked the voltage on the 9v and 3.3v power supplies again. They were both at spec. So then I checked the voltage on the socket jumper on the back and it read 8.83v. So I took it out and put it back in. Now it reads 8.98v and it seems to be solid again.
>
> So I am going the get the schematic out and trace it again to see if I can find a loose connection somewhere.
>
> Allen
> KB0ASQ
> http://kb0asq.com
>
>

31623. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 01:58:57 UTC
From: Terry Wagoner
Topic: 31519 Message: 31623

Joe--If you dont have the TS-830s service manual it would be good to get it. On the x-ray view of the boards they list all the semi-conductor devices. D1 is a 1S1587, Silicon gen purpose, 200 piv that subs to a NTE 177.
D2 is a 1S2588, Silicon fast switching that subs to a NTE 519

Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 31, 2011 8:39:45 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry: exactly what I'm thinking. I don't want to take it apart again! I'm going to order a new NTE222 (K4EAA) to be on the safe side. but I have no idea what to replace D1 and D2 with? They test OK in circuit, but I'd rather just replace them while I'm inside. Any ideas on substitutes?
Joe
WW8X

On Tue, May 31, 2011 at 8:27 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe- OK understand why you would want to rewind entirely. How will you
> remove
> the enamel insulation to make your termination? I have burned it off on
> larger
> guage magnet wire. Maybe we could talk Gordon into writing an L41 procedure
> and
> post it on his website?
> One more thing dont forget to check diode D2 (ohmmeter forward and reverse
> test)
> and Q1 if you can. Hate to see you put board back in only to find out Q1
> and/or
> D2 were bad. I dont have much dual gate mosfet experience. I know that you
> have
> to be careful with static charge. I suspect you could set Ohmmeter on 10k
> range
> and measure from gates to source and drain. If you get a reading I think it
>
> would indicate shorted device. Maybe Gordon can advise you on this? Maybe
> you
> should replace Q1 as a precaution? I would imagine there are NTE subs that

> would
> match specs especially noise figure. Good luck -Terry K9TW
>
> _____
> From: Joe Loverti <ww8x.joe@...>
>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, May 31, 2011 8:15:48 PM
>
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> Terry: The photo makes it look as if the gauge differs. In reality it looks
> like the same gauge. At this point after poking around on the wires, I
> think
> I'd rather just start from scratch with fresh wires. After disassembly, it
> looks like the primary's 6 windings are wound on the bottom section of the
> spool. And the secondary's 26 windings extent to the top.
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...> wrote:
>
> >
> >
> > Joe--From the picture it looks like there are two different guage
> windings?
> > It looks like a heavy guage over a smaller guage? I have never seen one.
> Is
> > it possible you may be able to leave one winding in place? Terry
> > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> > wrote:
> > >
> > > Terry: Here's a close-up photo of my L41. The windings appear still
> > bright
> > > and shiny. No evidence of burning. But if you look closely on the right
> > side
> > > there's a section of wire missing above where it connects to the pin on
> > the
> > > right. Later when I touched the upper piece gently with a tweezer, it
> > broke
> > > again. Now the upper end is buried in the windings... which was why was
> > > having trouble figuring out primary and secondary without unwinding it.
> > > Joe
> > > WW8X
> > >
> > >
> > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> > >

> > > >
> > > >
> > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I dont
> know
> > why
> > > > L41 fails like that. Certainly inadvertant transmit RF into the
> SO-239
> > jack
> > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > Kempski
> > > > talks about finding D2 shorted saving the Mosfet and maybe taking out
> > L41? I
> > > > have seen post where the person said the windings appeared burned
> black
> > > > and/or fused together. That almost has to be xmit RF or lighting?
> What
> > did
> > > > you see when you took yours apart? If a lead was broken off that
> sounds
> > like
> > > > a weakness from day one that just finally gave up? I dont think you
> did
> > > > anything based on what you have told us. Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > would
> > > > > cause the transformer to one day go bad? Lightening static? Stray
> RF?
> > As
> > > > I
> > > > > said in my original post, one day it was receiving great -- next
> day
> > it
> > > > was
> > > > > deaf. I leave no antennas connected when I'm not operating the
> > radios.
> > > > >
> > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > though
> > > > they
> > > > > may need to overlap somewhat. From what I read the wrap technique
> > isn't
> > > > > super critical... but, I do understand your point of maintaining
> the
> > > > winding
> > > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > > enameled

> > > > > wire since I have time waiting on the L4 from Gordon.
> > > > >
> > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > concerning
> > > > > the re-wrap of the L41. I'd be interested in anything not covered
> by
> > > > > K4EAA's website.
> > > > >
> > > > > 73
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > >
> > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule so
> you
> > > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and very
> > easy
> > > > to
> > > > > > break
> > > > > > if too much tension during winding.That is why I suggested you
> ask
> > > > Gordon
> > > > > > about
> > > > > > any lessons learned.
> > > > > >
> > > > > > If you increase the wire gage it will have an effect on the
> > inductance
> > > > of
> > > > > > the
> > > > > > winding for same number of turns. If you change the inductance
> you
> > will
> > > > > > change
> > > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > > critical.
> > > > > > The
> > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > > characteristic
> > > > > > to maintain. Changing wire guage wont effect the turns ratio
> unless
> > you
> > > > > > cant get

> > > > > > same number of turns.
> > > > > >
> > > > > > So long winded answer is I would try to wind it with 46 guage and
> > if
> > > > you
> > > > > > cant
> > > > > > then consider going up in guage as long as you can still get 26
> > turns
> > > > wound
> > > > > > on
> > > > > > the bobbin.
> > > > > >
> > > > > > I have looked for miniature and sub-miniature RF xfmrs (via
> Google)
> > and
> > > > I
> > > > > > find
> > > > > > several that come close in value but not sure about correct
> > dimensions
> > > > for
> > > > > > PC
> > > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr
> would
> > work
> > > > > > just
> > > > > > fine. If I find a close sub, I will buy a couple to experiment
> with
> > as
> > > > they
> > > > > > are
> > > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > > >
> > > > > > _____
> > > > > > From: Joe Loverti <ww8x.joe@>
> > > >
> > > > > >
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > >
> > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > Little
> > > > > > S-meter
> > > > > > movement
> > > > > >
> > > > > > Terry:
> > > > > > Thanks... found it!! What do you think about the wire gauge? Do
> you
> > > > > think
> > > > > > that would be critical? Even with enlarging goggles on, that is a
> > > > > mighty

> > > > > > small piece to work with -- That wire is like a human hair width.
> I
> > > > wonder
> > > > > > why the designer's used such a small gauge in the input circuit
> if
> > not
> > > > for
> > > > > > it to also serve as fuse to protect the front end.
> > > > > > Joe
> > > > > > WW8X
> > > > > >
> > > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > > schematic
> > > > > > look
> > > > > > > > on right side for the RF Unit bounded by dashed line. Find
> > Connector
> > > > 3 on
> > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > line
> > > > from
> > > > > > > ANT
> > > > > > > down to L41. You will see Primary on left side and Secondary on
> > right
> > > > side.
> > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > Secondary
> > > > has
> > > > > > > 26
> > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at
> > X-ray
> > > > view
> > > > > > > of
> > > > > > > RF board on Page 12. Look down at L41. You can see on Left Side
> > it
> > > > has 2
> > > > > > > Pins and Right Side has 3 Pins. The center pin on Right Side is
> > Not
> > > > > > > Connected (NC). The Secondary winding is connected to the Top 2
> > pins.
> > > > The
> > > > > > > Top Left goes to C42 and the Top Right goes to L12. The Primary
> > > > Winding
> > > > > > > is
> > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to ground
> > and

> > > > the
> > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to you I
> > have
> > > > > > never
> > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> solenoid
> > wind
> > > > and
> > > > > > > not scramble wind. When you unwind the wire you will be able to
> > tell
> > > > > > which
> > > > > > > winding was wound on the bobbin first. I guess if I were doing
> it
> > I
> > > > would
> > > > > > > wind secondary first and then put primary over it, but it
> > shouldnt
> > > > really
> > > > > > > matter. Gordon will have some tips for you as he has wound new
> > L41
> > > > xfmrs.
> > > > > > > Good Luck Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti
> > <ww8x.joe@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> > process
> > > > of
> > > > > > > checking out L41 – when I pulled the cover off I noticed a
> > clean
> > > > break
> > > > > > in
> > > > > > > one of the wires. I think I'll have to rewind the coil. Right
> > now
> > > > I'm
> > > > > > trying
> > > > > > > to figure out which side is the primary and which side is the
> > > > > > secondary.
> > > > > > > For
> > > > > > > the life of me I can't find the darn thing on the schematic
> to
> > > > double
> > > > > > check
> > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > important
> > > > > > it
> > > > > > > is
> > > > > > > use exactly #42 enameled wire? I have some old RF chokes I

> can
> > get
> > > > wire
> > > > > > > from
> > > > > > > > > if the size isn't super critical.
> > > > > > > > >
> > > > > > > > > No other parts needed!! Thank you.
> > > > > > > > >
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hi Terry,
> > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > Joe, I have the coil in the padded envelope and will ship
> it
> > > > > tomorrow
> > > > > > > > to
> > > > > > > > > you.
> > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > > >
> > > > > > > > > 73,
> > > > > > > > > Gordon
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > <wagstw46@>
> > > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > > Joe--That is great! Maybe before he ships it he can
> bridge
> > it
> > > > > and
> > > > > > > > see
> > > > > > > > if
> > > > > > > > > my calc
> > > > > > > > > @ .270 uh was close. Well--as you found out you will need
> a
> > > > steady
> > > > > > > hand
> > > > > > > > > and
> > > > > > > > > magnifier head set. L41 is very fine wire and not sure my
> > old
> > > > eyes
> > > > > > > and
> > > > > > > > > hands

> > > > > > > > > > would be up to the task. As you noted "brain surgery".
> 73s
> > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Mon, May 30, 2011 8:27:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive
> > and
> > > > > > > Little
> > > > > > > > > S-meter
> > > > > > > > > movement
> > > > > > > > >
> > > > > > > > > Terry:
> > > > > > > > > That's real good information. N6WK has kindly offered me
> a
> > > > > > replacement
> > > > > > > > > L4...
> > > > > > > > > which would be great given my experience level. I will
> next
> > > > move on
> > > > > > > to
> > > > > > > > > L41
> > > > > > > > > and check it's condition, rewinding it as needed --
> hoping
> > to
> > > > > keep
> > > > > > > self
> > > > > > > > > inflicted damage to a minimum. :â€")
> > > > > > > > > Thanks,
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 7:20 AM, Terry Wagoner <wagstw46@
> >
> > > > wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Joe--All is not lost. L4 is not a transformer. It is a
> > simple
> > > > > > tuned
> > > > > > > > > core
> > > > > > > > > coil...an inductor. It is shunted by C7 1200pf cap.
> > Together

> > > > they
> > > > > > > form
> > > > > > > > > a
> > > > > > > > > > > parallel resonant circuit that offers Hi-Z to 8.83 mhz.
> > In
> > > > short,
> > > > > > it
> > > > > > > > blocks
> > > > > > > > > > the 8.83 Mhz IF from getting into RF amp. So, in a
> pinch
> > you
> > > > > > could
> > > > > > > > > install a
> > > > > > > > > > > miniature axial lead RF choke in its place. It would be
> > > > better to
> > > > > > have
> > > > > > > > > a
> > > > > > > > > > > slug tuned coil form so you could adjust it to
> resonance
> > at
> > > > > > 8.83mhz,
> > > > > > > > > but
> > > > > > > > > > > after rewinding L41 you could get your rig back on the
> > air
> > > > with
> > > > > > > > installation
> > > > > > > > > > > of a choke coil at L4. There are a couple of other
> series
> > > > > resonant
> > > > > > > > > traps in
> > > > > > > > > > > this string including one at L4/C7 junction that you
> can
> > tune
> > > > > > later
> > > > > > > > to
> > > > > > > > > > address any 8.83.
> > > > > > > > > > >
> > > > > > > > > > > I did the math and you need a .270 uh coil. There are a
> > lot
> > > > of
> > > > > > > > combinations
> > > > > > > > > > > to get this ie 10 turns of No. 32 magnet wire on a 1/8
> > inch
> > > > > core.
> > > > > > > > Of
> > > > > > > > > course
> > > > > > > > > > > it would be best if you had LC bridge to adjust coil.
> If
> > you
> > > > > are

> > > > > > > not up
> > > > > > > > > > to
> > > > > > > > > > > > winding a new L4 I would try the fixed RF choke
> approach.
> > > > > > > > > > > >
> > > > > > > > > > > > > The good news is that .270 uh is a standard value rf
> > choke.
> > > > > > > Mouser
> > > > > > > > and
> > > > > > > > > > Digi
> > > > > > > > > > > > > Key sell them for literally pennies. I took a brief
> look
> > and
> > > > > > > Surplus of
> > > > > > > > > > > > Nebraska has some miniature IF cans and slug tuned
> coils
> > and
> > > > > they
> > > > > > > have
> > > > > > > > > one
> > > > > > > > > > > > that would tune in the range you need and is thru hole
> > mount.
> > > > So
> > > > > > in
> > > > > > > > > absence
> > > > > > > > > > > > of a replacement L4 or a replacement RF board, I would
> > > install a
> > > > > > > > miniature
> > > > > > > > > > > > .270uh axial lead choke and get rig back on the air.
> Best
> > I
> > > > can
> > > > > > do
> > > > > > > for
> > > > > > > > > you.
> > > > > > > > > > > > Keep smiling. Terry K9TW
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, n6wk@wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Hmmm, That pic doesn't look like any L41 I have ever
> > taken
> > > > > > > apart.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > Gordon
> > > > > > > > > > > > > N6WK
> > > > > > > > > > > > > >
> > > > > > > > > > > > > On 5/29/2011 6:49 PM, ww8x_joe wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > Well... good question. I posted photos in the photo
> > > section.
> > > > > > > > Not a

> > > > > > > > > > > > > > good evening at all. :-(
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>,
> > n6wk@wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Why did you remove L4 ?
> > > > > > > > > > > > > > > I think you should have been looking at L41
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Gordon
> > > > > > > > > > > > > > > N6WK
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > On 5/29/2011 6:34 PM, ww8x_joe wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Terry:
> > > > > > > > > > > > > > > Taking the RF board out was less of a problem
> > than I
> > > > > > > > anticipated.
> > > > > > > > > > > > > > > It
> > > > > > > > > > > > > > > took about 45 minutes and I had the board free.
> I
> > > > > located
> > > > > > > L4
> > > > > > > > > > > > > and
> > > > > > > > > > > > > > > removed it from the board. My initial readings
> > were
> > > > > no
> > > > > > > short
> > > > > > > > > > > > between
> > > > > > > > > > > > > > > the primary and secondary -- and I had
> continuity
> > on
> > > > > the
> > > > > > > windings
> > > > > > > > > > > > > > > themselves. Later on I retook readings and this
> > time
> > > > > > > there
> > > > > > > > > > > was
> > > > > > > > > > > > no
> > > > > > > > > > > > > > > continuity on the windings??? Very strange. So,
> I
> > > > > > > proceeded
> > > > > > > > > > to
> > > > > > > > > > > > > > > disassemble L4 and have a look and the whole
> > thing
> > > > > came
> > > > > > > apart
> > > > > > > > > > > > in my
> > > > > > > > > > > > > > > hands. I'm not sure I'll have success in trying
> > to

> > > > > > rebuild
> > > > > > > > it.
> > > > > > > > > > > > Seems
> > > > > > > > > > > > > > > > > > > like you'd need to be a brain surgeon to do it
> > right.
> > > > If
> > > > > > I
> > > > > > > > can
> > > > > > > > > > > > > figure
> out how to post a few photos I will. I'm out of
> > ideas
> > > > and
> > > > > > > > kind
> > > > > > > > > > of
> > > > > > > > > > > > > > > > > > brain dead for this evening.
> WW8X
> JOe
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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31624. ALC pegs on xmit and S-meter pegs on receive

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-05-31 23:52:10 UTC
From: srsigno
Topic: 31624 Message: 31624

I am having a cascade of problems with my TS-820 since I opened it to replace the S-meter bulbs. The first problem was a reduction of sensitivity on the receiver after activating the PTT switch. The meter pegged and gradually indicated a lower reading while the receiver a sensitivity increased. However, the S-meter did not move from near zero after that. I replaced Relay unit (X43 1190-00)but it did not fix the problem. Now the symptom has changed to something quite different. The S-meter pegs and does not move at all and the receiver sensitivity is extremely low. However, if I set the MODE switch to CW and flip the REC-SEND to switch to SEND with the meter on the ALC position, the meter pegs and gradually decreases to the normal ALC reading. Immediately after switching back to receive, the sensitivity is back to its normal level for a few seconds. Then the S-meter gradually goes back to max reading while the receiving sensitivity is reduced significantly. I would really appreciate any help that any member of the group could give me.

31625. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 02:54:52 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31625

Hi Guys,
Whenever I am testing a diode, I always lift one end and then use my
Diode tester to verify that it is good and no leakage.
Same with Transistors and Mosfets. You can test voltages when the
circuit is live, but trying to do the resistance test can give erroneous
results if done in circuit.
I have a L-41 apart here now on the bench. I am going to take pictures
and make a PDF file of step by step instructions on re-winding it.
Need to borrow the XYL's high dollar camera for nice close -ups..... LOL
The primary (6 turns) are wound on the lower part of the bobbin core
and the Secondary (26 turns) are wound on the upper part.
It is important to try and wind each turn NEXT to each other and not all
over the place. (make it uniform)
The wire is very easy to break, so don't be surprised if you have to
attempt it a couple of times to get it right.
The NTE222 is a good replacement, but be ready for sticker shock when
you buy one
Joe,
L4 went out in today's mail to you.
73,
Gordon
N6WK

On 5/31/2011 5:27 PM, Terry Wagoner wrote:
>
> Joe- OK understand why you would want to rewind entirely. How will you
> remove
> the enamel insulation to make your termination? I have burned it off
> on larger
> guage magnet wire. Maybe we could talk Gordon into writing an L41
> procedure and
> post it on his website?
> One more thing dont forget to check diode D2 (ohmmeter forward and
> reverse test)
> and Q1 if you can. Hate to see you put board back in only to find out
> Q1 and/or
> D2 were bad. I dont have much dual gate mosfet experience. I know that
> you have
> to be careful with static charge. I suspect you could set Ohmmeter on
> 10k range
> and measure from gates to source and drain. If you get a reading I
> think it
> would indicate shorted device. Maybe Gordon can advise you on this?
> Maybe you

> should replace Q1 as a precaution? I would imagine there are NTE subs
> that would
> match specs especially noise figure. Good luck -Terry K9TW
>
> _____
> From: Joe Loverti <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tue, May 31, 2011 8:15:48 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> Terry: The photo makes it look as if the gauge differs. In reality it
> looks
> like the same gauge. At this point after poking around on the wires, I
> think
> I'd rather just start from scratch with fresh wires. After disassembly, it
> looks like the primary's 6 windings are wound on the bottom section of the
> spool. And the secondary's 26 windings extent to the top.
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...
> <mailto:wagstw46%40yahoo.com>> wrote:
>
> >
> >
> > Joe--From the picture it looks like there are two different guage
> windings?
> > It looks like a heavy guage over a smaller guage? I have never seen
> one. Is
> > it possible you may be able to leave one winding in place? Terry
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@...>
> > wrote:
> > >
> > > Terry: Here's a close-up photo of my L41. The windings appear still
> > bright
> > > and shiny. No evidence of burning. But if you look closely on the
> right
> > side
> > > there's a section of wire missing above where it connects to the
> pin on
> > the
> > > right. Later when I touched the upper piece gently with a tweezer, it
> > broke
> > > again. Now the upper end is buried in the windings... which was
> why was
> > > having trouble figuring out primary and secondary without

> unwinding it.
> > > Joe
> > > WW8X
> > >
> > >
> > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > >
> > > >
> > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> dont know
> > why
> > > > L41 fails like that. Certainly inadvertant transmit RF into the
> SO-239
> > jack
> > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > Kempski
> > > > talks about finding D2 shorted saving the Mosfet and maybe
> taking out
> > L41? I
> > > > have seen post where the person said the windings appeared
> burned black
> > > > and/or fused together. That almost has to be xmit RF or
> lighting? What
> > did
> > > > you see when you took yours apart? If a lead was broken off that
> sounds
> > like
> > > > a weakness from day one that just finally gave up? I dont think
> you did
> > > > anything based on what you have told us. Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > would
> > > > > cause the transformer to one day go bad? Lightening static?
> Stray RF?
> > As
> > > > I
> > > > > said in my original post, one day it was receiving great --
> next day
> > it
> > > > was
> > > > > deaf. I leave no antennas connected when I'm not operating the
> > radios.
> > > > >
> > > > > I think I could get a slightly heavier gauge to make 26 wraps --

> > though
> > > > they
> > > > > may need to overlap somewhat. From what I read the wrap technique
> > isn't
> > > > > super critical... but, I do understand your point of
> maintaining the
> > > > winding
> > > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > > enameled
> > > > > wire since I have time waiting on the L4 from Gordon.
> > > > >
> > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > concerning
> > > > > the re-wrap of the L41. I'd be interested in anything not
> covered by
> > > > > K4EAA's website.
> > > > >
> > > > > 73
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > >
> > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule
> so you
> > > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and
> very
> > easy
> > > > to
> > > > > > break
> > > > > > if too much tension during winding.That is why I suggested
> you ask
> > > > Gordon
> > > > > > about
> > > > > > any lessons learned.
> > > > > >
> > > > > > If you increase the wire gage it will have an effect on the
> > inductance
> > > > of
> > > > > > the
> > > > > > winding for same number of turns. If you change the
> inductance you
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> > > > > > change
> > > > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > > critical.
> > > > > > The
> > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
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> unless
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> > > > > >
> > > > > > So long winded answer is I would try to wind it with 46
> guage and
> > if
> > > > you
> > > > > > cant
> > > > > > then consider going up in guage as long as you can still get 26
> > turns
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> > > > > > on
> > > > > > the bobbin.
> > > > > >
> > > > > > I have looked for miniature and sub-miniature RF xfmrs (via
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> > > > for
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> > > > > > just
> > > > > > fine. If I find a close sub, I will buy a couple to
> experiment with
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> > > > they
> > > > > > are
> > > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > > >
> > > > > > _____
> > > > > > From: Joe Loverti <ww8x.joe@>
> > > >
> > > > > >
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Tue, May 31, 2011 9:58:29 AM

> > > > > >
> > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > Little
> > > > > > S-meter
> > > > > > movement
> > > > > > >
> > > > > > Terry:
> > > > > > Thanks... found it!! What do you think about the wire gauge?
> Do you
> > > > think
> > > > > > that would be critical? Even with enlarging goggles on, that
> is a
> > > > mighty
> > > > > > small piece to work with -- That wire is like a human hair
> width. I
> > > > wonder
> > > > > > why the designer's used such a small gauge in the input
> circuit if
> > not
> > > > for
> > > > > > it to also serve as fuse to protect the front end.
> > > > > > Joe
> > > > > > WW8X
> > > > > > >
> > > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > > schematic
> > > > > > look
> > > > > > > > on right side for the RF Unit bounded by dashed line. Find
> > Connector
> > > > 3 on
> > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > line
> > > > from
> > > > > > ANT
> > > > > > > > down to L41. You will see Primary on left side and
> Secondary on
> > right
> > > > > > side.
> > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > Secondary
> > > > has
> > > > > > 26
> > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look at
> > X-ray
> > > > view

> > > > > > of
> > > > > > > RF board on Page 12. Look down at L41. You can see on Left
> Side
> > it
> > > > has 2
> > > > > > > Pins and Right Side has 3 Pins. The center pin on Right
> Side is
> > Not
> > > > > > > Connected (NC). The Secondary winding is connected to the
> Top 2
> > pins.
> > > > The
> > > > > > > Top Left goes to C42 and the Top Right goes to L12. The
> Primary
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> > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to
> you I
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> > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> solenoid
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> able to
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> > shouldnt
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> > L41
> > > > xfmrs.
> > > > > > > Good Luck Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
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> > > > > > > Gordon: Thanks very much for sending the L4... I am in the
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> > > > of
> > > > > > > > checking out L41 – when I pulled the cover off I noticed a
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> > > > > break
> > > > > > in
> > > > > > > > one of the wires. I think I'll have to rewind the coil.
> Right
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> > > > I'm
> > > > > > trying
> > > > > > > > to figure out which side is the primary and which side
> is the
> > > > > > secondary.
> > > > > > > For
> > > > > > > > the life of me I can't find the darn thing on the
> schematic to
> > > > double
> > > > > > check
> > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > important
> > > > > > it
> > > > > > > is
> > > > > > > > use exactly #42 enameled wire? I have some old RF chokes
> I can
> > get
> > > > wire
> > > > > > from
> > > > > > > > if the size isn't super critical.
> > > > > > > >
> > > > > > > > No other parts needed!! Thank you.
> > > > > > > >
> > > > > > > > Joe
> > > > > > > > WW8X
> > > > > > > >
> > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > Joe, I have the coil in the padded envelope and will
> ship it
> > > > tomorrow
> > > > > > to
> > > > > > > > you.
> > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > >
> > > > > > > > 73,
> > > > > > > > Gordon

> > > > > > > > > >
> > > > > > > > > >
>

31626. Burnt cathode resistors on a 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 02:58:21 UTC
From: Erik
Topic: 31626 Message: 31626

Hello all,
I'm back on the group after an absence and using my 520S again. Sunday night, during a ragchew on 14.273, I let the smoke out of my final cage. Visual inspection revealed the 10ohm, 1W carbon resistors on the final board were fried, one so bad I can't read the color bands on it. When this rig was given to me, the final board had 3 resistors burned under one tube. Those were replaced and it has done fantastic the few times I've used it. Now, one of the resistors that was replaced is burnt along with the same size resistor under the other tube. I've not yet tested the 6146B tubes but will before I try it again. Any ideas of what could toast a 1W resistor?

I also found 2 cracked diodes on the rectifier board and when I removed them, all but 1 came out in pieces. It was not the HV rectifier diodes but the 14V rectifier stage. I've replaced all 4 diodes with new ones now.

Any help would be greatly appreciated!
Erik
KF4KRK

31627. Burnt cathode resistors on a 520S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 02:58:51 UTC
From: Erik
Topic: 31626 Message: 31627

Hello all,
I'm back on the group after an absence and using my 520S again. Sunday night, during a ragchew on 14.273, I let the smoke out of my final cage. Visual inspection revealed the 10ohm, 1W carbon resistors on the final board were fried, one so bad I can't read the color bands on it. When this rig was given to me, the final board had 3 resistors burned under one tube. Those were replaced and it has done fantastic the few times I've used it. Now, one of the resistors that was replaced is burnt along with the same size resistor under the other tube. I've not yet tested the 6146B tubes but will before I try it again. Any ideas of what could toast a 1W resistor?

I also found 2 cracked diodes on the rectifier board and when I removed them, all but 1 came out in pieces. It was not the HV rectifier diodes but the 14V rectifier stage. I've replaced all 4 diodes with new ones now.

Any help would be greatly appreciated!
Erik
KF4KRK

31628. BS-5 Bandscope Adapter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 08:14:04 UTC
From: pakjan830
Topic: 31628 Message: 31628

Hi all,

I have a spare BS-5 Bandscope adapter (which allows a SM-220 station monitor to be used as a bandscope for a TS520, R599 or any other device which has a 3.395 MHz wide band IF accessible somewhere).

I can not fully test it as I do not own a TS520 but it works as expected in my SM-220 (not for sale) when fed with a 3.395 MHz signal from my signal generator.

If anybody is interested, let me know via PM please.

73, Jan

31629. Re: [TS-520_820_530_830] BS-5 Bandscope Adapter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 08:42:21 UTC
From: David & Sarah Bennett
Topic: 31628 Message: 31629

I am not sure if you will get this message but i am interested in the bandscope.
Not sure if you would send to VK but let me know a price and and we can go from there
Thanks David VK2DV
----- Original Message -----
From: pakjan830
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 01, 2011 6:14 PM
Subject: [TS-520_820_530_830] BS-5 Bandscope Adapter

Hi all,

I have a spare BS-5 Bandscope adapter (which allows a SM-220 station monitor to be used as a bandscope for a TS520, R599 or any other device which has a 3.395 MHz wide band IF accessible somewhere).

I can not fully test it as I do not own a TS520 but it works as expected in my SM-220 (not for sale) when fed with a 3.395 MHz signal from my signal generator.

If anybody is interested, let me know via PM please.

73, Jan

[Non-text portions of this message have been removed]

31630. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 10:04:09 UTC
From: Terry Wagoner
Topic: 31519 Message: 31630

Gordon --Thanks --we will all greatly benefit from your L41 experience. Terry

---
From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, May 31, 2011 10:54:52 PM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Hi Guys,
Whenever I am testing a diode, I always lift one end and then use my
Diode tester to verify that it is good and no leakage.
Same with Transistors and Mosfets. You can test voltages when the
circuit is live, but trying to do the resistance test can give erroneous
results if done in circuit.
I have a L-41 apart here now on the bench. I am going to take pictures
and make a PDF file of step by step instructions on re-winding it.
Need to borrow the XYL's high dollar camera for nice close -ups..... LOL
The primary (6 turns) are wound on the lower part of the bobbin core
and the Secondary (26 turns) are wound on the upper part.
It is important to try and wind each turn NEXT to each other and not all
over the place. (make it uniform)
The wire is very easy to break, so don't be surprised if you have to
attempt it a couple of times to get it right.
The NTE222 is a good replacement, but be ready for sticker shock when
you buy one
Joe,
L4 went out in today's mail to you.
73,
Gordon
N6WK

On 5/31/2011 5:27 PM, Terry Wagoner wrote:
>
> Joe- OK understand why you would want to rewind entirely. How will you
> remove
> the enamel insulation to make your termination? I have burned it off
> on larger
> guage magnet wire. Maybe we could talk Gordon into writing an L41
> procedure and
> post it on his website?
> One more thing dont forget to check diode D2 (ohmmeter forward and
> reverse test)
> and Q1 if you can. Hate to see you put board back in only to find out

> Q1 and/or
> D2 were bad. I dont have much dual gate mosfet experience. I know that
> you have
> to be careful with static charge. I suspect you could set Ohmmeter on
> 10k range
> and measure from gates to source and drain. If you get a reading I
> think it
> would indicate shorted device. Maybe Gordon can advise you on this?
> Maybe you
> should replace Q1 as a precaution? I would imagine there are NTE subs
> that would
> match specs especially noise figure. Good luck -Terry K9TW
>
> _____
> From: Joe Loverti <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tue, May 31, 2011 8:15:48 PM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> Terry: The photo makes it look as if the gauge differs. In reality it
> looks
> like the same gauge. At this point after poking around on the wires, I
> think
> I'd rather just start from scratch with fresh wires. After disassembly, it
> looks like the primary's 6 windings are wound on the bottom section of the
> spool. And the secondary's 26 windings extent to the top.
> Joe
> WW8X
>
> On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...
> <mailto:wagstw46%40yahoo.com>> wrote:
>
> >
> >
> > Joe--From the picture it looks like there are two different guage
> windings?
> > It looks like a heavy guage over a smaller guage? I have never seen
> one. Is
> > it possible you may be able to leave one winding in place? Terry
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@...>
> > wrote:
> > >
> > > Terry: Here's a close-up photo of my L41. The windings appear still
> > bright
> > > and shiny. No evidence of burning. But if you look closely on the
> right

> > side
> > > there's a section of wire missing above where it connects to the
> pin on
> > the
> > > right. Later when I touched the upper piece gently with a tweezer, it
> > broke
> > > again. Now the upper end is buried in the windings... which was
> why was
> > > having trouble figuring out primary and secondary without
> unwinding it.
> > > Joe
> > > WW8X
> > >
> > >
> > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > >
> > > >
> > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> dont know
> > why
> > > > L41 fails like that. Certainly inadvertant transmit RF into the
> SO-239
> > jack
> > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > Kempski
> > > > talks about finding D2 shorted saving the Mosfet and maybe
> taking out
> > L41? I
> > > > have seen post where the person said the windings appeared
> burned black
> > > > and/or fused together. That almost has to be xmit RF or
> lighting? What
> > did
> > > > you see when you took yours apart? If a lead was broken off that
> sounds
> > like
> > > > a weakness from day one that just finally gave up? I dont think
> you did
> > > > anything based on what you have told us. Terry
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@>
> > > > wrote:
> > > > >
> > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > would
> > > > > cause the transformer to one day go bad? Lightening static?
> Stray RF?
> > As

> > > > I
> > > > > said in my original post, one day it was receiving great --
> next day
> > it
> > > > was
> > > > > deaf. I leave no antennas connected when I'm not operating the
> > radios.
> > > > >
> > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > though
> > > > they
> > > > > may need to overlap somewhat. From what I read the wrap technique
> > isn't
> > > > > super critical... but, I do understand your point of
> maintaining the
> > > > winding
> > > > > ratio. On the other hand, I may go ahead at look for the #42 gauge
> > > > enameled
> > > > > wire since I have time waiting on the L4 from Gordon.
> > > > >
> > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > concerning
> > > > > the re-wrap of the L41. I'd be interested in anything not
> covered by
> > > > > K4EAA's website.
> > > > >
> > > > > 73
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > > >
> > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule
> so you
> > > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and
> very
> > easy
> > > > to
> > > > > > break
> > > > > > if too much tension during winding.That is why I suggested
> you ask
> > > > Gordon
> > > > > > about

> > > > > > any lessons learned.
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> > > > > > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > >
> > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
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> > > > > > S-meter
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> > > > > > Terry:
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> > > > > > > > > trying
> > > > > > > > > to figure out which side is the primary and which side
> is the
> > > > > secondary.
> > > > > > > > > For
> > > > > > > > > the life of me I can't find the darn thing on the
> schematic to
> > > > double
> > > > > > > > > check
> > > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > important
> > > > > > > > > it
> > > > > > > > > is
> > > > > > > > > use exactly #42 enameled wire? I have some old RF chokes
> I can
> > get
> > > > wire
> > > > > > > > > from
> > > > > > > > > if the size isn't super critical.
> > > > > > > > >
> > > > > > > > > No other parts needed!! Thank you.
> > > > > > > > >
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hi Terry,
> > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > Joe, I have the coil in the padded envelope and will

> ship it
> > > > tomorrow
> > > > > > > > to
> > > > > > > > > > you.
> > > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > > Any other small parts you need before I seal the envelope?
> > > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > > > Gordon
> > > > > > > > > >
> > > > > > > > > >
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31631. Re: [TS-520_820_530_830] Re: Another TS-820 display issue

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 11:07:45 UTC
From: Charles Coffee
Topic: 31583 Message: 31631

Allen;

Most everyone uses DeOxit D5 for the contact cleaner.

You may want to try cleaning the wiper inside the VFO with DeOxit D5. On
the right side of the VFO (from front of unit) is a cover held
in place with two screws. If you remove one screw and loosen the other,
slide the cover up, in the rear of the VFO is a wiper which
touches the Variable Capacitor and the frame. Try spraying this wiper with
DeOxit D5, and then move the VFO back and forth for
a little while. I have had this cause your type of problem before on the
TS-820. I guess over time, this wiper get dirt/grime and needs
cleaning to make good contact.

Regards and best of luck, 73s

Chuck, KJ4GU

On Tue, May 31, 2011 at 9:54 PM, kb0asq <kb0asq@...> wrote:

> Well that didn't help. It ran all afternoon real solid and then this
> evening, I had to run the band switch again to get it to stabilize.
>
> Couple of questions.
>
> 1. I see most of you are using Deoxit D5. Is that a better option then the
> D100 I am using?
>
> 2. Is this kind of par for the course for the TS-820? Do you just have to
> run the band switch back and forth every once and a while?
>
> Allen
> KBØASQ
> http://kb0asq.com
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "kb0asq" <kb0asq@...> wrote:
> >
> > Interestingly, I had it on all weekend and on Monday it was rock solid.
> >
> > I shut it off last night and this morning, I am back to the same problem.
> Out of frustration, I checked the voltage on the 9v and 3.3v power supplies
> again. They were both at spec. So then I checked the voltage on the socket
> jumper on the back and it read 8.83v. So I took it out and put it back in.
> Now it reads 8.98v and it seems to be solid again.
> >

> > So I am going the get the schematic out and trace it again to see if I
> can find a loose connection somewhere.
> >
> > Allen
> > KB0ASQ
> > http://kb0asq.com
> >
> >
>
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

31632. Re: [TS-520_820_530_830] BS-5 Bandscope Adapter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 17:39:21 UTC
From: pitot1stat@aol.com
Topic: 31628 Message: 31632

I am interested in purchasing it, how much are you asking?

Sent via DROID on Verizon Wireless

-----Original message-----
From: pakjan830 <lategahn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, Jun 1, 2011 08:14:17 GMT+00:00
Subject: [TS-520_820_530_830] BS-5 Bandscope Adapter

Hi all,

I have a spare BS-5 Bandscope adapter (which allows a SM-220 station monitor to be used as a bandscope for a TS520, R599 or any other device which has a 3.395 MHz wide band IF accessible somewhere).

I can not fully test it as I do not own a TS520 but it works as expected in my SM-220 (not for sale) when fed with a 3.395 MHz signal from my signal generator.

If anybody is interested, let me know via PM please.

73, Jan

[Non-text portions of this message have been removed]

31633. 820 display question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 16:27:20 UTC
From: km5wx@bellsouth.net
Topic: 31633 Message: 31633

Hello again I'm glad I found this group as all I own are Kenwood hybrids and this site has a wealth of info. Now the problem at hand. My 820s display has lost the center horizontal lines. IE. the 3's look like backward C's the 5's are missing the center horizontal line etc. Is the display on a plug in connector or is it soldered in? If it's plug in I would attempt replacing it. I assume that's how to fix it? If it's soldered I'll have to refer it to someone else. My soldering skills have become nil due to health issues. Severe hand shakes. Thanks for the help as I know that more than one person here will know how to fix it. In regards to a hybrid net. I'm interested in trying. Maybe we could just set a frequency to call on as it seems to be tough to get a set time? Thanks again. Richard KM5WX

31634. Re: [TS-520_820_530_830] 820 display question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 19:57:24 UTC
From: W5RKL
Topic: 31633 Message: 31634

The TS-820 display "tube" you are referring to plugs into the Display Unit through a multi wire connection. If you remove the top cover you will see the wires that connect to a plug that plugs into the Display Unit. The display tube itself is soldered to the small PC board that mounts behind the front panel. You might consider contacting Bob Mansker, ke5ftf at mail.com, he may have one.

73s
Mike
W5RKL

>_____
>From: "km5wx@..." <km5wx@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 1, 2011 11:27 AM
>Subject: [TS-520_820_530_830] 820 display question
>
>
>
>Hello again I'm glad I found this group as all I own are Kenwood hybrids and this site has a wealth of info. Now the problem at hand. My 820s display has lost the center horizontal lines. IE. the 3's look like backward C's the 5's are missing the center horizontal line etc. Is the display on a plug in connector or is it soldered in? If it's plug in I would attempt replacing it. I assume that's how to fix it? If it's soldered I'll have to refer it to someone else. My soldering skills have become nil due to health issues. Severe hand shakes. Thanks for the help as I know that more than one person here will know how to fix it. In regards to a hybrid net. I'm interested in trying. Maybe we could just set a frequency to call on as it seems to be tough to get a set time? Thanks again. Richard KM5WX
>
>
>
>
>

[Non-text portions of this message have been removed]

31635. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-01 23:15:18 UTC
From: Joe Loverti
Topic: 31519 Message: 31635

Gordon: It would be great to see your progress with the L41 winding demo. I'm sure a lot of us would learn a lot from it! I have my parts ordered: NTE222, NTE177, NTE519, the #42 enameled wire and of course the L4 (coming from you). It will good to get my rig off the bench and back on the air! Thanks to you and Terry for all the patience and sage advice!
73
WW8X
Joe

On Tue, May 31, 2011 at 10:54 PM, <n6wk@...> wrote:

> Hi Guys,
> Whenever I am testing a diode, I always lift one end and then use my
> Diode tester to verify that it is good and no leakage.
> Same with Transistors and Mosfets. You can test voltages when the
> circuit is live, but trying to do the resistance test can give erroneous
> results if done in circuit.
> I have a L-41 apart here now on the bench. I am going to take pictures
> and make a PDF file of step by step instructions on re-winding it.
> Need to borrow the XYL's high dollar camera for nice close -ups..... LOL
> The primary (6 turns) are wound on the lower part of the bobbin core
> and the Secondary (26 turns) are wound on the upper part.
> It is important to try and wind each turn NEXT to each other and not all
> over the place. (make it uniform)
> The wire is very easy to break, so don't be surprised if you have to
> attempt it a couple of times to get it right.
> The NTE222 is a good replacement, but be ready for sticker shock when
> you buy one
> Joe,
> L4 went out in today's mail to you.
> 73,
> Gordon
> N6WK
>
> On 5/31/2011 5:27 PM, Terry Wagoner wrote:
> >
> > Joe- OK understand why you would want to rewind entirely. How will you
> > remove
> > the enamel insulation to make your termination? I have burned it off
> > on larger
> > guage magnet wire. Maybe we could talk Gordon into writing an L41
> > procedure and
> > post it on his website?
> > One more thing dont forget to check diode D2 (ohmmeter forward and

> > reverse test)
> > and Q1 if you can. Hate to see you put board back in only to find out
> > Q1 and/or
> > D2 were bad. I dont have much dual gate mosfet experience. I know that
> > you have
> > to be careful with static charge. I suspect you could set Ohmmeter on
> > 10k range
> > and measure from gates to source and drain. If you get a reading I
> > think it
> > would indicate shorted device. Maybe Gordon can advise you on this?
> > Maybe you
> > should replace Q1 as a precaution? I would imagine there are NTE subs
> > that would
> > match specs especially noise figure. Good luck -Terry K9TW
> >
> > _____
> > From: Joe Loverti <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Tue, May 31, 2011 8:15:48 PM
> > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > S-meter
> > movement
> >
> > Terry: The photo makes it look as if the gauge differs. In reality it
> > looks
> > like the same gauge. At this point after poking around on the wires, I
> > think
> > I'd rather just start from scratch with fresh wires. After disassembly,
> it
> > looks like the primary's 6 windings are wound on the bottom section of
> the
> > spool. And the secondary's 26 windings extent to the top.
> > Joe
> > WW8X
> >
> > On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...
> > <mailto:wagstw46%40yahoo.com>> wrote:
> >
> > >
> > >
> > > Joe--From the picture it looks like there are two different guage
> > windings?
> > > It looks like a heavy guage over a smaller guage? I have never seen
> > one. Is
> > > it possible you may be able to leave one winding in place? Terry
> > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@
> ...>
> > > wrote:

> > > >
> > > > Terry: Here's a close-up photo of my L41. The windings appear still
> > > bright
> > > > and shiny. No evidence of burning. But if you look closely on the
> > right
> > > side
> > > > there's a section of wire missing above where it connects to the
> > pin on
> > > the
> > > > right. Later when I touched the upper piece gently with a tweezer, it
> > > broke
> > > > again. Now the upper end is buried in the windings... which was
> > why was
> > > > having trouble figuring out primary and secondary without
> > unwinding it.
> > > > Joe
> > > > WW8X
> > > >
> > > >
> > > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@...> wrote:
> > > >
> > > > >
> > > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> > dont know
> > > why
> > > > > L41 fails like that. Certainly inadvertant transmit RF into the
> > SO-239
> > > jack
> > > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > > Kempski
> > > > > talks about finding D2 shorted saving the Mosfet and maybe
> > taking out
> > > L41? I
> > > > > have seen post where the person said the windings appeared
> > burned black
> > > > > and/or fused together. That almost has to be xmit RF or
> > lighting? What
> > > did
> > > > > you see when you took yours apart? If a lead was broken off that
> > sounds
> > > like
> > > > > a weakness from day one that just finally gave up? I dont think
> > you did
> > > > > anything based on what you have told us. Terry
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@>
> > > > > wrote:
> > > > > >

> > > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > > would
> > > > > > cause the transformer to one day go bad? Lightening static?
> > Stray RF?
> > > As
> > > > > I
> > > > > > said in my original post, one day it was receiving great --
> > next day
> > > it
> > > > > was
> > > > > > deaf. I leave no antennas connected when I'm not operating the
> > > radios.
> > > > > >
> > > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > > though
> > > > > they
> > > > > > may need to overlap somewhat. From what I read the wrap technique
> > > isn't
> > > > > > super critical... but, I do understand your point of
> > maintaining the
> > > > > winding
> > > > > > ratio. On the other hand, I may go ahead at look for the #42
> gauge
> > > > > enameled
> > > > > > wire since I have time waiting on the L4 from Gordon.
> > > > > >
> > > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > > concerning
> > > > > > the re-wrap of the L41. I'd be interested in anything not
> > covered by
> > > > > > K4EAA's website.
> > > > > >
> > > > > > 73
> > > > > > Joe
> > > > > > WW8X
> > > > > >
> > > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > >
> > > > > > >
> > > > > > >
> > > > > > > Joe--I dont think they had fusing in mind. At that stage of the
> > > > > receiver
> > > > > > you are
> > > > > > dealing with micro-volt signals so current will be miniscule
> > so you
> > > > > dont
> > > > > > need
> > > > > > heavy gage wire. Yes--that wire will be very hard to see and
> > very

> > > easy
> > > > > to
> > > > > > > break
> > > > > > > if too much tension during winding.That is why I suggested
> > you ask
> > > > > Gordon
> > > > > > > about
> > > > > > > any lessons learned.
> > > > > > > >
> > > > > > > If you increase the wire gage it will have an effect on the
> > > inductance
> > > > > of
> > > > > > > the
> > > > > > > winding for same number of turns. If you change the
> > inductance you
> > > will
> > > > > > > change
> > > > > > > the impedance ratio of the Xfmr. I dont think it would be real
> > > > > critical.
> > > > > > > The
> > > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more important
> > > > > > > characteristic
> > > > > > > to maintain. Changing wire guage wont effect the turns ratio
> > unless
> > > you
> > > > > > > cant get
> > > > > > > same number of turns.
> > > > > > > >
> > > > > > > So long winded answer is I would try to wind it with 46
> > guage and
> > > if
> > > > > you
> > > > > > > cant
> > > > > > > then consider going up in guage as long as you can still get 26
> > > turns
> > > > > wound
> > > > > > > on
> > > > > > > the bobbin.
> > > > > > > >
> > > > > > > I have looked for miniature and sub-miniature RF xfmrs (via
> > Google)
> > > and
> > > > > I
> > > > > > > find
> > > > > > > several that come close in value but not sure about correct
> > > dimensions
> > > > > for
> > > > > > > PC
> > > > > > > board thru hole mounting. It looks like a wide band 4:1 xfmr
> > would

> > > work
> > > > > > > just
> > > > > > > fine. If I find a close sub, I will buy a couple to
> > experiment with
> > > as
> > > > > they
> > > > > > > are
> > > > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > >
> > > > > > >
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > > >
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > > Little
> > > > > > > S-meter
> > > > > > > movement
> > > > > > >
> > > > > > > Terry:
> > > > > > > Thanks... found it!! What do you think about the wire gauge?
> > Do you
> > > > > > think
> > > > > > > that would be critical? Even with enlarging goggles on, that
> > is a
> > > > > mighty
> > > > > > > small piece to work with -- That wire is like a human hair
> > width. I
> > > > > wonder
> > > > > > > why the designer's used such a small gauge in the input
> > circuit if
> > > not
> > > > > > for
> > > > > > > it to also serve as fuse to protect the front end.
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@>
> > wrote:
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > Hi Joe--Did you get an answer to location of L41? If not, on
> > > > > schematic
> > > > > > > look
> > > > > > > on right side for the RF Unit bounded by dashed line. Find
> > > Connector

> > > > > 3 on
> > > > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > > line
> > > > > from
> > > > > > > ANT
> > > > > > > > > down to L41. You will see Primary on left side and
> > Secondary on
> > > right
> > > > > > side.
> > > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > > Secondary
> > > > > has
> > > > > > > 26
> > > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look
> at
> > > X-ray
> > > > > view
> > > > > > > > of
> > > > > > > > > RF board on Page 12. Look down at L41. You can see on Left
> > Side
> > > it
> > > > > has 2
> > > > > > > > > Pins and Right Side has 3 Pins. The center pin on Right
> > Side is
> > > Not
> > > > > > > > Connected (NC). The Secondary winding is connected to the
> > Top 2
> > > pins.
> > > > > > The
> > > > > > > > > Top Left goes to C42 and the Top Right goes to L12. The
> > Primary
> > > > > Winding
> > > > > > > > is
> > > > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to
> ground
> > > and
> > > > > > the
> > > > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to
> > you I
> > > have
> > > > > > never
> > > > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> > solenoid
> > > wind
> > > > > > and
> > > > > > > > > not scramble wind. When you unwind the wire you will be
> > able to
> > > tell
> > > > > > which
> > > > > > > > > winding was wound on the bobbin first. I guess if I were

> > doing it
> > > I
> > > > > would
> > > > > > > > wind secondary first and then put primary over it, but it
> > > shouldnt
> > > > > really
> > > > > > > > matter. Gordon will have some tips for you as he has wound
> new
> > > L41
> > > > > xfmrs.
> > > > > > > > Good Luck Terry
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> > > <ww8x.joe@>
> > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> > > process
> > > > > > of
> > > > > > > > > checking out L41 ??? when I pulled the cover off I noticed
> a
> > > clean
> > > > > > break
> > > > > > > > > in
> > > > > > > > > one of the wires. I think I'll have to rewind the coil.
> > Right
> > > now
> > > > > > I'm
> > > > > > > > > trying
> > > > > > > > > to figure out which side is the primary and which side
> > is the
> > > > > > secondary.
> > > > > > > > > For
> > > > > > > > > the life of me I can't find the darn thing on the
> > schematic to
> > > > > > double
> > > > > > > > > check
> > > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > > > important
> > > > > > > > > it
> > > > > > > > > is
> > > > > > > > > use exactly #42 enameled wire? I have some old RF chokes
> > I can
> > > > > > get
> > > > > > > > > wire
> > > > > > > > > from
> > > > > > > > > if the size isn't super critical.
> > > > > > > > >
> > > > > > > > > No other parts needed!! Thank you.

> > > > > > > > > >
> > > > > > > > > > Joe
> > > > > > > > > > WW8X
> > > > > > > > > >
> > > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Hi Terry,
> > > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > > Joe, I have the coil in the padded envelope and will
> > ship it
> > > > > > tomorrow
> > > > > > > > > to
> > > > > > > > > > you.
> > > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > > Any other small parts you need before I seal the
> envelope?
> > > > > > > > >
> > > > > > > > > > 73,
> > > > > > > > > > Gordon
> > > > > > > > >
> > > > > > > > >
> > >
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

31636. Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 02:11:14 UTC
From: Terry Wagoner
Topic: 31458 Message: 31636

Here is status of getting permission to load newsletters on our site.

Contacted Rob N8RT former owner/editor. He has no problem with us doing this however when he sold INRAD he sold the copyright as well.

He told me to contace George Cutsogeorge W2VJN and ask his permission.

I sent George an email using the address I found on QRZ.Com and it comes back undeliverable.

Anyone know how to contact him?

Terry-K9TW

31637. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 03:07:50 UTC
From: pmarkavage@juno.com
Topic: 31458 Message: 31637

I would suspect that when George sold the INRAD business to the current owners, the rights to the newsletters went to these new owners. I can't see any reason for George to hold on to this information.

Pete, wa2cwa

On Thu, 02 Jun 2011 02:11:14 -0000 "Terry Wagoner" <wagstw46@...> writes:
> Here is status of getting permission to load newsletters on our
> site.
>
> Contacted Rob N8RT former owner/editor. He has no problem with us
> doing this however when he sold INRAD he sold the copyright as well.
>
>
> He told me to contace George Cutsogeorge W2VJN and ask his
> permission.
>
> I sent George an email using the address I found on QRZ.Com and it
> comes back undeliverable.
>
> Anyone know how to contact him?
>
> Terry-K9TW

31638. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 10:50:07 UTC
From: Terry Wagoner
Topic: 31458 Message: 31638

That would make sense but I wrote new owners first. Trey Garlough N5KO referred me back to Rob? So at this point after looking at all of the issues not sure other than the nostalgia and history that they would be of any value to our members. I think that is what you told me early on.

From: "pmarkavage@..." <pmarkavage@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 1, 2011 11:07:50 PM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

I would suspect that when George sold the INRAD business to the current owners, the rights to the newsletters went to these new owners. I can't see any reason for George to hold on to this information.

Pete, wa2cwa

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> comes back undeliverable.
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> Anyone know how to contact him?
>
> Terry-K9TW

[Non-text portions of this message have been removed]

31639. Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 15:26:09 UTC
From: ki4ax
Topic: 31458 Message: 31639

Terry,

Don't want to create more work for you... but you could always read the new letters and then publish a review of what is in them. I am sure that there is some good info in them; like wiring the fan to the heater switch. That seems like a pretty good modification to me. Anyway just a thought. Like I said... not trying to create work for you.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> That would make sense but I wrote new owners first. Trey Garlough N5KO referred
> me back to Rob? So at this point after looking at all of the issues not sure
> other than the nostalgia and history that they would be of any value to our
> members. I think that is what you told me early on.
>
> _____
> From: "pmarkavage@..." <pmarkavage@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, June 1, 2011 11:07:50 PM
> Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter
>
>
> I would suspect that when George sold the INRAD business to the current
> owners, the rights to the newsletters went to these new owners. I can't
> see any reason for George to hold on to this information.
>
> Pete, wa2cwa
>
> On Thu, 02 Jun 2011 02:11:14 -0000 "Terry Wagoner" <wagstw46@...>
> writes:
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> > site.
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> > Contacted Rob N8RT former owner/editor. He has no problem with us
> > doing this however when he sold INRAD he sold the copyright as well.
> >
> >
> > He told me to contace George Cutsogeorge W2VJN and ask his
> > permission.
> >
> > I sent George an email using the address I found on QRZ.Com and it
> > comes back undeliverable.
> >
> > Anyone know how to contact him?
> >

> > Terry-K9TW
>
>
>
> [Non-text portions of this message have been removed]
>

31640. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 15:32:28 UTC
From: van wd8aam
Topic: 31458 Message: 31640

here you are:

http://www.custommetalworks.com/photo_gallery/w2vjn/w2vjn.htm

van
wd8aam

At 02:11 6/2/2011, you wrote:
>
>
>Here is status of getting permission to load newsletters on our site.
>
>Contacted Rob N8RT former owner/editor. He has
>no problem with us doing this however when he
>sold INRAD he sold the copyright as well.
>
>He told me to contace George Cutsogeorge W2VJN and ask his permission.
>
>I sent George an email using the address I found
>on QRZ.Com and it comes back undeliverable.
>
>Anyone know how to contact him?
>
>Terry-K9TW
>
>

[Non-text portions of this message have been removed]

31641. Re: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 15:38:13 UTC
From: Terry Wagoner
Topic: 31458 Message: 31641

Dan-- I thought about trying to go thru and high lite only the 520, 820, 530, and 830 articles. I could then make an index of those articles and post it on here and if anyone saw something they were interested in I could summarize it to them Off List? It would be a lot of work. I havent given up yet on getting permission to copy them. Terry

---

From: ki4ax <dan8barb@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 2, 2011 11:26:09 AM
Subject: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

Terry,

Don't want to create more work for you... but you could always read the new letters and then publish a review of what is in them. I am sure that there is some good info in them; like wiring the fan to the heater switch. That seems like a pretty good modification to me.

Anyway just a thought. Like I said... not trying to create work for you.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> That would make sense but I wrote new owners first. Trey Garlough N5KO referred
>
> me back to Rob? So at this point after looking at all of the issues not sure
> other than the nostalgia and history that they would be of any value to our
> members. I think that is what you told me early on.
>
> ---
> From: "pmarkavage@..." <pmarkavage@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Wed, June 1, 2011 11:07:50 PM
> Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter
>
>
> I would suspect that when George sold the INRAD business to the current
> owners, the rights to the newsletters went to these new owners. I can't
> see any reason for George to hold on to this information.
>
> Pete, wa2cwa
>
> On Thu, 02 Jun 2011 02:11:14 -0000 "Terry Wagoner" <wagstw46@...>
> writes:

> > Here is status of getting permission to load newsletters on our
> > site.
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> > Contacted Rob N8RT former owner/editor. He has no problem with us
> > doing this however when he sold INRAD he sold the copyright as well.
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> > He told me to contace George Cutsogeorge W2VJN and ask his
> > permission.
> >
> > I sent George an email using the address I found on QRZ.Com and it
> > comes back undeliverable.
> >
> > Anyone know how to contact him?
> >
> > Terry-K9TW
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31642. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 15:42:16 UTC
From: Terry Wagoner
Topic: 31458 Message: 31642

Van--I had found this. It is advertisement from the company that put up Georges antenna farm (I am envious!). If you click on the link to Georges website it takes you to announcement that old INRAD website is replaced by new owners site. I contacted new owners and no luck with them.
Thank_Terry

From: van wd8aam <vlincoln@frontiernet.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 2, 2011 11:32:28 AM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

here you are:

http://www.custommetalworks.com/photo_gallery/w2vjn/w2vjn.htm

van
wd8aam

At 02:11 6/2/2011, you wrote:
>
>
>Here is status of getting permission to load newsletters on our site.
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>Contacted Rob N8RT former owner/editor. He has
>no problem with us doing this however when he
>sold INRAD he sold the copyright as well.
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>on QRZ.Com and it comes back undeliverable.
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>Anyone know how to contact him?
>
>Terry-K9TW
>
>

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[Non-text portions of this message have been removed]

31643. Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 18:59:12 UTC
From: Bernie
Topic: 31458 Message: 31643

Uses covered under limitations and exceptions to copyright, such as fair use, do not require permission from the copyright owner.

Examples of fair use include commentary, criticism, news reporting, research, teaching, library archiving and scholarship.

These are quotes. I would think that this use would fall under these circumstances.

W8NBC - Bernie

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Dan-- I thought about trying to go thru and high lite only the 520, 820, 530,
> and 830 articles. I could then make an index of those articles and post it on
> here and if anyone saw something they were interested in I could summarize it to
> them Off List? It would be a lot of work. I havent given up yet on getting
> permission to copy them. Terry
>
>
>
> _____
> From: ki4ax <dan8barb@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 2, 2011 11:26:09 AM
> Subject: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter
>
>
> Terry,
>
> Don't want to create more work for you... but you could always read the new
> letters and then publish a review of what is in them. I am sure that there is
> some good info in them; like wiring the fan to the heater switch. That seems
> like a pretty good modification to me.
>
> Anyway just a thought. Like I said... not trying to create work for you.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > That would make sense but I wrote new owners first. Trey Garlough N5KO referred
> >
> > me back to Rob? So at this point after looking at all of the issues not sure
> > other than the nostalgia and history that they would be of any value to our
> > members. I think that is what you told me early on.
> >

> > _____
> > From: "pmarkavage@" <pmarkavage@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, June 1, 2011 11:07:50 PM
> > Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter
> >
> >
> > I would suspect that when George sold the INRAD business to the current
> > owners, the rights to the newsletters went to these new owners. I can't
> > see any reason for George to hold on to this information.
> >
> > Pete, wa2cwa
> >
> > On Thu, 02 Jun 2011 02:11:14 -0000 "Terry Wagoner" <wagstw46@>
> > writes:
> > > Here is status of getting permission to load newsletters on our
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> > > Contacted Rob N8RT former owner/editor. He has no problem with us
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> > > Anyone know how to contact him?
> > >
> > > Terry-K9TW
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31644. Re: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 19:34:07 UTC
From: Terry Wagoner
Topic: 31458 Message: 31644

Bernie--Thanks-- I am not sure what part of this we could claim? Each newsletter has specific prohibitions about "copying" and "reproducing". Appears that commenting on would be legal, but more work than I care to take on.-- I dont want for this to get off on an On List tangent or debate about copyright laws. Appreciate your efforts. Let me exhaust getting permission first and then we can let Group Owners to decide if they want to risk any legal ramifications. I have an email from Rob stating he has no problem with us uploading them , but I dont think he has a dog in the race any longer. Terry

From: Bernie <pizzameister2001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 2, 2011 2:59:12 PM
Subject: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter

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> Dan-- I thought about trying to go thru and high lite only the 520, 820, 530,
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>
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 2, 2011 11:26:09 AM
> Subject: [TS-520_820_530_830] Re: Kenwood Users Group Newsletter
>
>
> Terry,
>

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> letters and then publish a review of what is in them. I am sure that there is
> some good info in them; like wiring the fan to the heater switch. That seems
> like a pretty good modification to me.
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> Anyway just a thought. Like I said... not trying to create work for you.
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
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>
> >
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> > members. I think that is what you told me early on.
> >
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> > From: "pmarkavage@" <pmarkavage@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Wed, June 1, 2011 11:07:50 PM
> > Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter
> >
> >
> > I would suspect that when George sold the INRAD business to the current
> > owners, the rights to the newsletters went to these new owners. I can't
> > see any reason for George to hold on to this information.
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> > Pete, wa2cwa
> >
> > On Thu, 02 Jun 2011 02:11:14 -0000 "Terry Wagoner" <wagstw46@>
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> > > Terry-K9TW
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31645. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 19:40:36 UTC
From: Terry Wagoner
Topic: 31519 Message: 31645

Joe--It might be a good time to install a socket at Q1 the dual gate mosfet RF amplifier. It looks like there would be room. Would make any future repairs a lot easier. I suspect Mouser and/or Digi-key would have a 4 pin socket for the NTE222 package. Just a thought. I too am anxious to watch Gordons YouTube video!-- Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Gordon: It would be great to see your progress with the L41 winding demo.
> I'm sure a lot of us would learn a lot from it! I have my parts ordered:
> NTE222, NTE177, NTE519, the #42 enameled wire and of course the L4 (coming
> from you). It will good to get my rig off the bench and back on the air!
> Thanks to you and Terry for all the patience and sage advice!
> 73
> WW8X
> Joe
>
> On Tue, May 31, 2011 at 10:54 PM, <n6wk@...> wrote:
>
> > Hi Guys,
> > Whenever I am testing a diode, I always lift one end and then use my
> > Diode tester to verify that it is good and no leakage.
> > Same with Transistors and Mosfets. You can test voltages when the
> > circuit is live, but trying to do the resistance test can give erroneous
> > results if done in circuit.
> > I have a L-41 apart here now on the bench. I am going to take pictures
> > and make a PDF file of step by step instructions on re-winding it.
> > Need to borrow the XYL's high dollar camera for nice close -ups..... LOL
> > The primary (6 turns) are wound on the lower part of the bobbin core
> > and the Secondary (26 turns) are wound on the upper part.
> > It is important to try and wind each turn NEXT to each other and not all
> > over the place. (make it uniform)
> > The wire is very easy to break, so don't be surprised if you have to
> > attempt it a couple of times to get it right.
> > The NTE222 is a good replacement, but be ready for sticker shock when
> > you buy one
> > Joe,
> > L4 went out in today's mail to you.
> > 73,
> > Gordon
> > N6WK
> >
> > On 5/31/2011 5:27 PM, Terry Wagoner wrote:
> > >
> > > Joe- OK understand why you would want to rewind entirely. How will you

> > > remove
> > > the enamel insulation to make your termination? I have burned it off
> > > on larger
> > > guage magnet wire. Maybe we could talk Gordon into writing an L41
> > > procedure and
> > > post it on his website?
> > > One more thing dont forget to check diode D2 (ohmmeter forward and
> > > reverse test)
> > > and Q1 if you can. Hate to see you put board back in only to find out
> > > Q1 and/or
> > > D2 were bad. I dont have much dual gate mosfet experience. I know that
> > > you have
> > > to be careful with static charge. I suspect you could set Ohmmeter on
> > > 10k range
> > > and measure from gates to source and drain. If you get a reading I
> > > think it
> > > would indicate shorted device. Maybe Gordon can advise you on this?
> > > Maybe you
> > > should replace Q1 as a precaution? I would imagine there are NTE subs
> > > that would
> > > match specs especially noise figure. Good luck -Terry K9TW
> > >
> > > _____
> > > From: Joe Loverti <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > Sent: Tue, May 31, 2011 8:15:48 PM
> > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > S-meter
> > > movement
> > >
> > > Terry: The photo makes it look as if the gauge differs. In reality it
> > > looks
> > > like the same gauge. At this point after poking around on the wires, I
> > > think
> > > I'd rather just start from scratch with fresh wires. After disassembly,
> > it
> > > looks like the primary's 6 windings are wound on the bottom section of
> > the
> > > spool. And the secondary's 26 windings extent to the top.
> > > Joe
> > > WW8X
> > >
> > > On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...
> > > <mailto:wagstw46%40yahoo.com>> wrote:
> > >
> > > >
> > > >
> > > > Joe--From the picture it looks like there are two different guage

> > > windings?
> > > > It looks like a heavy guage over a smaller guage? I have never seen
> > > one. Is
> > > > it possible you may be able to leave one winding in place? Terry
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@
> > ...>
> > > > wrote:
> > > > >
> > > > > Terry: Here's a close-up photo of my L41. The windings appear still
> > > > bright
> > > > > and shiny. No evidence of burning. But if you look closely on the
> > > right
> > > > side
> > > > > there's a section of wire missing above where it connects to the
> > > pin on
> > > > the
> > > > > right. Later when I touched the upper piece gently with a tweezer, it
> > > > broke
> > > > > again. Now the upper end is buried in the windings... which was
> > > why was
> > > > > having trouble figuring out primary and secondary without
> > > unwinding it.
> > > > > Joe
> > > > > WW8X
> > > > >
> > > > >
> > > > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@> wrote:
> > > > >
> > > > > >
> > > > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> > > dont know
> > > > why
> > > > > > L41 fails like that. Certainly inadvertant transmit RF into the
> > > SO-239
> > > > jack
> > > > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > > > Kempski
> > > > > > talks about finding D2 shorted saving the Mosfet and maybe
> > > taking out
> > > > L41? I
> > > > > > have seen post where the person said the windings appeared
> > > burned black
> > > > > > and/or fused together. That almost has to be xmit RF or
> > > lighting? What
> > > > did
> > > > > > you see when you took yours apart? If a lead was broken off that
> > > sounds

> > > > like
> > > > > > a weakness from day one that just finally gave up? I dont think
> > > you did
> > > > > > anything based on what you have told us. Terry
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@>
> > > > > > wrote:
> > > > > > >
> > > > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > > > would
> > > > > > > cause the transformer to one day go bad? Lightening static?
> > > Stray RF?
> > > > > > As
> > > > > > > I
> > > > > > > > said in my original post, one day it was receiving great --
> > > next day
> > > > > > it
> > > > > > > was
> > > > > > > > deaf. I leave no antennas connected when I'm not operating the
> > > > radios.
> > > > > > > >
> > > > > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > > > though
> > > > > > > they
> > > > > > > > may need to overlap somewhat. From what I read the wrap technique
> > > > isn't
> > > > > > > > super critical... but, I do understand your point of
> > > maintaining the
> > > > > > > winding
> > > > > > > > ratio. On the other hand, I may go ahead at look for the #42
> > gauge
> > > > > > > enameled
> > > > > > > > wire since I have time waiting on the L4 from Gordon.
> > > > > > > >
> > > > > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > > > concerning
> > > > > > > > the re-wrap of the L41. I'd be interested in anything not
> > > covered by
> > > > > > > > K4EAA's website.
> > > > > > > >
> > > > > > > > 73
> > > > > > > > Joe
> > > > > > > > WW8X
> > > > > > > >
> > > > > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@>
> > wrote:
> > > > > > > >
> > > > > > > > >

> > > > > > > >
> > > > > > > > > Joe--I dont think they had fusing in mind. At that stage of the
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> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > > > > >
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and
> > > > Little
> > > > > > > > > S-meter
> > > > > > > > > movement
> > > > > > > > >
> > > > > > > > > Terry:
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> > > > > > > > > > > > on right side for the RF Unit bounded by dashed line. Find
> > > > Connector
> > > > > > 3 on
> > > > > > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > > line
> > > > > > from
> > > > > > > > > > ANT
> > > > > > > > > > > down to L41. You will see Primary on left side and
> > > Secondary on
> > > > > > right
> > > > > > > > > side.
> > > > > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > > > Secondary
> > > > > > has
> > > > > > > > > 26
> > > > > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look
> > at
> > > > > X-ray
> > > > > > view
> > > > > > > > > > of
> > > > > > > > > > > RF board on Page 12. Look down at L41. You can see on Left
> > > Side
> > > > > it
> > > > > > has 2
> > > > > > > > > > > Pins and Right Side has 3 Pins. The center pin on Right
> > > Side is
> > > > > Not
> > > > > > > > > > > Connected (NC). The Secondary winding is connected to the
> > > Top 2
> > > > > pins.
> > > > > > The
> > > > > > > > > > > Top Left goes to C42 and the Top Right goes to L12. The
> > > Primary
> > > > > > Winding
> > > > > > > > > > is
> > > > > > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to
> > ground
> > > > > and
> > > > > > > > > the

> > > > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to
> > > you I
> > > > have
> > > > > > > > > never
> > > > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> > > solenoid
> > > > wind
> > > > > > and
> > > > > > > > > not scramble wind. When you unwind the wire you will be
> > > able to
> > > > tell
> > > > > > > > which
> > > > > > > > > winding was wound on the bobbin first. I guess if I were
> > > doing it
> > > > I
> > > > > > would
> > > > > > > > > wind secondary first and then put primary over it, but it
> > > > shouldnt
> > > > > > really
> > > > > > > > > matter. Gordon will have some tips for you as he has wound
> > new
> > > > L41
> > > > > > xfmrs.
> > > > > > > > > Good Luck Terry
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> > > > <ww8x.joe@>
> > > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> > > > process
> > > > > > of
> > > > > > > > > checking out L41 â□" when I pulled the cover off I noticed
> > a
> > > > clean
> > > > > > break
> > > > > > > > > in
> > > > > > > > > one of the wires. I think I'll have to rewind the coil.
> > > Right
> > > > now
> > > > > > I'm
> > > > > > > > > trying
> > > > > > > > > to figure out which side is the primary and which side
> > > is the
> > > > > > secondary.
> > > > > > > > > For
> > > > > > > > > the life of me I can't find the darn thing on the
> > > schematic to

> > > > > > double
> > > > > > > > > > check
> > > > > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > > > important
> > > > > > > > > it
> > > > > > > > > > is
> > > > > > > > > > use exactly #42 enameled wire? I have some old RF chokes
> > > I can
> > > > > get
> > > > > > wire
> > > > > > > > > from
> > > > > > > > > > if the size isn't super critical.
> > > > > > > > >
> > > > > > > > > No other parts needed!! Thank you.
> > > > > > > > >
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > >
> > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hi Terry,
> > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > Joe, I have the coil in the padded envelope and will
> > > ship it
> > > > > > tomorrow
> > > > > > > > > to
> > > > > > > > > you.
> > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > Any other small parts you need before I seal the
> > envelope?
> > > > > > > > >
> > > > > > > > > 73,
> > > > > > > > > Gordon
> > > > > > > > >
> > > > > > > > >
> > >
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
> >

>
> [Non-text portions of this message have been removed]
>

31646. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 20:21:57 UTC
From: ki4ax
Topic: 31519 Message: 31646

I hope Gordon waves at us on the video... HI HI

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Joe--It might be a good time to install a socket at Q1 the dual gate mosfet RF amplifier. It looks like there would be room. Would make any future repairs a lot easier. I suspect Mouser and/or Digi-key would have a 4 pin socket for the NTE222 package. Just a thought. I too am anxious to watch Gordons YouTube video!-- Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@> wrote:
> >
> > Gordon: It would be great to see your progress with the L41 winding demo.
> > I'm sure a lot of us would learn a lot from it! I have my parts ordered:
> > NTE222, NTE177, NTE519, the #42 enameled wire and of course the L4 (coming
> > from you). It will good to get my rig off the bench and back on the air!
> > Thanks to you and Terry for all the patience and sage advice!
> > 73
> > WW8X
> > Joe
> >
> > On Tue, May 31, 2011 at 10:54 PM, <n6wk@> wrote:
> >
> > > Hi Guys,
> > > Whenever I am testing a diode, I always lift one end and then use my
> > > Diode tester to verify that it is good and no leakage.
> > > Same with Transistors and Mosfets. You can test voltages when the
> > > circuit is live, but trying to do the resistance test can give erroneous
> > > results if done in circuit.
> > > I have a L-41 apart here now on the bench. I am going to take pictures
> > > and make a PDF file of step by step instructions on re-winding it.
> > > Need to borrow the XYL's high dollar camera for nice close -ups..... LOL
> > > The primary (6 turns) are wound on the lower part of the bobbin core
> > > and the Secondary (26 turns) are wound on the upper part.
> > > It is important to try and wind each turn NEXT to each other and not all
> > > over the place. (make it uniform)
> > > The wire is very easy to break, so don't be surprised if you have to
> > > attempt it a couple of times to get it right.
> > > The NTE222 is a good replacement, but be ready for sticker shock when
> > > you buy one
> > > Joe,
> > > L4 went out in today's mail to you.
> > > 73,

> > > Gordon
> > > N6WK
> > >
> > > On 5/31/2011 5:27 PM, Terry Wagoner wrote:
> > > >
> > > > Joe- OK understand why you would want to rewind entirely. How will you
> > > > remove
> > > > the enamel insulation to make your termination? I have burned it off
> > > > on larger
> > > > guage magnet wire. Maybe we could talk Gordon into writing an L41
> > > > procedure and
> > > > post it on his website?
> > > > One more thing dont forget to check diode D2 (ohmmeter forward and
> > > > reverse test)
> > > > and Q1 if you can. Hate to see you put board back in only to find out
> > > > Q1 and/or
> > > > D2 were bad. I dont have much dual gate mosfet experience. I know that
> > > > you have
> > > > to be careful with static charge. I suspect you could set Ohmmeter on
> > > > 10k range
> > > > and measure from gates to source and drain. If you get a reading I
> > > > think it
> > > > would indicate shorted device. Maybe Gordon can advise you on this?
> > > > Maybe you
> > > > should replace Q1 as a precaution? I would imagine there are NTE subs
> > > > that would
> > > > match specs especially noise figure. Good luck -Terry K9TW
> > > >
> > > > _____
> > > > From: Joe Loverti <ww8x.joe@ <mailto:ww8x.joe%40gmail.com>>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Tue, May 31, 2011 8:15:48 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > > S-meter
> > > > movement
> > > >
> > > > Terry: The photo makes it look as if the gauge differs. In reality it
> > > > looks
> > > > like the same gauge. At this point after poking around on the wires, I
> > > > think
> > > > I'd rather just start from scratch with fresh wires. After disassembly,
> > > it
> > > > looks like the primary's 6 windings are wound on the bottom section of
> > > the
> > > > spool. And the secondary's 26 windings extent to the top.
> > > > Joe
> > > > WW8X
> > > >

> > > > On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@
> > > > <mailto:wagstw46%40yahoo.com>> wrote:
> > > >
> > > > >
> > > > > >
> > > > > > Joe--From the picture it looks like there are two different guage
> > > > windings?
> > > > > > It looks like a heavy guage over a smaller guage? I have never seen
> > > > one. Is
> > > > > > it possible you may be able to leave one winding in place? Terry
> > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@
> > > ...>
> > > > > > wrote:
> > > > > > >
> > > > > > > Terry: Here's a close-up photo of my L41. The windings appear still
> > > > > > bright
> > > > > > > and shiny. No evidence of burning. But if you look closely on the
> > > > right
> > > > > > side
> > > > > > > there's a section of wire missing above where it connects to the
> > > > pin on
> > > > > > the
> > > > > > > right. Later when I touched the upper piece gently with a tweezer, it
> > > > > > broke
> > > > > > > again. Now the upper end is buried in the windings... which was
> > > > why was
> > > > > > > having trouble figuring out primary and secondary without
> > > > unwinding it.
> > > > > > > Joe
> > > > > > > WW8X
> > > > > > >
> > > > > > >
> > > > > > > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > > >
> > > > > > > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> > > > dont know
> > > > > > why
> > > > > > > > > L41 fails like that. Certainly inadvertant transmit RF into the
> > > > SO-239
> > > > > > jack
> > > > > > > > > would do it. Induced lighting? Maybe it is a design weakness? Ken
> > > > > > Kempski
> > > > > > > > > talks about finding D2 shorted saving the Mosfet and maybe
> > > > taking out
> > > > > > L41? I
> > > > > > > > > have seen post where the person said the windings appeared

> > > > burned black
> > > > > > > and/or fused together. That almost has to be xmit RF or
> > > > lighting? What
> > > > > did
> > > > > > > you see when you took yours apart? If a lead was broken off that
> > > > sounds
> > > > > like
> > > > > > > a weakness from day one that just finally gave up? I dont think
> > > > you did
> > > > > > > anything based on what you have told us. Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti <ww8x.joe@>
> > > > > > > wrote:
> > > > > > >
> > > > > > > Terry -- I was wondering why L41 is prone to these problems? What
> > > > would
> > > > > > > cause the transformer to one day go bad? Lightening static?
> > > > Stray RF?
> > > > > As
> > > > > > > I
> > > > > > > said in my original post, one day it was receiving great --
> > > > next day
> > > > > it
> > > > > > > was
> > > > > > > deaf. I leave no antennas connected when I'm not operating the
> > > > radios.
> > > > > > >
> > > > > > > I think I could get a slightly heavier gauge to make 26 wraps --
> > > > though
> > > > > > > they
> > > > > > > may need to overlap somewhat. From what I read the wrap technique
> > > > isn't
> > > > > > > super critical... but, I do understand your point of
> > > > maintaining the
> > > > > > > winding
> > > > > > > ratio. On the other hand, I may go ahead at look for the #42
> > > gauge
> > > > > > > enameled
> > > > > > > wire since I have time waiting on the L4 from Gordon.
> > > > > > >
> > > > > > > Gordon, if you're reading this, please add to my knowledge base
> > > > > > > concerning
> > > > > > > the re-wrap of the L41. I'd be interested in anything not
> > > > covered by
> > > > > > > K4EAA's website.
> > > > > > >
> > > > > > > 73
> > > > > > > Joe

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> > > > > > > > > > >
> > > > > > > > > > So long winded answer is I would try to wind it with 46
> > > > guage and
> > > > > > if
> > > > > > > > you
> > > > > > > > > > cant

> > > > > > > > > then consider going up in guage as long as you can still get 26
> > > > > turns
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> > > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
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> > > > > Connector
> > > > > > > > 3 on
> > > > > > > > > > left side of RF unit. Find ANT terminal and follow Bold Black
> > > > > line
> > > > > > > > from
> > > > > > > > > ANT
> > > > > > > > > > down to L41. You will see Primary on left side and
> > > > Secondary on
> > > > > right
> > > > > > > > side.
> > > > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > > > > Secondary
> > > > > > > has
> > > > > > > > > 26
> > > > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual look
> > > at
> > > > > X-ray
> > > > > > > view
> > > > > > > > > of
> > > > > > > > > > RF board on Page 12. Look down at L41. You can see on Left
> > > > Side
> > > > > it
> > > > > > > has 2
> > > > > > > > > > Pins and Right Side has 3 Pins. The center pin on Right
> > > > Side is
> > > > > Not
> > > > > > > > > > Connected (NC). The Secondary winding is connected to the
> > > > Top 2
> > > > > pins.
> > > > > > > > The
> > > > > > > > > > Top Left goes to C42 and the Top Right goes to L12. The
> > > > Primary

> > > > > > > Winding
> > > > > > > > > > is
> > > > > > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to
> > > ground
> > > > > and
> > > > > > > > the
> > > > > > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to
> > > > you I
> > > > > have
> > > > > > > > > > never
> > > > > > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> > > > solenoid
> > > > > wind
> > > > > > > > and
> > > > > > > > > > > not scramble wind. When you unwind the wire you will be
> > > > able to
> > > > > tell
> > > > > > > > > which
> > > > > > > > > > > winding was wound on the bobbin first. I guess if I were
> > > > doing it
> > > > > I
> > > > > > > > would
> > > > > > > > > > > wind secondary first and then put primary over it, but it
> > > > shouldnt
> > > > > > > really
> > > > > > > > > > > matter. Gordon will have some tips for you as he has wound
> > > new
> > > > > L41
> > > > > > > > xfmrs.
> > > > > > > > > > > Good Luck Terry
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> > > > > <ww8x.joe@>
> > > > > > > > > > wrote:
> > > > > > > > > > >
> > > > > > > > > > > Gordon: Thanks very much for sending the L4... I am in the
> > > > > process
> > > > > > > > of
> > > > > > > > > > > checking out L41 â" when I pulled the cover off I noticed
> > > a
> > > > > clean
> > > > > > > > break
> > > > > > > > > > > in
> > > > > > > > > > > one of the wires. I think I'll have to rewind the coil.
> > > > Right
> > > > > now
> > > > > > > > I'm
> > > > > > > > > > > trying

> > > > > > > > > > > > to figure out which side is the primary and which side
> > > > is the
> > > > > > > > > > secondary.
> > > > > > > > > > > For
> > > > > > > > > > > > the life of me I can't find the darn thing on the
> > > > schematic to
> > > > > > > double
> > > > > > > > > > > check
> > > > > > > > > > > > which end is which -- must be blind. I'm also wondering how
> > > > > > important
> > > > > > > > it
> > > > > > > > > > is
> > > > > > > > > > > use exactly #42 enameled wire? I have some old RF chokes
> > > > I can
> > > > > get
> > > > > > wire
> > > > > > > > > > from
> > > > > > > > > > > if the size isn't super critical.
> > > > > > > > > >
> > > > > > > > > > > No other parts needed!! Thank you.
> > > > > > > > > >
> > > > > > > > > > > Joe
> > > > > > > > > > > WW8X
> > > > > > > > > >
> > > > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@> wrote:
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry,
> > > > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > > > Joe, I have the coil in the padded envelope and will
> > > > ship it
> > > > > > tomorrow
> > > > > > > > > > to
> > > > > > > > > > > you.
> > > > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > > > Any other small parts you need before I seal the
> > > envelope?
> > > > > > > > > >
> > > > > > > > > > > 73,
> > > > > > > > > > > Gordon
> > > > > > > > > >
> > > > > > > > > > >
> > > > > >
> > > > >
> > > > >
> > > > >
> > > ---
> > >

> > > Yahoo! Groups Links
> > >
> > >
> > >
> > >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31647. TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 22:21:07 UTC
From: Adam Liette
Topic: 31583 Message: 31647

I posted on this a while back, but as I was trying to get a grip on things, I had to rearrange my priorities. Now I'm back to square one it seems.

I have a 530S on the bench with good (tested) finals, plenty of ALC, and a hot receiver. I've replaced the screen and cathode resistors. When I tune the
radio, it's lucky to put out 1/2 w. It's also cooking a cap on the relay inside the final cage. The cap is from the lug (?) to ground. This cap and relay are what confuses me most. I can find several
sections of RL-1 on the schematic, but I see no designation for the second relay. This makes it tough to find my problem cap on the schematic.

With that cap gone, and most voltages checking within reason in the final cage, I'm wondering where to go next. I'm really not sure how to check voltages on the RF board either. Any tips?

Sorry for repeating my ignorance, but I hope to make this gem work! ;-)

Adam, N8YD

[Non-text portions of this message have been removed]

31648. Re: [TS-520_820_530_830] TS-530 Project...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 22:52:31 UTC
From: W5RKL
Topic: 31583 Message: 31648

Adam,
There are 2 relays in the 530, one on the IF board and one inside the final cage.

Looking at the530's main schematic in the serivce manual, the relay you are referring to is shown directly below the AF Unit board. This relay is located inside the final amplifier enclosure.

The other relay is located on the right rear corner of the IF Unit board.

The relay inside the final amplifier enclosure has a .01ufd disc cap connected across the relay's coil and the cap is labeled "C24". If this cap shorts internally then that relay will not energize because the relay voltage, 14VDC, will route/bypass the relay coil and short to ground.

The cap you are referring to, does it connect to the switch wafer inside the final amplifier enclosure? Other than the .01ufd cap across the relay coil, all the other disc caps connect to switch wafer S22-3 inside the final amplifier enclosure. If the cap does connect to the switch wafer than try tuning up on 15 meters to see if you get full output.

73s
Mike
W5RKL

>_____
>From: Adam Liette <aliette@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Thursday, June 2, 2011 5:21 PM
>Subject: [TS-520_820_530_830] TS-530 Project...
>
>
>
>I posted on this a while back, but as I was trying to get a grip on things,
>I had to rearrange my priorities. Now I'm back to square one it seems.
>
>I have a 530S on the bench with good (tested) finals, plenty of ALC, and a
>hot receiver. I've replaced the screen and cathode resistors. When I tune
>the
>radio, it's lucky to put out 1/2 w. It's also cooking a cap on the relay
>inside the final cage. The cap is from the lug (?) to ground. This cap and
>relay are what confuses me most. I can find several
>sections of RL-1 on the schematic, but I see no designation for the second
>relay. This makes it tough to find my problem cap on the schematic.
>
>With that cap gone, and most voltages checking within reason in the final
>cage, I'm wondering where to go next. I'm really not sure how to check
>voltages on the RF board either. Any tips?

>
>Sorry for repeating my ignorance, but I hope to make this gem work! ;-)
>
>Adam, N8YD
>
>[Non-text portions of this message have been removed]
>
>
>
>
>

[Non-text portions of this message have been removed]

31649. TS820 internal VFO

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-02 23:45:06 UTC
From: jdt970
Topic: 31649 Message: 31649

Im having trouble with the VFO. The outboard VFO works perfectly but the main VFO drops out, jumps Freq.,as I tune. when it is stable it drives the rig ok but it isn't stable very long.

I removed it to the bench and checked it with a scope and frequency counter. the wave form is lovely when its there. It will not go from 5Mhz to 5.5 Mhz. the hightest I can see is about 5.37 unmeshed. an about 4 somethine fully meshed. I sprayed the Cap wiper with contact cleaner. no help I applied pressure to the wiper against the shaft with a plastic tool, no help.

Looking over the schematic, I see that some of the resistors are a different value. For instance, there is a 1 meg where the schematic says it should be 100 ohms. there is a 1 meg resistor between the drain and source of the 3SK22 tacked on to the underside of the board. I tried replacing the 3SK22 with a 40673 and discovered that the pin markings on the board are in error. I reinstalled the 3SK22 and the 1 meg. resistor. I have got the same problem as before.

Has anyone run across this problem before?

Thanks es 73

WD0FTW (Jerry)

31650. ts-530 PA Band switch

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 08:33:54 UTC
From: kd5utc
Topic: 31650 Message: 31650

my pa band switch went bad in my 530s and need to replace it ,anyone know where to find this part? MY TECH SAID ITS CRACKED AND ARCED REAL BAD AND IS NO GOOD ANY INFO NEEDED THANK YOU....

PLZ email me kd5utc@... or kd5utC@...

31651. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 15:23:37 UTC
From: Joe Loverti
Topic: 31519 Message: 31651

Gordon: The L4 arrived this morning. Thanks very much for sending me the part... you are quick!
Best regards,
Joe
WW8X

On Thu, Jun 2, 2011 at 3:40 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--It might be a good time to install a socket at Q1 the dual gate mosfet
> RF amplifier. It looks like there would be room. Would make any future
> repairs a lot easier. I suspect Mouser and/or Digi-key would have a 4 pin
> socket for the NTE222 package. Just a thought. I too am anxious to watch
> Gordons YouTube video!-- Terry K9TW
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > Gordon: It would be great to see your progress with the L41 winding demo.
> > I'm sure a lot of us would learn a lot from it! I have my parts ordered:
> > NTE222, NTE177, NTE519, the #42 enameled wire and of course the L4
> (coming
> > from you). It will good to get my rig off the bench and back on the air!
> > Thanks to you and Terry for all the patience and sage advice!
> > 73
> > WW8X
> > Joe
> >
> > On Tue, May 31, 2011 at 10:54 PM, <n6wk@...> wrote:
> >
> > > Hi Guys,
> > > Whenever I am testing a diode, I always lift one end and then use my
> > > Diode tester to verify that it is good and no leakage.
> > > Same with Transistors and Mosfets. You can test voltages when the
> > > circuit is live, but trying to do the resistance test can give
> erroneous
> > > results if done in circuit.
> > > I have a L-41 apart here now on the bench. I am going to take pictures
> > > and make a PDF file of step by step instructions on re-winding it.
> > > Need to borrow the XYL's high dollar camera for nice close -ups.....
> LOL
> > > The primary (6 turns) are wound on the lower part of the bobbin core

> > > and the Secondary (26 turns) are wound on the upper part.
> > > It is important to try and wind each turn NEXT to each other and not
> all
> > > over the place. (make it uniform)
> > > The wire is very easy to break, so don't be surprised if you have to
> > > attempt it a couple of times to get it right.
> > > The NTE222 is a good replacement, but be ready for sticker shock when
> > > you buy one
> > > Joe,
> > > L4 went out in today's mail to you.
> > > 73,
> > > Gordon
> > > N6WK
> > >
> > > On 5/31/2011 5:27 PM, Terry Wagoner wrote:
> > > >
> > > > Joe- OK understand why you would want to rewind entirely. How will
> you
> > > > remove
> > > > the enamel insulation to make your termination? I have burned it off
> > > > on larger
> > > > guage magnet wire. Maybe we could talk Gordon into writing an L41
> > > > procedure and
> > > > post it on his website?
> > > > One more thing dont forget to check diode D2 (ohmmeter forward and
> > > > reverse test)
> > > > and Q1 if you can. Hate to see you put board back in only to find out
> > > > Q1 and/or
> > > > D2 were bad. I dont have much dual gate mosfet experience. I know
> that
> > > > you have
> > > > to be careful with static charge. I suspect you could set Ohmmeter on
> > > > 10k range
> > > > and measure from gates to source and drain. If you get a reading I
> > > > think it
> > > > would indicate shorted device. Maybe Gordon can advise you on this?
> > > > Maybe you
> > > > should replace Q1 as a precaution? I would imagine there are NTE subs
> > > > that would
> > > > match specs especially noise figure. Good luck -Terry K9TW
> > > >
> > > > _____
> > > > From: Joe Loverti <ww8x.joe@... <mailto:ww8x.joe%40gmail.com>>
> >
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > Sent: Tue, May 31, 2011 8:15:48 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> > > > S-meter
> > > > movement

> > > >
> > > > Terry: The photo makes it look as if the gauge differs. In reality it
> > > > looks
> > > > like the same gauge. At this point after poking around on the wires,
> I
> > > > think
> > > > I'd rather just start from scratch with fresh wires. After
> disassembly,
> > > it
> > > > looks like the primary's 6 windings are wound on the bottom section
> of
> > > the
> > > > spool. And the secondary's 26 windings extent to the top.
> > > > Joe
> > > > WW8X
> > > >
> > > > On Tue, May 31, 2011 at 7:35 PM, Terry Wagoner <wagstw46@...
>
> > > > <mailto:wagstw46%40yahoo.com>> wrote:
> > > >
> > > > >
> > > > >
> > > > > Joe--From the picture it looks like there are two different guage
> > > > windings?
> > > > > It looks like a heavy guage over a smaller guage? I have never seen
> > > > one. Is
> > > > > it possible you may be able to leave one winding in place? Terry
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> <ww8x.joe@
> > > ...>
> > > > > wrote:
> > > > > >
> > > > > > Terry: Here's a close-up photo of my L41. The windings appear
> still
> > > > bright
> > > > > > and shiny. No evidence of burning. But if you look closely on the
> > > > right
> > > > > side
> > > > > > there's a section of wire missing above where it connects to the
> > > > pin on
> > > > > the
> > > > > > right. Later when I touched the upper piece gently with a
> tweezer, it
> > > > broke
> > > > > > again. Now the upper end is buried in the windings... which was
> > > > why was
> > > > > > having trouble figuring out primary and secondary without
> > > > unwinding it.
> > > > > > Joe

> > > > > > WW8X
> > > > > > >
> > > > > > >
> > > > > > > On Tue, May 31, 2011 at 3:03 PM, Terry Wagoner <wagstw46@>
> wrote:
> > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > Joe-- I agree it doesnt have to be perfect solenoid wound. I
> > > > dont know
> > > > > why
> > > > > > > > L41 fails like that. Certainly inadvertant transmit RF into the
> > > > SO-239
> > > > > jack
> > > > > > > > would do it. Induced lighting? Maybe it is a design weakness?
> Ken
> > > > Kempski
> > > > > > > > talks about finding D2 shorted saving the Mosfet and maybe
> > > > taking out
> > > > > L41? I
> > > > > > > > have seen post where the person said the windings appeared
> > > > burned black
> > > > > > > > and/or fused together. That almost has to be xmit RF or
> > > > lighting? What
> > > > > did
> > > > > > > > you see when you took yours apart? If a lead was broken off
> that
> > > > sounds
> > > > > like
> > > > > > > > a weakness from day one that just finally gave up? I dont think
> > > > you did
> > > > > > > > anything based on what you have told us. Terry
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> <ww8x.joe@>
> > > > > > > > wrote:
> > > > > > > > >
> > > > > > > > Terry -- I was wondering why L41 is prone to these problems?
> What
> > > > would
> > > > > > > > cause the transformer to one day go bad? Lightening static?
> > > > Stray RF?
> > > > > As
> > > > > > > > I
> > > > > > > > said in my original post, one day it was receiving great --
> > > > next day
> > > > > it
> > > > > > > > was
> > > > > > > > deaf. I leave no antennas connected when I'm not operating

> the
> > > > > radios.
> > > > > > > > >
> > > > > > > > > I think I could get a slightly heavier gauge to make 26 wraps
> --
> > > > > > though
> > > > > > > > they
> > > > > > > > > may need to overlap somewhat. From what I read the wrap
> technique
> > > > > > isn't
> > > > > > > > > super critical... but, I do understand your point of
> > > > maintaining the
> > > > > > > winding
> > > > > > > > > ratio. On the other hand, I may go ahead at look for the #42
> > > gauge
> > > > > > > enameled
> > > > > > > > > wire since I have time waiting on the L4 from Gordon.
> > > > > > > > > >
> > > > > > > > > Gordon, if you're reading this, please add to my knowledge
> base
> > > > > > concerning
> > > > > > > > > the re-wrap of the L41. I'd be interested in anything not
> > > > covered by
> > > > > > > > K4EAA's website.
> > > > > > > > > >
> > > > > > > > > 73
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > > > >
> > > > > > > > > On Tue, May 31, 2011 at 11:33 AM, Terry Wagoner <wagstw46@>
> > > wrote:
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > Joe--I dont think they had fusing in mind. At that stage of
> the
> > > > > > receiver
> > > > > > > > > you are
> > > > > > > > > dealing with micro-volt signals so current will be
> miniscule
> > > > so you
> > > > > > > dont
> > > > > > > > > need
> > > > > > > > > heavy gage wire. Yes--that wire will be very hard to see
> and
> > > > > very
> > > > > > > easy
> > > > > > > > > to
> > > > > > > > > break
> > > > > > > > > if too much tension during winding.That is why I suggested

> > > > you ask
> > > > > > > Gordon
> > > > > > > > > about
> > > > > > > > > any lessons learned.
> > > > > > > > > >
> > > > > > > > > If you increase the wire gage it will have an effect on the
> > > > inductance
> > > > > > > of
> > > > > > > > > the
> > > > > > > > > winding for same number of turns. If you change the
> > > inductance you
> > > > will
> > > > > > > change
> > > > > > > > > the impedance ratio of the Xfmr. I dont think it would be
> real
> > > > > > critical.
> > > > > > > > > The
> > > > > > > > > Xfmr turns ratio is about 4.34 to 1. That is the more
> important
> > > > > > characteristic
> > > > > > > > > to maintain. Changing wire guage wont effect the turns
> ratio
> > > > unless
> > > > > > > you
> > > > > > > > > > cant get
> > > > > > > > > > same number of turns.
> > > > > > > > > >
> > > > > > > > > So long winded answer is I would try to wind it with 46
> > > guage and
> > > > > > if
> > > > > > > > you
> > > > > > > > > > cant
> > > > > > > > > > then consider going up in guage as long as you can still
> get 26
> > > > > turns
> > > > > > > > wound
> > > > > > > > > > on
> > > > > > > > > > the bobbin.
> > > > > > > > > >
> > > > > > > > > I have looked for miniature and sub-miniature RF xfmrs (via
> > > > Google)
> > > > > > and
> > > > > > > > I
> > > > > > > > > > find
> > > > > > > > > > several that come close in value but not sure about correct
> > > > > dimensions
> > > > > > > > for
> > > > > > > > > > PC
> > > > > > > > > > board thru hole mounting. It looks like a wide band 4:1
> xfmr

> > > > would
> > > > > work
> > > > > > > > > just
> > > > > > > > > fine. If I find a close sub, I will buy a couple to
> > > > experiment with
> > > > > as
> > > > > > > they
> > > > > > > > > are
> > > > > > > > > low cost . I am searching Mouser and Digi-key. 73s Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Joe Loverti <ww8x.joe@>
> > > > > > >
> > > > > > > > >
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > > > > > Sent: Tue, May 31, 2011 9:58:29 AM
> > > > > > > > >
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive
> and
> > > > > Little
> > > > > > > > > S-meter
> > > > > > > > > movement
> > > > > > > >
> > > > > > > > > Terry:
> > > > > > > > > Thanks... found it!! What do you think about the wire
> gauge?
> > > > Do you
> > > > > > > think
> > > > > > > > > that would be critical? Even with enlarging goggles on,
> that
> > > > is a
> > > > > > > mighty
> > > > > > > > > small piece to work with -- That wire is like a human hair
> > > > width. I
> > > > > > > wonder
> > > > > > > > > why the designer's used such a small gauge in the input
> > > > circuit if
> > > > > > > not
> > > > > > > > for
> > > > > > > > > it to also serve as fuse to protect the front end.
> > > > > > > > > Joe
> > > > > > > > > WW8X
> > > > > > > >
> > > > > > > > > On Tue, May 31, 2011 at 7:22 AM, Terry Wagoner <wagstw46@>
> > > > wrote:
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Hi Joe--Did you get an answer to location of L41? If not,

> on
> > > > > > > schematic
> > > > > > > > > look
> > > > > > > > > > on right side for the RF Unit bounded by dashed line.
> Find
> > > > > Connector
> > > > > > > 3 on
> > > > > > > > > > left side of RF unit. Find ANT terminal and follow Bold
> Black
> > > > > line
> > > > > > > from
> > > > > > > > > ANT
> > > > > > > > > > down to L41. You will see Primary on left side and
> > > > Secondary on
> > > > > right
> > > > > > > > side.
> > > > > > > > > > So the Xfmr is a Step UP. The Primary has 6 turns and the
> > > > > Secondary
> > > > > > > has
> > > > > > > > > 26
> > > > > > > > > > turns (per K4EAA FAQs). If you have the Service Manual
> look
> > > at
> > > > > X-ray
> > > > > > > view
> > > > > > > > > of
> > > > > > > > > > RF board on Page 12. Look down at L41. You can see on
> Left
> > > > Side
> > > > > it
> > > > > > > has 2
> > > > > > > > > > Pins and Right Side has 3 Pins. The center pin on Right
> > > > Side is
> > > > > Not
> > > > > > > > > > Connected (NC). The Secondary winding is connected to the
> > > > Top 2
> > > > > pins.
> > > > > > > The
> > > > > > > > > > Top Left goes to C42 and the Top Right goes to L12. The
> > > > Primary
> > > > > > > Winding
> > > > > > > > > is
> > > > > > > > > > connected to the Bottom 2 pins. The Bottom Left goes to
> > > ground
> > > > > and
> > > > > > > the
> > > > > > > > > > Bottom Right goes to junction of C7/L4. As I mentioned to
> > > > you I
> > > > > have
> > > > > > > > > never

> > > > > > > > > > wound an L41. Per Kens K4EAA web site he says to try to
> > > > solenoid
> > > > > wind
> > > > > > > and
> > > > > > > > > > not scramble wind. When you unwind the wire you will be
> > > > able to
> > > > > tell
> > > > > > > > > which
> > > > > > > > > > winding was wound on the bobbin first. I guess if I were
> > > > doing it
> > > > > I
> > > > > > > would
> > > > > > > > > > wind secondary first and then put primary over it, but it
> > > > > shouldnt
> > > > > > > really
> > > > > > > > > > matter. Gordon will have some tips for you as he has
> wound
> > > new
> > > > > L41
> > > > > > > > xfmrs.
> > > > > > > > > > Good Luck Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joe Loverti
> > > > > <ww8x.joe@>
> > > > > > > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > Gordon: Thanks very much for sending the L4... I am in
> the
> > > > > process
> > > > > > > > of
> > > > > > > > > > checking out L41 ??" when I pulled the cover off I
> noticed
> > > a
> > > > > clean
> > > > > > > > break
> > > > > > > > > > in
> > > > > > > > > > one of the wires. I think I'll have to rewind the coil.
> > > > Right
> > > > > now
> > > > > > > > I'm
> > > > > > > > > > trying
> > > > > > > > > > to figure out which side is the primary and which side
> > > > is the
> > > > > > > > secondary.
> > > > > > > > > > For
> > > > > > > > > > the life of me I can't find the darn thing on the
> > > > schematic to
> > > > > > > > double
> > > > > > > > > > check

> > > > > > > > > > > which end is which -- must be blind. I'm also wondering
> how
> > > > > > > important
> > > > > > > > > it
> > > > > > > > > > is
> > > > > > > > > > > use exactly #42 enameled wire? I have some old RF
> chokes
> > > > I can
> > > > > get
> > > > > > > wire
> > > > > > > > > > from
> > > > > > > > > > > if the size isn't super critical.
> > > > > > > > > > >
> > > > > > > > > > > No other parts needed!! Thank you.
> > > > > > > > > > >
> > > > > > > > > > > Joe
> > > > > > > > > > > WW8X
> > > > > > > > > > >
> > > > > > > > > > > On Mon, May 30, 2011 at 1:44 PM, n6wk_skcc3 <n6wk@>
> wrote:
> > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry,
> > > > > > > > > > > > I measured the coil L4 and it measures out at .290uh
> > > > > > > > > > > > Joe, I have the coil in the padded envelope and will
> > > > > ship it
> > > > > > > > tomorrow
> > > > > > > > > > > to
> > > > > > > > > > > > you.
> > > > > > > > > > > > I don't have any spare L41 coils to send though LOL
> > > > > > > > > > > > Any other small parts you need before I seal the
> > > envelope?
> > > > > > > > > > > >
> > > > > > > > > > > > 73,
> > > > > > > > > > > > Gordon
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > >
> > >
> > >
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
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> >
> > [Non-text portions of this message have been removed]
> >
>
>
>

[Non-text portions of this message have been removed]

31652. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 16:02:59 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31652

My pleasure Joe.
I am now almost done with my video for re-winding L-41.
I made an error on winding the primary and wound it clockwise instead
of counterclockwise, so I need to unwind the coil and re-shoot that part
of the video :-)

73,
Gordon

On 6/3/2011 8:23 AM, Joe Loverti wrote:
> Gordon: The L4 arrived this morning. Thanks very much for sending me the
> part... you are quick!
> Best regards,
> Joe
> WW8X
>

31653. Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 16:05:13 UTC
From: sadtenor
Topic: 31653 Message: 31653

Hi! Today I replaced the HV filter caps in my ts830m. The old black caps had a black spot on one of the terminals and I had it in my mind that these were Pos. I wired in the replacement blue ones accordingly. I think I have made a serious error because when I swithced the radio on the light went out and it appears to be "Dead". If the black topped terminals are actually Neg., then I have wired the caps in reverse polarity.
Can someone please confirm if this is the case and what if anything I might be able to do to put things right. I'm concerned I have made a bad situation worse. Thanks for any help/advice etc.. Cheers Jess

31654. Re: [TS-520_820_530_830] Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 16:16:21 UTC
From: n6wk@n6wk.com
Topic: 31653 Message: 31654

Black is NEGATIVE

73,
Gordon

On 6/3/2011 9:05 AM, sadtenor wrote:
>
> Hi! Today I replaced the HV filter caps in my ts830m. The old black
> caps had a black spot on one of the terminals and I had it in my mind
> that these were Pos. I wired in the replacement blue ones accordingly.
> I think I have made a serious error because when I swithced the radio
> on the light went out and it appears to be "Dead". If the black topped
> terminals are actually Neg., then I have wired the caps in reverse
> polarity.
> Can someone please confirm if this is the case and what if anything I
> might be able to do to put things right. I'm concerned I have made a
> bad situation worse. Thanks for any help/advice etc.. Cheers Jess
>
>

31655. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 16:29:17 UTC
From: Joe Loverti
Topic: 31519 Message: 31655

Gordon, I can't wait to see your demo. That will be so cool... and helpful
to lots of us who will eventually need to rewind the L41 to get our rigs
back on the air!
Joe
WW8X

On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:

>
>
> My pleasure Joe.
> I am now almost done with my video for re-winding L-41.
> I made an error on winding the primary and wound it clockwise instead
> of counterclockwise, so I need to unwind the coil and re-shoot that part
> of the video :-)
>
> 73,
> Gordon
>
>
> On 6/3/2011 8:23 AM, Joe Loverti wrote:
> > Gordon: The L4 arrived this morning. Thanks very much for sending me the
> > part... you are quick!
> > Best regards,
> > Joe
> > WW8X
> >
>
>
>

[Non-text portions of this message have been removed]

31656. Missing Screw on TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 16:56:04 UTC
From: jim.goldring
Topic: 31656 Message: 31656

When cleaning and lubricating my newly acquired TS-820S, I lost one of the two 1/4-inch screws that mount the bottom of the VFO compartment to the bottom of the chassis. If someone has an extra screw I'd sure like to get one. Just call me at (509)427-4101 or email me at jimgoldring@.... Thanks!
73,
Jim Goldring, AK7R

31657. Re: Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 17:10:25 UTC
From: sadtenor
Topic: 31653 Message: 31657

Thanks Gordon - I feared it might be. Do you think I could get away with some more New Caps. and fuse?
Cheers Jess
--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Black is NEGATIVE
>
> 73,
> Gordon
>
> On 6/3/2011 9:05 AM, sadtenor wrote:
> >
> > Hi! Today I replaced the HV filter caps in my ts830m. The old black
> > caps had a black spot on one of the terminals and I had it in my mind
> > that these were Pos. I wired in the replacement blue ones accordingly.
> > I think I have made a serious error because when I swithced the radio
> > on the light went out and it appears to be "Dead". If the black topped
> > terminals are actually Neg., then I have wired the caps in reverse
> > polarity.
> > Can someone please confirm if this is the case and what if anything I
> > might be able to do to put things right. I'm concerned I have made a
> > bad situation worse. Thanks for any help/advice etc.. Cheers Jess
> >
> >
>

31658. Re: [TS-520_820_530_830] Re: Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 17:20:17 UTC
From: n6wk@n6wk.com
Topic: 31653 Message: 31658

Hi Jess,
You might be able to just re-wire the caps correctly and insert a new fuse.
I would certainly try that if the caps show now signs of damage such as
the bottom being swollen of cracked.
Let us know what you decide to do and what the results are.
Be sure to use ONLY a 6 amp fuse. Nothing bigger!
Another good device is the transformer saver. It is in the files section
of the group.
Very easy to build and protects the rig during testing.

73,
Gordon
N6WK

On 6/3/2011 10:10 AM, sadtenor wrote:
>
>
> Thanks Gordon - I feared it might be. Do you think I could get away
> with some more New Caps. and fuse?
> Cheers Jess
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Black is NEGATIVE
> >
> > 73,
> > Gordon
> >
> > On 6/3/2011 9:05 AM, sadtenor wrote:
> > >
> > > Hi! Today I replaced the HV filter caps in my ts830m. The old black
> > > caps had a black spot on one of the terminals and I had it in my mind
> > > that these were Pos. I wired in the replacement blue ones
> accordingly.
> > > I think I have made a serious error because when I swithced the radio
> > > on the light went out and it appears to be "Dead". If the black
> topped
> > > terminals are actually Neg., then I have wired the caps in reverse
> > > polarity.
> > > Can someone please confirm if this is the case and what if anything I
> > > might be able to do to put things right. I'm concerned I have made a
> > > bad situation worse. Thanks for any help/advice etc.. Cheers Jess
> > >
> > >
> >

>
>

31659. Re: [TS-520_820_530_830] Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 18:01:38 UTC
From: Don Langston
Topic: 31653 Message: 31659

On 6/3/2011 11:16 AM, n6wk@... wrote:
> Black is NEGATIVE
>
> 73,
> Gordon
>
> On 6/3/2011 9:05 AM, sadtenor wrote:
>> Hi! Today I replaced the HV filter caps in my ts830m. The old black
>> caps had a black spot on one of the terminals and I had it in my mind
>> that these were Pos. I wired in the replacement blue ones accordingly.
>> I think I have made a serious error because when I swithced the radio
>> on the light went out and it appears to be "Dead". If the black topped
>> terminals are actually Neg., then I have wired the caps in reverse
>> polarity.
>> Can someone please confirm if this is the case and what if anything I
>> might be able to do to put things right. I'm concerned I have made a
>> bad situation worse. Thanks for any help/advice etc.. Cheers Jess
>>
>>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
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>

YEP! You put them in backwards. FYI black denotes neg on electric caps.
rewire them, replace the fuse and enjoy.
Don.

31660. Re: [TS-520_820_530_830] Re: Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 18:05:49 UTC
From: n6wk@n6wk.com
Topic: 31653 Message: 31660

Jess,
if you are running from 240 volt mains, the fuse should be 4 amp.
I assumed you were running from 120 volt when I stated to use a 6 amp fuse.
Not sure what voltage is used in the UK

Gordon

On 6/3/2011 10:10 AM, sadtenor wrote:
>
>
> Thanks Gordon - I feared it might be. Do you think I could get away
> with some more New Caps. and fuse?
> Cheers Jess
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Black is NEGATIVE
> >
> > 73,
> > Gordon
> >
> > On 6/3/2011 9:05 AM, sadtenor wrote:
> > >
> > > Hi! Today I replaced the HV filter caps in my ts830m. The old black
> > > caps had a black spot on one of the terminals and I had it in my mind
> > > that these were Pos. I wired in the replacement blue ones
> accordingly.
> > > I think I have made a serious error because when I swithced the radio
> > > on the light went out and it appears to be "Dead". If the black
> topped
> > > terminals are actually Neg., then I have wired the caps in reverse
> > > polarity.
> > > Can someone please confirm if this is the case and what if anything I
> > > might be able to do to put things right. I'm concerned I have made a
> > > bad situation worse. Thanks for any help/advice etc.. Cheers Jess
> > >
> > >
> >
>
>

31661. Re: Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 20:30:47 UTC
From: sadtenor
Topic: 31653 Message: 31661

Thank you Gentlemen! Despite my best efforts to blow this old radio up I have just finished a QSO with an old friend S51ZZ, who gave me a good report. I did what you said Don and things seem to be working fine. The meter light is not working but I can live with that until I can get a bulb.
I replaced the blown fuse and checked the caps which seemed OK and re-did the installation correctly this time.
It is very comforting having all this support and guidance that this forum offers. Many thanks to you all. Cheers Jess (G8IYE)
--- In TS-520_820_530_830@yahoogroups.com, Don Langston <donaldl37@...> wrote:
>
> On 6/3/2011 11:16 AM, n6wk@... wrote:
> > Black is NEGATIVE
> >
> > 73,
> > Gordon
> >
> > On 6/3/2011 9:05 AM, sadtenor wrote:
> >> Hi! Today I replaced the HV filter caps in my ts830m. The old black
> >> caps had a black spot on one of the terminals and I had it in my mind
> >> that these were Pos. I wired in the replacement blue ones accordingly.
> >> I think I have made a serious error because when I swithced the radio
> >> on the light went out and it appears to be "Dead". If the black topped
> >> terminals are actually Neg., then I have wired the caps in reverse
> >> polarity.
> >> Can someone please confirm if this is the case and what if anything I
> >> might be able to do to put things right. I'm concerned I have made a
> >> bad situation worse. Thanks for any help/advice etc.. Cheers Jess
> >>
> >>
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
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> >
> >
>
> YEP! You put them in backwards. FYI black denotes neg on electric caps.
> rewire them, replace the fuse and enjoy.
> Don.
>

31662. Picked up a 520 s today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-03 22:57:24 UTC
From: Brian
Topic: 31662 Message: 31662

Picked up a 520 s today for $75.Receives great, have not tried transmitting yet but was assured it works fine. Cabinet is in good shape too. Serial number is 750516, any idea on when it was manufactored?

Also included was 2 dg-5s. One works, the other some of the leds are dead. Can they be repaired?

Thanks KB4MNG

31663. Re: [TS-520_820_530_830] Picked up a 520 s today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 01:04:53 UTC
From: jeffrey lord
Topic: 31662 Message: 31663

looks like you got a bargin , especially if all is working.

In AUS the 520S are selling for 5 times that

Jeff
VK4FNRS

From: Brian <bsa0791@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, 3 June, 2011 2:57:24 PM
Subject: [TS-520_820_530_830] Picked up a 520 s today...

Picked up a 520 s today for $75.Receives great, have not tried transmitting yet
but was assured it works fine. Cabinet is in good shape too. Serial number is
750516, any idea on when it was manufactored?

Also included was 2 dg-5s. One works, the other some of the leds are dead. Can
they be repaired?

Thanks KB4MNG

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31664. Re: Error replacing HV filter Caps Ts 830m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 01:06:44 UTC
From: Bill
Topic: 31653 Message: 31664

Hi Jess,

I'm glad to hear that everything turned out okay for you. I just hate when I make that kind of mistakes!

73,

Bill KU8H

31666. 599 twins - new relays

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 01:12:41 UTC
From: Bill
Topic: 31666 Message: 31666

Hi Everybody,

I posted about ordering new relays for my twins. They arrived and I installed them. The flaky operation of the receiver was corrected. The ALC in the transmitter is now applied but the 9 volt battery trick still will not get mine below about 10 watts. I can dial it down to around about 1 watt with the drive control but it's reassuring to see the ALC actually applied.

73,

Bill KU8H

31667. Re: Picked up a 520 s today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 01:22:15 UTC
From: ki4ax
Topic: 31662 Message: 31667

What a luckey duck. Where am I when all these good deals are going down? HI. HI.

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, "Brian" <bsa0791@...> wrote:
>
> Picked up a 520 s today for $75.Receives great, have not tried transmitting yet but was assured it works fine. Cabinet is in good shape too. Serial number is 750516, any idea on when it was manufactored?
>
> Also included was 2 dg-5s. One works, the other some of the leds are dead. Can they be repaired?
>
> Thanks KB4MNG
>

31668. Looking For...HF Rig

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 03:18:18 UTC
From: John P.
Topic: 31662 Message: 31668

Hi all,

  Just started looking for an HF rig. Want to get back onto HF.

  1st choice -- TS-520 or 530 series
  2nd choice -- TS 4xx series
  3rd choice -- TS-8xx series.

  Your input is welcome as well as anyone looking to sell. Did have a Heathkit SB-101 a ways back but circumstances required me to sell it.

Thanks,
John - WA2HIP
http://wa2hip.com

[Non-text portions of this message have been removed]

31669. Re: [TS-520_820_530_830] Looking For...HF Rig

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 03:55:09 UTC
From: n6wk@n6wk.com
Topic: 31662 Message: 31669

John,
If I had a choice, I would get a TS-830S
That is MY opinion

73,
Gordon
n6WK

On 6/3/2011 8:18 PM, John P. wrote:
>
> Hi all,
>
> Just started looking for an HF rig. Want to get back onto HF.
>
> 1st choice -- TS-520 or 530 series
> 2nd choice -- TS 4xx series
> 3rd choice -- TS-8xx series.
>
> Your input is welcome as well as anyone looking to sell. Did have a
> Heathkit SB-101 a ways back but circumstances required me to sell it.
>
> Thanks,
> John - WA2HIP
> http://wa2hip.com
>
> [Non-text portions of this message have been removed]
>
>

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31670. Re: [TS-520_820_530_830] Looking For...HF Rig

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 11:12:21 UTC
From: John P.
Topic: 31662 Message: 31670

Hi,

  Thanks for the input. I agree. Yet, at this time it is a matter of affording it and also availability.

John - WA2HIP
http://wa2hip.com

--- On Fri, 6/3/11, n6wk@... <n6wk@...> wrote:

From: n6wk@n6wk.com <n6wk@...>
Subject: Re: [TS-520_820_530_830] Looking For...HF Rig
To: TS-520_820_530_830@yahoogroups.com
Date: Friday, June 3, 2011, 11:55 PM

John,
If I had a choice, I would get a TS-830S
That is MY opinion

73,
Gordon
n6WK

On 6/3/2011 8:18 PM, John P. wrote:
>
> Hi all,
>
> Just started looking for an HF rig. Want to get back onto HF.
>
> 1st choice -- TS-520 or 530 series
> 2nd choice -- TS 4xx series
> 3rd choice -- TS-8xx series.
>
> Your input is welcome as well as anyone looking to sell. Did have a
> Heathkit SB-101 a ways back but circumstances required me to sell it.
>
> Thanks,
> John - WA2HIP
> http://wa2hip.com
>
> [Non-text portions of this message have been removed]
>
>

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[Non-text portions of this message have been removed]

31671. Plate capacitor setting?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 14:24:28 UTC
From: b.mcmillan@sbcglobal.net
Topic: 31671 Message: 31671

Just bought a ts520s and pulled all the knobs to clean the gunk off. When I went to replace the knobs I discovered that the plate capacitor knob can actually turn completely in circles! Unfortunately I did not mark the position of the pointer and I am nervous that I will not find the dip quickly when I tune up for the first time.

Based on the 180 degree scale on the face plate, I assume the proper adjustment runs from plates completely meshed to plates completely open.

Can anyone tell me if the completely meshed position relates to 3.5mhz or would it be the other way around?

31672. Re: [TS-520_820_530_830] Plate capacitor setting?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 16:20:16 UTC
From: n6wk@n6wk.com
Topic: 31671 Message: 31672

Plates fully Closed is the 3.5 position

73,
gordon
N6WK

On 6/4/2011 7:24 AM, b.mcmillan@... wrote:
> Just bought a ts520s and pulled all the knobs to clean the gunk off.
> When I went to replace the knobs I discovered that the plate capacitor
> knob can actually turn completely in circles! Unfortunately I did not
> mark the position of the pointer and I am nervous that I will not find
> the dip quickly when I tune up for the first time.
>
> Based on the 180 degree scale on the face plate, I assume the proper
> adjustment runs from plates completely meshed to plates completely open.
>
> Can anyone tell me if the completely meshed position relates to 3.5mhz
> or would it be the other way around?
>
>

31673. Re: [TS-520_820_530_830] Plate capacitor setting?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 16:46:35 UTC
From: Bill McMillan
Topic: 31671 Message: 31673

Thank you Gordon! I will pay better attenton the next time I pull the knobs!

73,
Bill
N0YUD

From: "n6wk@n6wk.com" <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, June 4, 2011 11:20:16 AM
Subject: Re: [TS-520_820_530_830] Plate capacitor setting?

Plates fully Closed is the 3.5 position

73,
gordon
N6WK

On 6/4/2011 7:24 AM, b.mcmillan@... wrote:
>
> Just bought a ts520s and pulled all the knobs to clean the gunk off.
> When I went to replace the knobs I discovered that the plate capacitor
> knob can actually turn completely in circles! Unfortunately I did not
> mark the position of the pointer and I am nervous that I will not find
> the dip quickly when I tune up for the first time.
>
> Based on the 180 degree scale on the face plate, I assume the proper
> adjustment runs from plates completely meshed to plates completely open.
>
> Can anyone tell me if the completely meshed position relates to 3.5mhz
> or would it be the other way around?
>
>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31674. suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 20:20:11 UTC
From: ktwhy2003
Topic: 31674 Message: 31674

It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...

On BIAS it's only showing 20ma now (mode USB, meter IP)
and all the rest of the tune up process is correspondingly low.
I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?

31675. TS 530 verses a TS 130

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 20:16:16 UTC
From: Brian
Topic: 31675 Message: 31675

Along with my 520s I also purchased a TS 130. I was told the ts 130 is a mobile version of the 530. I find that hard to believe. Is the receiver in the TS 130 on the same level as the hybrids?

Thanks KB4MNG

31676. Re: [TS-520_820_530_830] suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 21:47:25 UTC
From: W5RKL
Topic: 31674 Message: 31676

I seriously doubt the lightning arrestor has anything to do with your problem.

You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).

Also, what is the IP meter showing at maximum power output (top meter scale).

It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).

73s
Mike
W5RKL

>_____
>From: ktwhy2003 <ktwhy2003@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Saturday, June 4, 2011 3:20 PM
>Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
>
>
>
>It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
>
>On BIAS it's only showing 20ma now (mode USB, meter IP)
>and all the rest of the tune up process is correspondingly low.
>I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?
>
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[Non-text portions of this message have been removed]

31677. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 21:58:23 UTC
From: ktwhy2003
Topic: 31674 Message: 31677

400 volts on the HV

about 125ma on CW send mode. so both about half normal.
I'll check the rely after dinner, don't want to be opening it up while cooking.

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> I seriously doubt the lightning arrestor has anything to do with your problem.
>
> You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
>
> Also, what is the IP meter showing at maximum power output (top meter scale).
>
> It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
> >_____
> >From: ktwhy2003 <ktwhy2003@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Saturday, June 4, 2011 3:20 PM
> >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> >
> >
> >Â
> >It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
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> >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?
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>
> [Non-text portions of this message have been removed]
>

31678. Re: TS 530 verses a TS 130

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 22:03:55 UTC
From: w5rkl
Topic: 31675 Message: 31678

This sound more like a personal opinion than fact from Kenwood. Although the TS-130 has the same band coverage and "similar" power rating as the TS-530, I've never heard or read where the TS-130 is Kenwood's "mobile" version of the TS-530.

The TS-130 has a sideband PEP input power rating of 200 watts and a CW DC input power rating of 160 watts.

The TS-530 has a sideband PEP input power rating of 200 watts and a CW DC input power rating of 180 watts.

The "20 watts" DC input power difference in CW mode between the TS-130 and TS-530 will not make any difference at the receiving end.

The TS-130 receiver, with appropriate filters installed and assuming the TS-130 is aligned properly and operating according to specifications, is quite similar, if not equal to the TS-530. Operating mobile will not, in many cases, produce the same as operating from your house. Antennas, type of antenna used, radiation patterns, and physical location play a role in efficient mobile operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@...m, "Brian" <bsa0791@...> wrote:
>
> Along with my 520s I also purchased a TS 130. I was told the ts 130 is a mobile version of the 530. I find that hard to believe. Is the receiver in the TS 130 on the same level as the hybrids?
>
>
> Thanks KB4MNG
>

31679. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 22:09:55 UTC
From: w5rkl
Topic: 31674 Message: 31679

If the HV is only 400VDC then one of the HV filter capacitors has failed.

I recommend replacing both HV filter capacitors with new caps, obtained from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and .01ufd disc capacitors with new components along with new HV filter caps. Ken, K4EAA, sells a HV rebuild kit which as all these components.

When you replace the HV caps, pay attention to the leads. Remember, "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps have a strip down the side of the capacitor that points to the "negative" terminal. If you have a high res digital camera, take a picture of how the leads of the failed capacitors are connected. The HV supply in the 830, just like all the other hybrids, is a voltage "doubling" supply. The two HV filter capacitors are wired in "series" NOT "parallel"!

If there is any doubt in your ability to perform the capacitor replacement, locate a local ham who has experience and knowledge to help you. Don't try it if you have any doubt you can do the job successfully and "safely".

If you do it yourself, thoroughly check your work to ensure the capacitors are connected properly BEFORE you apply power! Don't be in a hurry, take your time.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> 400 volts on the HV
>
> about 125ma on CW send mode. so both about half normal.
> I'll check the rely after dinner, don't want to be opening it up while cooking.
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> >
> > I seriously doubt the lightning arrestor has anything to do with your problem.
> >
> > You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
> >
> > Also, what is the IP meter showing at maximum power output (top meter scale).
> >
> > It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the

relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > >_____
> > >From: ktwhy2003 <ktwhy2003@>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Saturday, June 4, 2011 3:20 PM
> > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> > >
> > >
> > >Â
> > >It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
> > >
> > >On BIAS it's only showing 20ma now (mode USB, meter IP)
> > >and all the rest of the tune up process is correspondingly low.
> > >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?
> > >
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> > >
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> >
> > [Non-text portions of this message have been removed]
> >
>

31680. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 22:11:21 UTC
From: w5rkl
Topic: 31674 Message: 31680

Your problem appears to be the HV filter capacitors. For now, replace the HV filter caps and I suspect your problem will be solved. The AF Unit relay does not appear, at this point, to be the source of your problem.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> 400 volts on the HV
>
> about 125ma on CW send mode. so both about half normal.
> I'll check the rely after dinner, don't want to be opening it up while cooking.
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> >
> > I seriously doubt the lightning arrestor has anything to do with your problem.
> >
> > You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
> >
> > Also, what is the IP meter showing at maximum power output (top meter scale).
> >
> > It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> >
> > >_____
> > >From: ktwhy2003 <ktwhy2003@>
> > >To: TS-520_820_530_830@yahoogroups.com
> > >Sent: Saturday, June 4, 2011 3:20 PM
> > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> > >

> > >
> > >Â
> > >It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
> > >
> > >On BIAS it's only showing 20ma now (mode USB, meter IP)
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> > >
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> >
> > [Non-text portions of this message have been removed]
> >
>

31681. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-04 23:04:35 UTC
From: ktwhy2003
Topic: 31674 Message: 31681

THanks for the info. I'm pretty good with a soldering iron, been into electronics since I was 7, now 44. There's a guy that sells the kit on ebay that's an hour drive from here, may just see if I can go buy them from him since there's a postal strike on in Canada right now. I won't want to have it hung up some place for weeks..

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If the HV is only 400VDC then one of the HV filter capacitors has failed.
>
> I recommend replacing both HV filter capacitors with new caps, obtained from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and .01ufd disc capacitors with new components along with new HV filter caps. Ken, K4EAA, sells a HV rebuild kit which as all these components.
>
> When you replace the HV caps, pay attention to the leads. Remember, "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps have a strip down the side of the capacitor that points to the "negative" terminal. If you have a high res digital camera, take a picture of how the leads of the failed capacitors are connected. The HV supply in the 830, just like all the other hybrids, is a voltage "doubling" supply. The two HV filter capacitors are wired in "series" NOT "parallel"!
>
> If there is any doubt in your ability to perform the capacitor replacement, locate a local ham who has experience and knowledge to help you. Don't try it if you have any doubt you can do the job successfully and "safely".
>
> If you do it yourself, thoroughly check your work to ensure the capacitors are connected properly BEFORE you apply power! Don't be in a hurry, take your time.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@> wrote:
> >
> > 400 volts on the HV
> >
> > about 125ma on CW send mode. so both about half normal.
> > I'll check the rely after dinner, don't want to be opening it up while cooking.
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> > >
> > > I seriously doubt the lightning arrestor has anything to do with your problem.

> > >
> > > You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
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> > >
> > > 73s
> > > Mike
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> > >
> > >
> > >
> > > >_____
> > > >From: ktwhy2003 <ktwhy2003@>
> > > >To: TS-520_820_530_830@yahoogroups.com
> > > >Sent: Saturday, June 4, 2011 3:20 PM
> > > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
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> > > >
> > > >
> > > >
> > > >
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> > >
> > > [Non-text portions of this message have been removed]
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>

31682. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 02:26:27 UTC
From: Joe Loverti
Topic: 31519 Message: 31682

I rewound L41 and installed the L4 that I received from Gordon. I carefully installed the RF board and reassembled the radio. There is some improvement...I can hear signals and the S-meter is responsive. Problem is the the AF volume control needs to be nearly fully clockwise to get a nice full volume. Before the initial problem, the volume was comfortably loud with the AF control at 9 o'clock.

Maybe I didn't do a great job at rewinding the L41? I'm not sure how critical the windings are...then again, maybe there's another issue.

73,
Joe
WW8X

On Fri, Jun 3, 2011 at 12:29 PM, Joe Loverti <ww8x.joe@...> wrote:

> Gordon, I can't wait to see your demo. That will be so cool... and helpful
> to lots of us who will eventually need to rewind the L41 to get our rigs
> back on the air!
> Joe
> WW8X
>
>
> On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:
>
>>
>>
>> My pleasure Joe.
>> I am now almost done with my video for re-winding L-41.
>> I made an error on winding the primary and wound it clockwise instead
>> of counterclockwise, so I need to unwind the coil and re-shoot that part
>> of the video :-)
>>
>> 73,
>> Gordon
>>
>>
>> On 6/3/2011 8:23 AM, Joe Loverti wrote:
>> > Gordon: The L4 arrived this morning. Thanks very much for sending me the
>> > part... you are quick!
>> > Best regards,
>> > Joe
>> > WW8X
>> >
>>

>>
>>
>
>

[Non-text portions of this message have been removed]

31683. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 11:29:17 UTC
From: Terry Wagoner
Topic: 31519 Message: 31683

Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it on and tune to it do you have to reduce the AF Gain? Do you have a signal generator? In absence of generator apply your finger or jumper clip lead to VC-1 and VC-2 as you previously did-- Terry
--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> I rewound L41 and installed the L4 that I received from Gordon. I carefully
> installed the RF board and reassembled the radio. There is some
> improvement...I can hear signals and the S-meter is responsive. Problem is
> the the AF volume control needs to be nearly fully clockwise to get a nice
> full volume. Before the initial problem, the volume was comfortably loud
> with the AF control at 9 o'clock.
>
> Maybe I didn't do a great job at rewinding the L41? I'm not sure how
> critical the windings are...then again, maybe there's another issue.
>
> 73,
> Joe
> WW8X
>
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> > Joe
> > WW8X
> >
> >
> > On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:
> >
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> >> I made an error on winding the primary and wound it clockwise instead
> >> of counterclockwise, so I need to unwind the coil and re-shoot that part
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> >> 73,
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> >> On 6/3/2011 8:23 AM, Joe Loverti wrote:
> >> > Gordon: The L4 arrived this morning. Thanks very much for sending me the

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>
> [Non-text portions of this message have been removed]
>

31684. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 14:06:20 UTC
From: Joe Loverti
Topic: 31519 Message: 31684

Terry... it seems I've got more problems than the lower, but improved receive. Now I have no RF output.

I must have made a mistake or misalignment of the shafts in reassembly. I made notes as I took it apart and followed the notes when putting it together. I'm able to peak the drive on the ALC meter when in Tune. But, I'm unable to get a dip in plate current. Turning the plate control has no effect at all. I'm going to go back inside and see what I've messed up.

The calibrator volume seems loud to my ears, but on any band never moves the meter beyond S7.

73,
WW8X
Joe

On Sun, Jun 5, 2011 at 7:29 AM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it on
> and tune to it do you have to reduce the AF Gain? Do you have a signal
> generator? In absence of generator apply your finger or jumper clip lead to
> VC-1 and VC-2 as you previously did-- Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > I rewound L41 and installed the L4 that I received from Gordon. I
> carefully
> > installed the RF board and reassembled the radio. There is some
> > improvement...I can hear signals and the S-meter is responsive. Problem
> is
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> >
> > Maybe I didn't do a great job at rewinding the L41? I'm not sure how
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> > Joe
> > WW8X
> >

> >
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> > >
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> > >
> > >>
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> > >> My pleasure Joe.
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> > >> I made an error on winding the primary and wound it clockwise instead
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> > >> 73,
> > >> Gordon
> > >>
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> > >> On 6/3/2011 8:23 AM, Joe Loverti wrote:
> > >> > Gordon: The L4 arrived this morning. Thanks very much for sending me
> the
> > >> > part... you are quick!
> > >> > Best regards,
> > >> > Joe
> > >> > WW8X
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31685. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 14:23:19 UTC
From: Terry Wagoner
Topic: 31519 Message: 31685

Joe--Alignment of RF board bandswitch S1 to PA cage bandswitch S22 is critical. Mike W5RKL has posted detailed step by step several times. You can search archives for it. I would not attempt anymore loading until you assure S22 has been re-coupled correctly. If not, can damage finals.
Get RF output fixed and then go back to low receive. Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 5, 2011 10:06:20 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Terry... it seems I've got more problems than the lower, but improved receive. Now I have no RF output.

I must have made a mistake or misalignment of the shafts in reassembly. I made notes as I took it apart and followed the notes when putting it together. I'm able to peak the drive on the ALC meter when in Tune. But, I'm unable to get a dip in plate current. Turning the plate control has no effect at all. I'm going to go back inside and see what I've messed up.

The calibrator volume seems loud to my ears, but on any band never moves the meter beyond S7.

73,
WW8X
Joe

On Sun, Jun 5, 2011 at 7:29 AM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it on
> and tune to it do you have to reduce the AF Gain? Do you have a signal
> generator? In absence of generator apply your finger or jumper clip lead to
> VC-1 and VC-2 as you previously did-- Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> wrote:
> >
> > I rewound L41 and installed the L4 that I received from Gordon. I
> carefully
> > installed the RF board and reassembled the radio. There is some
> > improvement...I can hear signals and the S-meter is responsive. Problem

> is
> > the the AF volume control needs to be nearly fully clockwise to get a
> nice
> > full volume. Before the initial problem, the volume was comfortably loud
> > with the AF control at 9 o'clock.
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> > Maybe I didn't do a great job at rewinding the L41? I'm not sure how
> > critical the windings are...then again, maybe there's another issue.
> >
> > 73,
> > Joe
> > WW8X
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> > On Fri, Jun 3, 2011 at 12:29 PM, Joe Loverti <ww8x.joe@...> wrote:
> >
> > > Gordon, I can't wait to see your demo. That will be so cool... and
> helpful
> > > to lots of us who will eventually need to rewind the L41 to get our
> rigs
> > > back on the air!
> > > Joe
> > > WW8X
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> > >
> > > On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:
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> > >> My pleasure Joe.
> > >> I am now almost done with my video for re-winding L-41.
> > >> I made an error on winding the primary and wound it clockwise instead
> > >> of counterclockwise, so I need to unwind the coil and re-shoot that
> part
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> > >> 73,
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> > >> On 6/3/2011 8:23 AM, Joe Loverti wrote:
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Yahoo! Groups Links

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31686. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 14:38:00 UTC
From: W5RKL
Topic: 31519 Message: 31686

Joe,

It appears you have the band switch S22 switch shaft and long band switch shaft out of alignment.

Remove ALL power to the 830.

Ensure the HV capacitors have bled down to zero.

Place the 830 with the front panel facing you.

Remove the final amplifier cover.

Remove V1, front 6146.

Set the band switch to the "10Mhz" position. That is not 10 meters.

The switch shaft on the switch inside the final amplifier has 2 flat spots. With the band switch set to 10Mhz, one flat spot must be exactly vertical on the right and the other flat spot should be exactly horizontal on the bottom.

If this not how the switch assembly shaft inside the final amplifier is in your 830 then the long band switch shaft is out of sync with S22 switch assembly shaft inside the final amplifier enclosure.

The flat spots I am referring to are on the short S22 switch shaft NOT the long band switch shaft.

73s
Mike
W5RKL

>_____
>From: Joe Loverti <ww8x.joe@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, June 5, 2011 9:06 AM
>Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement
>
>Terry... it seems I've got more problems than the lower, but improved
>receive. Now I have no RF output.
>
>I must have made a mistake or misalignment of the shafts in reassembly. I
>made notes as I took it apart and followed the notes when putting it
>together. I'm able to peak the drive on the ALC meter when in Tune. But, I'm
>unable to get a dip in plate current. Turning the plate control has no
>effect at all. I'm going to go back inside and see what I've messed up.

>
>The calibrator volume seems loud to my ears, but on any band never moves the
>meter beyond S7.
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>73,
>WW8X
>Joe
>
>On Sun, Jun 5, 2011 at 7:29 AM, Terry Wagoner <wagstw46@...> wrote:
>
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>>
>> Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it on
>> and tune to it do you have to reduce the AF Gain? Do you have a signal
>> generator? In absence of generator apply your finger or jumper clip lead to
>> VC-1 and VC-2 as you previously did-- Terry
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>> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
>> wrote:
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>> > I rewound L41 and installed the L4 that I received from Gordon. I
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>> > installed the RF board and reassembled the radio. There is some
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>> > the the AF volume control needs to be nearly fully clockwise to get a
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>> > full volume. Before the initial problem, the volume was comfortably loud
>> > with the AF control at 9 o'clock.
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>> > Maybe I didn't do a great job at rewinding the L41? I'm not sure how
>> > critical the windings are...then again, maybe there's another issue.
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>> > On Fri, Jun 3, 2011 at 12:29 PM, Joe Loverti <ww8x.joe@...> wrote:
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>> > > Gordon, I can't wait to see your demo. That will be so cool... and
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>> > > to lots of us who will eventually need to rewind the L41 to get our
>> rigs
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>> > > On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:

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>> > >> My pleasure Joe.
>> > >> I am now almost done with my video for re-winding L-41.
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>> > >> of counterclockwise, so I need to unwind the coil and re-shoot that
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>> > >> On 6/3/2011 8:23 AM, Joe Loverti wrote:
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31687. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 14:41:18 UTC
From: W5RKL
Topic: 31519 Message: 31687

Joe,

If you continue tuning the transmitter with the band switch out of sync, the plates on "both" 6146s will turn RED and you can easily damage not only the final tubes but also the HV supply and possibly other components.

If you can't find the steps to align the band switch, drop me an e-mail and I'll give them to you. It's not difficult.

73s
Mike
W5RKL

>_____
>From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sunday, June 5, 2011 9:23 AM
>Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement
>
>
>
>Joe--Alignment of RF board bandswitch S1 to PA cage bandswitch S22 is critical.
>Mike W5RKL has posted detailed step by step several times. You can search
>archives for it. I would not attempt anymore loading until you assure S22 has
>been re-coupled correctly. If not, can damage finals.
>Get RF output fixed and then go back to low receive. Terry
>
>_____
>From: Joe Loverti <ww8x.joe@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Sun, June 5, 2011 10:06:20 AM
>Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter
>movement
>
>Terry... it seems I've got more problems than the lower, but improved
>receive. Now I have no RF output.
>
>I must have made a mistake or misalignment of the shafts in reassembly. I
>made notes as I took it apart and followed the notes when putting it
>together. I'm able to peak the drive on the ALC meter when in Tune. But, I'm
>unable to get a dip in plate current. Turning the plate control has no
>effect at all. I'm going to go back inside and see what I've messed up.
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>The calibrator volume seems loud to my ears, but on any band never moves the
>meter beyond S7.

>
>73,
>WW8X
>Joe
>
>On Sun, Jun 5, 2011 at 7:29 AM, Terry Wagoner <wagstw46@yahoo.com> wrote:
>
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>> Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it on
>> and tune to it do you have to reduce the AF Gain? Do you have a signal
>> generator? In absence of generator apply your finger or jumper clip lead to
>> VC-1 and VC-2 as you previously did-- Terry
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
>> wrote:
>> >
>> > I rewound L41 and installed the L4 that I received from Gordon. I
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>> > installed the RF board and reassembled the radio. There is some
>> > improvement...I can hear signals and the S-meter is responsive. Problem
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>> > the the AF volume control needs to be nearly fully clockwise to get a
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>> > full volume. Before the initial problem, the volume was comfortably loud
>> > with the AF control at 9 o'clock.
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>> > Maybe I didn't do a great job at rewinding the L41? I'm not sure how
>> > critical the windings are...then again, maybe there's another issue.
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>> > > Gordon, I can't wait to see your demo. That will be so cool... and
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>> > > to lots of us who will eventually need to rewind the L41 to get our
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>> > > back on the air!
>> > > Joe
>> > > WW8X
>> > >
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>> > > On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:
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>> > >>
>> > >>

>> > >> My pleasure Joe.
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31688. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 20:40:18 UTC
From: John Becker
Topic: 31458 Message: 31688

At 09:11 PM 6/1/2011, you wrote: IN PART

>I sent George an email using the address I found on QRZ.Com and it comes back undeliverable.
>
>Anyone know how to contact him?
>
>Terry-K9TW
Then that would leave you with 2 choices..

1 try to find a land line phone number

or

Good ol US MAIL system

John, W0JAB

31689. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 21:35:16 UTC
From: Terry Wagoner
Topic: 31458 Message: 31689

John --I thought one of our members might know him and have his current email address.

I did the white page searches (people, phone etc) and came up empty.

I will snail mail him using the address on QRZ.com.

After looking at the newsletters I am glad I got to see them and will hang on to them. However, someone who was familiar with them posted that much of the info contained has already hit the internet especially the mods and there would not be much value to our members to have access to them.

If snail mail fails then I think that is where we will be at.

Terry -K9TW

From: John Becker <jab@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 5, 2011 4:40:18 PM
Subject: Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

At 09:11 PM 6/1/2011, you wrote: IN PART

>I sent George an email using the address I found on QRZ.Com and it comes back
>undeliverable.
>
>
>Anyone know how to contact him?
>
>Terry-K9TW
Then that would leave you with 2 choices..

1 try to find a land line phone number

or

Good ol US MAIL system

John, W0JAB

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31690. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 21:57:56 UTC
From: Joe Loverti
Topic: 31519 Message: 31690

Mike,
The short shaft inside the RF cage has two flat sides opposite of each other. I'm confused when you say the flat on the right should be perfectly vertical and the flat on the bottom should be perfectly horizontal. What am I missing? Also since the control will rotate 360 degrees, how do you know it's not 180 degrees out of sync? I don't mean to thick headed.
Thanks,
Joe
WW8X

[Non-text portions of this message have been removed]

31691. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 22:14:27 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31691

Joe,
I have NEVER seen a TS-830S final cage band switch that had the flats
opposite each other. They have always been exactly as mike stated.
The long shaft coming through from the front has the flats on each side,
but the Final cage output band switch has them at 90 degrees apart.
I can send a picture if needed

73,
Gordon

On 6/5/2011 2:57 PM, Joe Loverti wrote:
>
> Mike,
> The short shaft inside the RF cage has two flat sides opposite of each
> other. I'm confused when you say the flat on the right should be perfectly
> vertical and the flat on the bottom should be perfectly horizontal.
> What am
> I missing? Also since the control will rotate 360 degrees, how do you know
> it's not 180 degrees out of sync? I don't mean to thick headed.
> Thanks,
> Joe
> WW8X
>
> [Non-text portions of this message have been removed]
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>

31692. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 22:18:28 UTC
From: Chris Parnell
Topic: 31519 Message: 31692

Gordon, I don't have this problem but would appreciate a photo of this too.

Thanks
Chris, ZL1CDP

Sent from my iPhone

On 6/06/2011, at 10:14 AM, n6wk@... wrote:

> Joe,
> I have NEVER seen a TS-830S final cage band switch that had the flats
> opposite each other. They have always been exactly as mike stated.
> The long shaft coming through from the front has the flats on each side,
> but the Final cage output band switch has them at 90 degrees apart.
> I can send a picture if needed
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> 73,
> Gordon
>
> On 6/5/2011 2:57 PM, Joe Loverti wrote:
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>> Mike,
>> The short shaft inside the RF cage has two flat sides opposite of each
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>> vertical and the flat on the bottom should be perfectly horizontal.
>> What am
>> I missing? Also since the control will rotate 360 degrees, how do you know
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>> Thanks,
>> Joe
>> WW8X
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31693. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 22:48:45 UTC
From: Joe Loverti
Topic: 31519 Message: 31693

I guess I'm in big do-do, because mine has the flats on opposite sides. Now what?
73,
WW8X
Joe

On Sun, Jun 5, 2011 at 6:14 PM, <n6wk@...> wrote:

> Joe,
> I have NEVER seen a TS-830S final cage band switch that had the flats
> opposite each other. They have always been exactly as mike stated.
> The long shaft coming through from the front has the flats on each side,
> but the Final cage output band switch has them at 90 degrees apart.
> I can send a picture if needed
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> 73,
> Gordon
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> On 6/5/2011 2:57 PM, Joe Loverti wrote:
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> > The short shaft inside the RF cage has two flat sides opposite of each
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> > Thanks,
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31694. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 22:50:40 UTC
From: w5rkl
Topic: 31519 Message: 31694

Joe,

Make sure the HV filter capacitors are discharged to zero before continuing.

Remove the top cover of the 830 then remove the top cover of the final amplifier enclosure.

Remove V1, front 6146. Removing V1 gives you a clear view of the band switch coupler and the shaft of switch S22's shaft.

Switch "S22" is inside the final amplifier enclosure.

If you look closely you will see 2 flats on the shaft of switch S22. You can easily see them by rotating the band switch and watch as the shaft of S22 rotates. Once you see the flats and how they are on switch S22's shaft then all this will make sense.

Just remember, do NOT set the band switch to 10 meters!! A number of hams have confused "10" on the band switch to mean "10 meters" but that's not true!! Setting the band switch to "10" is "10Mhz" NOT "10 meters"!!

I agree, Gordon, send him the picture. This will help him understand what we are talking about, the flats on the shaft of S22.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Mike,
> The short shaft inside the RF cage has two flat sides opposite of each
> other. I'm confused when you say the flat on the right should be perfectly
> vertical and the flat on the bottom should be perfectly horizontal. What am
> I missing? Also since the control will rotate 360 degrees, how do you know
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> Thanks,
> Joe
> WW8X
>
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31695. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 22:51:25 UTC
From: w5rkl
Topic: 31519 Message: 31695

Joe,

Is this with the band switch set to "10" on the front panel?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> I guess I'm in big do-do, because mine has the flats on opposite sides. Now
> what?
> 73,
> WW8X
> Joe
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> On Sun, Jun 5, 2011 at 6:14 PM, <n6wk@...> wrote:
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> > Joe,
> > I have NEVER seen a TS-830S final cage band switch that had the flats
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31696. Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-05 23:11:15 UTC
From: w5rkl
Topic: 31519 Message: 31696

One additional comment. You will need a "1.5mm" metric hex tool to loosen the set screws on the band switch coupler. A normal hex tool will not work. You can typically purchase metric hex tools at most hardware stores, that's where I bought mine. A set cost around $6 to $8.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> I guess I'm in big do-do, because mine has the flats on opposite sides. Now
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> > know
> > > it's not 180 degrees out of sync? I don't mean to thick headed.
> > > Thanks,
> > > Joe
> > > WW8X
> > >

> > > [Non-text portions of this message have been removed]
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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31697. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 00:03:23 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31697

Hi Chris and Joe,
Attached are some pics that should help.
I have tried to use arrows and labels to explain. The switch i used is
out of the radio but hope this clears it up

73,
Gordon

On 6/5/2011 3:18 PM, Chris Parnell wrote:
>
> Gordon, I don't have this problem but would appreciate a photo of this
> too.
>
> Thanks
> Chris, ZL1CDP
>
> Sent from my iPhone
>
> On 6/06/2011, at 10:14 AM, n6wk@... <mailto:n6wk%40n6wk.com> wrote:
>
> > Joe,
> > I have NEVER seen a TS-830S final cage band switch that had the flats
> > opposite each other. They have always been exactly as mike stated.
> > The long shaft coming through from the front has the flats on each
> side,
> > but the Final cage output band switch has them at 90 degrees apart.
> > I can send a picture if needed
> >
> > 73,
> > Gordon
> >
> > On 6/5/2011 2:57 PM, Joe Loverti wrote:
> >>
> >> Mike,
> >> The short shaft inside the RF cage has two flat sides opposite of each
> >> other. I'm confused when you say the flat on the right should be
> perfectly
> >> vertical and the flat on the bottom should be perfectly horizontal.
> >> What am
> >> I missing? Also since the control will rotate 360 degrees, how do
> you know
> >> it's not 180 degrees out of sync? I don't mean to thick headed.
> >> Thanks,
> >> Joe

> >> WW8X
> >>
> >> [Non-text portions of this message have been removed]
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> > ------------------------------------
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> > Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31698. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 00:37:20 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31698

The pictures can be seen here as well
http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/

On 6/5/2011 5:03 PM, n6wk@... wrote:
> Hi Chris and Joe,
> Attached are some pics that should help.
> I have tried to use arrows and labels to explain. The switch I used is
> out of the radio but hope this clears it up
>
> 73,
> Gordon

31699. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 00:47:23 UTC
From: Joe Loverti
Topic: 31519 Message: 31699

Thanks Gordon,
I finally located the flats on the short shaft inside the RF cage. They are as described and as your photos show. When I aligned the vertical on the right side and the horizontal on the bottom and positioned the front dial to "10" -- when the rig powers up the digital display is way off and doesn't align with the band numbers on lthe front of the dial. I sent an email to Mike about this... I think I'm still out of alignment.
73,
WW8X
Joe

On Sun, Jun 5, 2011 at 8:37 PM, <n6wk@...> wrote:

>
>
> The pictures can be seen here as well
>
> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
>
>
> On 6/5/2011 5:03 PM, n6wk@... wrote:
> > Hi Chris and Joe,
> > Attached are some pics that should help.
> > I have tried to use arrows and labels to explain. The switch I used is
> > out of the radio but hope this clears it up
> >
> > 73,
> > Gordon
>
>
>

[Non-text portions of this message have been removed]

31700. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 01:28:44 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31700

Sounds like maybe you have the front shaft 180 degrees out
What does the display show when you are on the 10 MHZ position ?

Gordon

On 6/5/2011 5:47 PM, Joe Loverti wrote:
> Thanks Gordon,
> I finally located the flats on the short shaft inside the RF cage. They are
> as described and as your photos show. When I aligned the vertical on the
> right side and the horizontal on the bottom and positioned the front dial to
> "10" -- when the rig powers up the digital display is way off and doesn't
> align with the band numbers on lthe front of the dial. I sent an email to
> Mike about this... I think I'm still out of alignment.
> 73,
> WW8X
> Joe
>
> On Sun, Jun 5, 2011 at 8:37 PM,<n6wk@...> wrote:
>
>>
>> The pictures can be seen here as well
>>
>> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
>>
>>
>> On 6/5/2011 5:03 PM, n6wk@... wrote:
>>> Hi Chris and Joe,
>>> Attached are some pics that should help.
>>> I have tried to use arrows and labels to explain. The switch I used is
>>> out of the radio but hope this clears it up
>>>
>>> 73,
>>> Gordon
>>
>>
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> [Non-text portions of this message have been removed]
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31701. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 02:01:23 UTC
From: Joe Loverti
Topic: 31519 Message: 31701

Gordon,
The display reads 29 mhz in the 10 mhz position -- 28 mhz in the 7 mhz position... You're correct: 180 degrees out on all positions. What I don't understand is why the rig won't tune when the dispaly is reading 7 mhz? What would it matter what number the knob is pointing at as long as the frequency display is correct? Seems like I could just loosen the knob and turn it to the correct number?
73,
WW8X
Joe

On Sun, Jun 5, 2011 at 9:28 PM, <n6wk@...> wrote:

>
>
> Sounds like maybe you have the front shaft 180 degrees out
> What does the display show when you are on the 10 MHZ position ?
>
> Gordon
>
>
> On 6/5/2011 5:47 PM, Joe Loverti wrote:
> > Thanks Gordon,
> > I finally located the flats on the short shaft inside the RF cage. They
> are
> > as described and as your photos show. When I aligned the vertical on the
> > right side and the horizontal on the bottom and positioned the front dial
> to
> > "10" -- when the rig powers up the digital display is way off and doesn't
> > align with the band numbers on lthe front of the dial. I sent an email to
> > Mike about this... I think I'm still out of alignment.
> > 73,
> > WW8X
> > Joe
> >
> > On Sun, Jun 5, 2011 at 8:37 PM,<n6wk@...> wrote:
> >
> >>
> >> The pictures can be seen here as well
> >>
> >>
> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
> >>
> >>

> >> On 6/5/2011 5:03 PM, n6wk@... wrote:
> >>> Hi Chris and Joe,
> >>> Attached are some pics that should help.
> >>> I have tried to use arrows and labels to explain. The switch I used is
> >>> out of the radio but hope this clears it up
> >>>
> >>> 73,
> >>> Gordon
> >>
> >>
> > [Non-text portions of this message have been removed]
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31702. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 02:09:33 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31702

Joe,
You must loosen the front set screws on the coupler, slide the shaft completely out of the front section, then rotate the shaft 180 degrees, re-install it into the RF board and slide it into the rear coupler and then tighten the screws.
Everyone of the wafers on the RF Board band switch MUST be in the correct position as well as the output band switch for the radio to work properly.
Each one of the little white center pieces of the Rf Board band switch Wafers has a small DOT and a Notch on them. They all have to be orientated the same way as well.
For me, it is a 5 minute job, but then again, I have done dozens of them

Gordon
N6WK

On 6/5/2011 7:01 PM, Joe Loverti wrote:
> Gordon,
> The display reads 29 mhz in the 10 mhz position -- 28 mhz in the 7 mhz
> position... You're correct: 180 degrees out on all positions. What I don't
> understand is why the rig won't tune when the dispaly is reading 7 mhz? What
> would it matter what number the knob is pointing at as long as the frequency
> display is correct? Seems like I could just loosen the knob and turn it to
> the correct number?
> 73,
> WW8X
> Joe
>
>
> On Sun, Jun 5, 2011 at 9:28 PM,<n6wk@...> wrote:
>
>>
>> Sounds like maybe you have the front shaft 180 degrees out
>> What does the display show when you are on the 10 MHZ position ?
>>
>> Gordon
>>
>>
>> On 6/5/2011 5:47 PM, Joe Loverti wrote:
>>> Thanks Gordon,
>>> I finally located the flats on the short shaft inside the RF cage. They
>> are
>>> as described and as your photos show. When I aligned the vertical on the
>>> right side and the horizontal on the bottom and positioned the front dial

>> to
>>> "10" -- when the rig powers up the digital display is way off and doesn't
>>> align with the band numbers on lthe front of the dial. I sent an email to
>>> Mike about this... I think I'm still out of alignment.
>>> 73,
>>> WW8X
>>> Joe
>>>
>>> On Sun, Jun 5, 2011 at 8:37 PM,<n6wk@...> wrote:
>>>
>>>> The pictures can be seen here as well
>>>>
>>>>
>> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
>>>>
>>>> On 6/5/2011 5:03 PM, n6wk@... wrote:
>>>>> Hi Chris and Joe,
>>>>> Attached are some pics that should help.
>>>>> I have tried to use arrows and labels to explain. The switch I used is
>>>>> out of the radio but hope this clears it up
>>>>>
>>>>> 73,
>>>>> Gordon
>>>>
>>> [Non-text portions of this message have been removed]
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31703. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 02:19:55 UTC
From: Joe Loverti
Topic: 31519 Message: 31703

Gordon,
I understand that... and will do. I wonder if some how I got the wafers themselves misaligned. I did insert the shaft to turn the wafers when I cleaned them with a little deoxit, when the RF board was out on the bench. How can I double check the white dot and the notch? How should they be orientated when the shaft is inserted correctly and the pointer is on "10"?
73,
WW8X
Joe

On Sun, Jun 5, 2011 at 10:09 PM, <n6wk@...> wrote:

>
>
> Joe,
> You must loosen the front set screws on the coupler, slide the shaft
> completely out of the front section, then rotate the shaft 180 degrees,
> re-install it into the RF board and slide it into the rear coupler and
> then tighten the screws.
> Everyone of the wafers on the RF Board band switch MUST be in the
> correct position as well as the output band switch for the radio to work
> properly.
> Each one of the little white center pieces of the Rf Board band switch
> Wafers has a small DOT and a Notch on them. They all have to be
> orientated the same way as well.
> For me, it is a 5 minute job, but then again, I have done dozens of them
>
> Gordon
> N6WK
>
>
> On 6/5/2011 7:01 PM, Joe Loverti wrote:
> > Gordon,
> > The display reads 29 mhz in the 10 mhz position -- 28 mhz in the 7 mhz
> > position... You're correct: 180 degrees out on all positions. What I
> don't
> > understand is why the rig won't tune when the dispaly is reading 7 mhz?
> What
> > would it matter what number the knob is pointing at as long as the
> frequency
> > display is correct? Seems like I could just loosen the knob and turn it
> to
> > the correct number?
> > 73,

> > WW8X
> > Joe
> >
> >
> > On Sun, Jun 5, 2011 at 9:28 PM,<n6wk@...> wrote:
> >
> >>
> >> Sounds like maybe you have the front shaft 180 degrees out
> >> What does the display show when you are on the 10 MHZ position ?
> >>
> >> Gordon
> >>
> >>
> >> On 6/5/2011 5:47 PM, Joe Loverti wrote:
> >>> Thanks Gordon,
> >>> I finally located the flats on the short shaft inside the RF cage. They
> >> are
> >>> as described and as your photos show. When I aligned the vertical on
> the
> >>> right side and the horizontal on the bottom and positioned the front
> dial
> >> to
> >>> "10" -- when the rig powers up the digital display is way off and
> doesn't
> >>> align with the band numbers on lthe front of the dial. I sent an email
> to
> >>> Mike about this... I think I'm still out of alignment.
> >>> 73,
> >>> WW8X
> >>> Joe
> >>>
> >>> On Sun, Jun 5, 2011 at 8:37 PM,<n6wk@...> wrote:
> >>>
> >>>> The pictures can be seen here as well
> >>>>
> >>>>
> >>
> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
> >>>>
> >>>> On 6/5/2011 5:03 PM, n6wk@... wrote:
> >>>>> Hi Chris and Joe,
> >>>>> Attached are some pics that should help.
> >>>>> I have tried to use arrows and labels to explain. The switch I used
> is
> >>>>> out of the radio but hope this clears it up
> >>>>>
> >>>>> 73,
> >>>>> Gordon
> >>>>
> >>> [Non-text portions of this message have been removed]

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31704. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 04:03:48 UTC
From: n6wk@n6wk.com
Topic: 31519 Message: 31704

Joe,
Let us know how it all comes out after everything is aligned. Don't
forget, you will have tpo adjust the L-41 after it was re-wound as per
the service manual on 1.900 mhz
Bedtime here now :-)

73,
Gordon

On 6/5/2011 8:09 PM, Joe Loverti wrote:
> YES!! I see that and have reinserted the shaft so the notches match
> your photo. Thanks for hanging in there with me. I really appreciate
> it!! I'm putting it all back together. :--)
> 73,
> WW8X
> Joe
>
> On Sun, Jun 5, 2011 at 11:04 PM, <n6wk@...
> <mailto:n6wk@...>> wrote:
>
> Here is the wafer alignment in 10 mhz position
>
>
> On 6/5/2011 7:19 PM, Joe Loverti wrote:
>
> Gordon,
> I understand that... and will do. I wonder if some how I got
> the wafers
> themselves misaligned. I did insert the shaft to turn the
> wafers when I
> cleaned them with a little deoxit, when the RF board was out
> on the bench.
> How can I double check the white dot and the notch? How should
> they be
> orientated when the shaft is inserted correctly and the
> pointer is on "10"?
> 73,
> WW8X
> Joe
>
> On Sun, Jun 5, 2011 at 10:09 PM,<n6wk@...
> <mailto:n6wk@...>> wrote:
>
>
>

> Joe,
> You must loosen the front set screws on the coupler, slide
> the shaft
> completely out of the front section, then rotate the shaft
> 180 degrees,
> re-install it into the RF board and slide it into the rear
> coupler and
> then tighten the screws.
> Everyone of the wafers on the RF Board band switch MUST be
> in the
> correct position as well as the output band switch for the
> radio to work
> properly.
> Each one of the little white center pieces of the Rf Board
> band switch
> Wafers has a small DOT and a Notch on them. They all have
> to be
> orientated the same way as well.
> For me, it is a 5 minute job, but then again, I have done
> dozens of them
>
> Gordon
> N6WK
>
>
> On 6/5/2011 7:01 PM, Joe Loverti wrote:
>
> Gordon,
> The display reads 29 mhz in the 10 mhz position -- 28
> mhz in the 7 mhz
> position... You're correct: 180 degrees out on all
> positions. What I
>
> don't
>
> understand is why the rig won't tune when the dispaly
> is reading 7 mhz?
>
> What
>
> would it matter what number the knob is pointing at as
> long as the
>
> frequency
>
> display is correct? Seems like I could just loosen the
> knob and turn it
>
> to
>

> the correct number?
> 73,
> WW8X
> Joe
>
>
> On Sun, Jun 5, 2011 at 9:28 PM,<n6wk@...
> <mailto:n6wk@...>> wrote:
>
> Sounds like maybe you have the front shaft 180
> degrees out
> What does the display show when you are on the 10
> MHZ position ?
>
> Gordon
>
>
> On 6/5/2011 5:47 PM, Joe Loverti wrote:
>
> Thanks Gordon,
> I finally located the flats on the short shaft
> inside the RF cage. They
>
> are
>
> as described and as your photos show. When I
> aligned the vertical on
>
> the
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> right side and the horizontal on the bottom
> and positioned the front
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> dial
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> to
>
> "10" -- when the rig powers up the digital
> display is way off and
>
> doesn't
>
> align with the band numbers on lthe front of
> the dial. I sent an email
>
> to
>
> Mike about this... I think I'm still out of
> alignment.
> 73,

> WW8X
> Joe
>
> On Sun, Jun 5, 2011 at 8:37 PM,<n6wk@...
> <mailto:n6wk@...>> wrote:
>
> The pictures can be seen here as well
>
>
> http://groups.yahoo.com/group/TS-520_820_530_830/files/TS-830S%20Coupler%20Alignment/
>
> On 6/5/2011 5:03 PM, n6wk@...
> <mailto:n6wk@...> wrote:
>
> Hi Chris and Joe,
> Attached are some pics that should help.
> I have tried to use arrows and labels
> to explain. The switch I used
>
> is
>
> out of the radio but hope this clears
> it up
>
> 73,
> Gordon
>
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> TS-520_820_530_830-fullfeatured@yahoogroups.com
> <mailto:TS-520_820_530_830-fullfeatured@yahoogroups.com>
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[Non-text portions of this message have been removed]

31705. ts530s need help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 12:36:31 UTC
From: kd5utc
Topic: 31705 Message: 31705

my pa band switch went bad in my 530s and need to replace it ,anyone know where

31706. Re: [TS-520_820_530_830] ts530s need help

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 13:33:24 UTC
From: W5RKL
Topic: 31705 Message: 31706

Contact Bob Mansker at

ke5ftf at mail.com

73s
Mike
W5RKL

>_____
>From: kd5utc <kd5utc@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Monday, June 6, 2011 7:36 AM
>Subject: [TS-520_820_530_830] ts530s need help
>
>
>
>my pa band switch went bad in my 530s and need to replace it ,anyone know where
>
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>
>
>

[Non-text portions of this message have been removed]

31707. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 14:38:53 UTC
From: Joe Loverti
Topic: 31519 Message: 31707

After a ton of help from Terry, Gordon, Mike and others I was able to remove the RF board, rewind the L41 transformer and finally get the band switch shaft reinstalled correctly. The audio is much improved and the transmit output is restored to normal operation. I must have gotten the band switch wafers on the RF board turned upside-down while I was cleaning them with deoxit. I used the shaft to rotate the wafers switches as I was cleaning them and didn't pay attention to how they were oriented. When I reinstalled the RF board the wafers switch were 180 out of phase. I was lucky to not do any damage in attempting to tune the rig with the switches and shaft alignment incorrect. Thanks again guys for your patience and for teaching me a little about the Kenwood TS-530S.
73,
WW8X
Joe

On Sun, Jun 5, 2011 at 10:41 AM, W5RKL <w5rkl@...> wrote:

>
>
> Joe,
>
> If you continue tuning the transmitter with the band switch out of sync,
> the plates on "both" 6146s will turn RED and you can easily damage not only
> the final tubes but also the HV supply and possibly other components.
>
> If you can't find the steps to align the band switch, drop me an e-mail and
> I'll give them to you. It's not difficult.
>
> 73s
> Mike
> W5RKL
>
> >_____
> >From: Terry Wagoner <wagstw46@...>
>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Sunday, June 5, 2011 9:23 AM
>
> >Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter movement
> >
> >
> >
> >Joe--Alignment of RF board bandswitch S1 to PA cage bandswitch S22 is

> critical.
> >Mike W5RKL has posted detailed step by step several times. You can search
> >archives for it. I would not attempt anymore loading until you assure S22
> has
> >been re-coupled correctly. If not, can damage finals.
> >Get RF output fixed and then go back to low receive. Terry
> >
> >_____
> >From: Joe Loverti <ww8x.joe@gmail.com>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Sun, June 5, 2011 10:06:20 AM
> >Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> >movement
> >
> >Terry... it seems I've got more problems than the lower, but improved
> >receive. Now I have no RF output.
> >
> >I must have made a mistake or misalignment of the shafts in reassembly. I
> >made notes as I took it apart and followed the notes when putting it
> >together. I'm able to peak the drive on the ALC meter when in Tune. But,
> I'm
> >unable to get a dip in plate current. Turning the plate control has no
> >effect at all. I'm going to go back inside and see what I've messed up.
> >
> >The calibrator volume seems loud to my ears, but on any band never moves
> the
> >meter beyond S7.
> >
> >73,
> >WW8X
> >Joe
> >
> >On Sun, Jun 5, 2011 at 7:29 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> >>
> >>
> >> Joe--How is the crystal calibrator (marker/MKR) volume? When you turn it
> on
> >> and tune to it do you have to reduce the AF Gain? Do you have a signal
> >> generator? In absence of generator apply your finger or jumper clip lead
> to
> >> VC-1 and VC-2 as you previously did-- Terry
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...>
> >> wrote:
> >> >
> >> > I rewound L41 and installed the L4 that I received from Gordon. I
> >> carefully
> >> > installed the RF board and reassembled the radio. There is some

> >> > improvement...I can hear signals and the S-meter is responsive.
> Problem
> >> is
> >> > the the AF volume control needs to be nearly fully clockwise to get a
> >> nice
> >> > full volume. Before the initial problem, the volume was comfortably
> loud
> >> > with the AF control at 9 o'clock.
> >> >
> >> > Maybe I didn't do a great job at rewinding the L41? I'm not sure how
> >> > critical the windings are...then again, maybe there's another issue.
> >> >
> >> > 73,
> >> > Joe
> >> > WW8X
> >> >
> >> >
> >> > On Fri, Jun 3, 2011 at 12:29 PM, Joe Loverti <ww8x.joe@...> wrote:
> >> >
> >> > > Gordon, I can't wait to see your demo. That will be so cool... and
> >> helpful
> >> > > to lots of us who will eventually need to rewind the L41 to get our
> >> rigs
> >> > > back on the air!
> >> > > Joe
> >> > > WW8X
> >> > >
> >> > >
> >> > > On Fri, Jun 3, 2011 at 12:02 PM, <n6wk@...> wrote:
> >> > >
> >> > >>
> >> > >>
> >> > >> My pleasure Joe.
> >> > >> I am now almost done with my video for re-winding L-41.
> >> > >> I made an error on winding the primary and wound it clockwise
> instead
> >> > >> of counterclockwise, so I need to unwind the coil and re-shoot that
> >> part
> >> > >> of the video :-)
> >> > >>
> >> > >> 73,
> >> > >> Gordon
> >> > >>
> >> > >>
> >> > >> On 6/3/2011 8:23 AM, Joe Loverti wrote:
> >> > >> > Gordon: The L4 arrived this morning. Thanks very much for sending
> me
> >> the
> >> > >> > part... you are quick!
> >> > >> > Best regards,

> >> > >> > Joe
> >> > >> > WW8X
> >> > >> >
> >> > >>
> >> > >>
> >> > >>
> >> > >
> >> > >
> >> >
> >> >
> >> > [Non-text portions of this message have been removed]
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31708. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 15:00:14 UTC
From: Jim S
Topic: 31519 Message: 31708

Would it be possible to put a little dot of red marker ink on each of the wafers before disassembling the switch, so there would be no guesswork involved when reassembling the thing? I am not familiar with this particular switch, but I do know that with many stacked wafer switches it is a distinct possibility to mark them in some manner. Just curious.

73, Jim AG3Y

----- Original Message -----
From: "Joe Loverti" <ww8x.joe@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 06, 2011 10:38 AM
Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

> After a ton of help from Terry, Gordon, Mike and others I was able to
> remove
> the RF board, rewind the L41 transformer and finally get the band switch
> shaft reinstalled correctly.

<snip>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17670)
http://www.pctools.com/
=======

31709. Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little S-meter movement

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 15:15:45 UTC
From: Joe Loverti
Topic: 31519 Message: 31709

Jim,
Gordon pointed out to me and sent me a photo showing tiny notches on the outside rim of each wafer switch. Had I known that beforehand or bothered to mark them as you suggest, I would not have made that mistake. It's a lesson that I won't forget!
Thanks,
Joe
WW8X

On Mon, Jun 6, 2011 at 11:00 AM, Jim S <jimstan@...> wrote:

>
>
> Would it be possible to put a little dot of red marker ink on each of the
> wafers before disassembling the switch, so there would be no guesswork
> involved when reassembling the thing? I am not familiar with this
> particular switch, but I do know that with many stacked wafer switches it
> is
> a distinct possibility to mark them in some manner. Just curious.
>
> 73, Jim AG3Y
>
>
> ----- Original Message -----
> From: "Joe Loverti" <ww8x.joe@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, June 06, 2011 10:38 AM
> Subject: Re: [TS-520_820_530_830] Re: TS-830S Low Receive and Little
> S-meter
> movement
>
> > After a ton of help from Terry, Gordon, Mike and others I was able to
> > remove
> > the RF board, rewind the L41 transformer and finally get the band switch
> > shaft reinstalled correctly.
>
> <snip>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17670)
> http://www.pctools.com/
> =======
>

>

[Non-text portions of this message have been removed]

31710. TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 14:58:56 UTC
From: puettgt2@gmail.com
Topic: 8876 Message: 31710

When trying to set idling current on my TS-830 to 60ma meter deflects slightly to left. Triple checked all control settings. Pot adjustment makes no difference in amount of deflection. Voltage on middle connector of SG switch reads 12.25 VDC, relay on rectifier board audible when SG switch moved. Receiver side seems ok no xmit. Ant ideas.

31711. Re: [TS-520_820_530_830] TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 18:23:20 UTC
From: W5RKL
Topic: 8876 Message: 31711

Have you tried replacing the final tubes? From what you are saying it appears one or both of the final tubes have an internal short between the cathode and grid allowing the final tube bias voltage which is negative to be applied to the metering circuit which is causing the meter to deflect below zero (to the left).

73s
Mike
W5RKL

>_____
>From: "puettgt2@..." <puettgt2@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Monday, June 6, 2011 9:58 AM
>Subject: [TS-520_820_530_830] TS-830
>
>
>
>When trying to set idling current on my TS-830 to 60ma meter deflects slightly to left. Triple checked all control settings. Pot adjustment makes no difference in amount of deflection. Voltage on middle connector of SG switch reads 12.25 VDC, relay on rectifier board audible when SG switch moved. Receiver side seems ok no xmit. Ant ideas.
>
>
>
>
>

[Non-text portions of this message have been removed]

31712. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 20:42:15 UTC
From: ktwhy2003
Topic: 31674 Message: 31712

Got the new caps for the radio today, and took a lot of pics installing them. Probably post them on my website and here when I have time. My high voltage is back where it belong and a solid 100 watts on a CW send.

THANK YOU for pointing out where the problem was for me.

next project is fixing the power switch soon as the one i ordered gets here..An interesting discovery though, I found a single thin blue wire cut and taped on the bottom near where the caps are..
and it has the CW filter YK-88C installed. not that I do CW, but nice to know.

Kent
VE3KNT

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If the HV is only 400VDC then one of the HV filter capacitors has failed.
>
> I recommend replacing both HV filter capacitors with new caps, obtained from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and .01ufd disc capacitors with new components along with new HV filter caps. Ken, K4EAA, sells a HV rebuild kit which as all these components.
>
> When you replace the HV caps, pay attention to the leads. Remember, "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps have a strip down the side of the capacitor that points to the "negative" terminal. If you have a high res digital camera, take a picture of how the leads of the failed capacitors are connected. The HV supply in the 830, just like all the other hybrids, is a voltage "doubling" supply. The two HV filter capacitors are wired in "series" NOT "parallel"!
>
> If there is any doubt in your ability to perform the capacitor replacement, locate a local ham who has experience and knowledge to help you. Don't try it if you have any doubt you can do the job successfully and "safely".
>
> If you do it yourself, thoroughly check your work to ensure the capacitors are connected properly BEFORE you apply power! Don't be in a hurry, take your time.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@> wrote:
> >
> > 400 volts on the HV
> >

> > about 125ma on CW send mode. so both about half normal.
> > I'll check the rely after dinner, don't want to be opening it up while cooking.
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> > >
> > > I seriously doubt the lightning arrestor has anything to do with your problem.
> > >
> > > You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
> > >
> > > Also, what is the IP meter showing at maximum power output (top meter scale).
> > >
> > > It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > >
> > > >_____
> > > >From: ktwhy2003 <ktwhy2003@>
> > > >To: TS-520_820_530_830@yahoogroups.com
> > > >Sent: Saturday, June 4, 2011 3:20 PM
> > > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> > > >
> > > >
> > > >Â
> > > >It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
> > > >
> > > >On BIAS it's only showing 20ma now (mode USB, meter IP)
> > > >and all the rest of the tune up process is correspondingly low.
> > > >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?
> > > >
> > > >
> > > >
> > > >
> > > >
> > > >
> > > [Non-text portions of this message have been removed]

> > >
> >
>

31713. Re: [TS-520_820_530_830] Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-06 21:01:08 UTC
From: Charles Coffee
Topic: 31674 Message: 31713

Probably the cut wire for the WARC bands. This enables you have have 17
meters, etc.
Chuck KJ4GU.

On Mon, Jun 6, 2011 at 4:42 PM, ktwhy2003 <ktwhy2003@...> wrote:

> Got the new caps for the radio today, and took a lot of pics installing
> them. Probably post them on my website and here when I have time. My high
> voltage is back where it belong and a solid 100 watts on a CW send.
>
> THANK YOU for pointing out where the problem was for me.
>
> next project is fixing the power switch soon as the one i ordered gets
> here..An interesting discovery though, I found a single thin blue wire cut
> and taped on the bottom near where the caps are..
> and it has the CW filter YK-88C installed. not that I do CW, but nice to
> know.
>
> Kent
> VE3KNT
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
> >
> > If the HV is only 400VDC then one of the HV filter capacitors has failed.
> >
> > I recommend replacing both HV filter capacitors with new caps, obtained
> from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and
> .01ufd disc capacitors with new components along with new HV filter caps.
> Ken, K4EAA, sells a HV rebuild kit which as all these components.
> >
> > When you replace the HV caps, pay attention to the leads. Remember,
> "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps
> have a strip down the side of the capacitor that points to the "negative"
> terminal. If you have a high res digital camera, take a picture of how the
> leads of the failed capacitors are connected. The HV supply in the 830, just
> like all the other hybrids, is a voltage "doubling" supply. The two HV
> filter capacitors are wired in "series" NOT "parallel"!
> >
> > If there is any doubt in your ability to perform the capacitor
> replacement, locate a local ham who has experience and knowledge to help
> you. Don't try it if you have any doubt you can do the job successfully and
> "safely".
> >

> > If you do it yourself, thoroughly check your work to ensure the
> capacitors are connected properly BEFORE you apply power! Don't be in a
> hurry, take your time.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@>
> wrote:
> > >
> > > 400 volts on the HV
> > >
> > > about 125ma on CW send mode. so both about half normal.
> > > I'll check the rely after dinner, don't want to be opening it up while
> cooking.
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> > > >
> > > > I seriously doubt the lightning arrestor has anything to do with your
> problem.
> > > >
> > > > You didn't say what the HV meter indicated when the 830's tuned for
> maximum power output (Red meter scale).
> > > >
> > > > Also, what is the IP meter showing at maximum power output (top meter
> scale).
> > > >
> > > > It's also possible the AF Unit relay is going bad, not unusual for
> this relay to fail and affect transmit and receive. You might try tapping
> lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If
> power output changes, increases, then replace the relay on the AF Unit board
> (see Ken, K4EAA, for details on replacement AF Unit relays).
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > > >_____
> > > > >From: ktwhy2003 <ktwhy2003@>
> > > > >To: TS-520_820_530_830@yahoogroups.com
> > > > >Sent: Saturday, June 4, 2011 3:20 PM
> > > > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S

> > > > >
> > > > >
> > > > >Â
> > > > >It was working fine last i tried transmitting a couple days ago.
> Just went to tune it up and I'm hardly getting any power output when I went
> to tune up...
> > > > >
> > > > >On BIAS it's only showing 20ma now (mode USB, meter IP)
> > > > >and all the rest of the tune up process is correspondingly low.
> > > > >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic
> lightning arrester out on my antenna this past week, but that's not involved
> in the tune up of course, and I was on the air a few days ago since adding
> the arrester. Could it have damaged my radio?
> > > > >
> > > > >
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> > > > > [Non-text portions of this message have been removed]
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31714. Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 04:25:30 UTC
From: Chris Parnell
Topic: 31714 Message: 31714

Hi all,

After aligning the rest of my TS-830s I went to do the Speech Processor alignment as per pages 40 & 41 of the Service Manual.

States:

SG SW = Off
Mode = USB
Meter = Comp
Mic Gain = MIN
Proc = ON

Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to Send and adjust Comp Level control until the meter reading is obtained.
Adjust L26 for Max. Meter Reading.

Done all of the above and all is well.

Next step:
Set VR5 on the IF unit fully clockwise and adjust the COMP level control until the meter indicates S-1. Set the AG output to 50 mV
VR5 Meter indicator 20 dB.

Done all of the above and all is well.

Next step:
Meter to ALC, Adjust Mic-Gain control until the maximum meter reading is obtained.
L276 Maximum meter reading.

Done all of the above and all is well

Next step:
Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG output to 10 mV.
Adjust the MIC GAIN control until until the meter indicates the maximum on-scale ALC reading. Set the PROC to ON.
L27 - Adjust until the same meter reading is obtained (MAX ALC on-scale)
Mic input providing the SAME ALC meter reading 10 mV (+/- 3dB).

This is where my 830 (or me) gets stuck☐..
Every step works until I get to the point where I turn the Proc ON and adjust L27 for the same reading as where the PROC is off.
On adjusting L27 with the PROC ON I get no movement on the meter at this point, and therefore cannot obtain the same ALC maximum reading.

Any help would be gratefully appreciated.

Thanks
Chris, ZL1CDP

[Non-text portions of this message have been removed]

31715. 12BY7 vs 12BY7A

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 12:26:29 UTC
From: Chris Parnell
Topic: 31715 Message: 31715

Hi all,

What's the main difference between a 12BY7 driver and the 12BY7A? - Assume the hybrids would be happy with either?

Thanks
Chris

[Non-text portions of this message have been removed]

31716. Re: [TS-520_820_530_830] 12BY7 vs 12BY7A

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 13:48:08 UTC
From: Charles Rodecap
Topic: 31715 Message: 31716

The "A" is to designate a faster warm up for the tube (approximate 11 seconds).

The 'non A is supposedly longer.
How much longer probably will not matter.
Most of us turn on the rig and wait 5 minutes for it to settle down anyway.

Charlie

--- On Tue, 6/7/11, Chris Parnell <cparnell1001@...> wrote:

From: Chris Parnell <cparnell1001@...>
Subject: [TS-520_820_530_830] 12BY7 vs 12BY7A
To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
Date: Tuesday, June 7, 2011, 8:26 AM

Hi all,

What's the main difference between a 12BY7 driver and the 12BY7A? - Assume

the hybrids would be happy with either?

Thanks

Chris

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31717. Re: Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 15:18:59 UTC
From: Terry Wagoner
Topic: 31714 Message: 31717

Chris--Did you get an answer to this?

I have not performed this step. I am stuck on Step 31 ALC adjust. I can do Step 1 and adjust VR6 for exact zero but cant do Step 2 as written with mic gain set to max as it pegs my meter hard with 5mv signal injected at mic connector. I have to reduce mic gain to get max full scale reading and then reduce it further to see 5 watt power reduction. I have found that some of these steps cant be performed as written. Because of this and test equipment limitations many(ok-some)of the fellows just perform the Sect 6 maintenance adjustments and a few select Service Manual steps. Setting voltage regulators, carrier adjustments, are all commonly done. Hard to do PLL BPA if you dont have good sweep generator and good scope. Also, spectrum analyzer is beyond reach for many. I watched an experienced kenwood tech adjust VBT oscillator by simply adjusting TC-2 to exactly 8375.0 khz. That is ok if it was grossly out, but real adjustment is described on Pg 38 with two methods that are more complex. I have used these steps and my VBT oscillator in 2 different 830s is set from about 50 to 100hz higher than 8375.00 to align the filter passband windows.

If I ever get past Steps 31 I will move on to Step 32 and give you my results. If you get it figured out I would appreciate you sharing it with me. Good Luck --Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all,
>
> After aligning the rest of my TS-830s I went to do the Speech Processor
> alignment as per pages 40 & 41 of the Service Manual.
>
> States:
>
> SG SW = Off
> Mode = USB
> Meter = Comp
> Mic Gain = MIN
> Proc = ON
>
> Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to
> Send and adjust Comp Level control until the meter reading is obtained.
> Adjust L26 for Max. Meter Reading.
>
> Done all of the above and all is well.
>
> Next step:
> Set VR5 on the IF unit fully clockwise and adjust the COMP level control
> until the meter indicates S-1. Set the AG output to 50 mV
> VR5 Meter indicator 20 dB.
>

> Done all of the above and all is well.
>
> Next step:
> Meter to ALC, Adjust Mic-Gain control until the maximum meter reading is
> obtained.
> L276 Maximum meter reading.
>
> Done all of the above and all is well
>
> Next step:
> Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG
> output to 10 mV.
> Adjust the MIC GAIN control until until the meter indicates the maximum
> on-scale ALC reading. Set the PROC to ON.
> L27 - Adjust until the same meter reading is obtained (MAX ALC on-scale)
> Mic input providing the SAME ALC meter reading 10 mV (+/- 3dB).
>
>
> This is where my 830 (or me) gets stuck☐..
> Every step works until I get to the point where I turn the Proc ON and
> adjust L27 for the same reading as where the PROC is off.
> On adjusting L27 with the PROC ON I get no movement on the meter at this
> point, and therefore cannot obtain the same ALC maximum reading.
>
> Any help would be gratefully appreciated.
>
> Thanks
> Chris, ZL1CDP
>
>
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>
>
> [Non-text portions of this message have been removed]
>

31718. Re: [TS-520_820_530_830] Kenwood Users Group Newsletter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 15:25:33 UTC
From: John Becker
Topic: 31458 Message: 31718

May try a google search using both one for name and
one by call.

At 04:35 PM 6/5/2011, you wrote:
>John --I thought one of our members might know him and have his current email
>address.
>
>I did the white page searches (people, phone etc) and came up empty.
>
>I will snail mail him using the address on QRZ.com.
>
>After looking at the newsletters I am glad I got to see them and will hang on to
>them. However, someone who was familiar with them posted that much of the info
>contained has already hit the internet especially the mods and there would not
>be much value to our members to have access to them.
>
>If snail mail fails then I think that is where we will be at.
>
>Terry -K9TW
>

31719. TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 14:22:52 UTC
From: Jes
Topic: 31719 Message: 31719

If I use the plate and load setting to reduce my power,would I be causing any damage to my 520? Or is this a normal way of controlling your output?Thanks for reading..Jes-m0jsw

31720. Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 11:03:59 UTC
From: Bernie
Topic: 31720 Message: 31720

Hi,

I bought a TS830s a while ago with several faults. Its now down to just one issue. On 20m, with no carrier at all, in CW mode with key down, when I sweep the plate control across the 20m section of the dial the PA takes off and current is at max on the Ip meter. I drop the key instantly as obviously don't want to se this through to its obvious conclusion!

Background:

I replaced valves with 6146B by GE from a well known reliable source. Same with driver valve.

I neutralised according to instructions.

I checked values of several components in the PA circuit - the cathose resistors, the SG voltage - everything normal. No signs of overheating/damage.

Prior to changing out the tubes I could tune the rig up and use it, but after a few minutes of use the fuse would blow. I figured the old tubes were arcing which is why I decided to change all.

I'm getting 100w on all bands easily although on 20m, tuning up is not easy. The dip seems broader than usual. Tuning for max power never gets me there, only very careful adjustment looking for the dip gets me to 100w with 265mA current. Tuning for maximum power always seems to result in excessive current.

On 28Mhz max power out coincides exactly with Ip dip.
On 24Mhz plate dip results in 80% of power available by tuning for max.
On 21 Mhz plate dip coincides with max power
On 18 Mhz plate dip coincides with 90% of max power out available.
On 14 Mhz plate dip coincides with 75-80% maximum power out.

I've done a few CW contests in recent weeks with the rig (what a beautiful, beautiful RX with the 250Hz filters !!!!) and I can get everything working - even on 20m.

BUT I feel something isn't right and I want my nice TS830s to have a happy life. It should not take off the way it does on 20m and the tuning is very difficult to manage on this band.

I've been a reader of the group for some time and I've looked through a lot of posts and there are similar issues out there but I haven't seen anything that is exactly like this and I'm not sure what to do next. I'd be really grateful for any ideas.

Thanks

Bernie
GM4WZG

31721. Re: TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 15:28:23 UTC
From: puettgt2@gmail.com
Topic: 8876 Message: 31721

Thanks Mike

I have replaced the tubes with a known good set from another kenwood I have. With the Final tubes removed the meter still deflects to the left. Since my last post I checked driver tube voltages they are

Pin xmit rec

1 4.6 0

2 0.4 43.6

3 0 0

7 346 346

8 256 256

measured from top of board with tube removed.

Thanks Gary
KI4QDC

31722. Re: [TS-520_820_530_830] Re: TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 15:51:43 UTC
From: W5RKL
Topic: 8876 Message: 31722

Hi Gary,

The driver tube voltages appears to normal. I assume pin 2 voltages are -43.6VDC in receive and +.4VDC in transmit. Your voltages appear to be positive but I suspect you forgot to put the "-" sign next to the 43.6VDC and the "+" sign next to the .4VDC. That's what the normal driver tube grid voltages are.
When you say the IP meter deflect below the 60ma mark, how far below doe the meter deflect or is the meter deflecting "below zero" in transmit?

73s
Mike
W5RKL

>_____
>From: "puettgt2@..." <puettgt2@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Tuesday, June 7, 2011 10:28 AM
>Subject: [TS-520_820_530_830] Re: TS-830
>
>
>
>
>Thanks Mike
>
>I have replaced the tubes with a known good set from another kenwood I have. With the Final tubes removed the meter still deflects to the left. Since my last post I checked driver tube voltages they are
>
>Pin xmit rec
>
>1 4.6 0
>
>2 0.4 43.6
>
>3 0 0
>
>7 346 346
>
>8 256 256
>
>measured from top of board with tube removed.
>
>Thanks Gary
>KI4QDC
>
>

>
>
>

[Non-text portions of this message have been removed]

31723. Re: [TS-520_820_530_830] TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 16:02:09 UTC
From: W5RKL
Topic: 31719 Message: 31723

Hi Jes,

You should never improperly adjust the PLATE and LOAD controls to reduce power output! Always adjust the PLATE and LOAD controls for full power output. By adjusting the PLATE and LOAD controls for a reduced RF output you are de-tuning the PI Network to an "out ot resonance" state which will result not only in higher final tube plate current and an increase in anode (plate) heat in both tubes but also you run the risk of an increase in harmonic radiation plus addes "undue" stress to the power supplies on the Rectifier Unit. As to whether you would be causing harm to the final tubes the answer is yes.

You can also reduce power output by applying a negative DC voltage between 1.5VDC and 5VDC, to the REMOTE socket's "ALC" terminal and ground. See the "Files" section of this group for circuits that do just that, there are 2 circuits, one with a pot and a 9VDC battery and one with a transistor, pot, a resistor or two, and a 9VDC battery. The transistor circuit is much more linear then the pot and 9VDC battery circuit.

To reduce power in CW, after properly tuning for maximum power output, adjust the CAR control CCW for the power level you want. In sideband, adjust the MIC gain for the power level you want.

If you are driving an amplifier and you need a lower power output, build an RF attenutator and place it between the 830 and the amplifier.

73s
Mike
W5RKL

From: Jes <jes.woodland@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Tuesday, June 7, 2011 9:22 AM
>Subject: [TS-520_820_530_830] TS520se Tx power
>
>
>
>
>If I use the plate and load setting to reduce my power,would I be causing any damage to my 520? Or is this a normal way of controlling your output?Thanks for reading..Jes-m0jsw
>
>
>
>
>

[Non-text portions of this message have been removed]

31724. Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 16:48:36 UTC
From: Terry Wagoner
Topic: 31720 Message: 31724

Bernie--Yes receiver is really good. I have full filtered and CW receive is best I have ever had.

It sure sounds like it is taking off on you. Is it possible you are losing bias?

Have you tried neutralizing on 20 meters? How are you neutralizing (with scope, RF millivolt meter to see the null?) as opposed to trying to match dip and max output power.

I would try to load up on 20 meters. Keep IP at around 100 ma if you can. You will likely see one side of your dip rise more abruptly on one side than the other. Set your plate control to that side slightly and then adjust neutralizing cap. May have to repeat several times to get a smooth and equal rise on either side of max dip.

Do you have a nice smooth and equal rise in dip on say 40 meters?

Terry-K9TW

--- In TS-520_820_530_830@yahoogroups.com, "Bernie" <berniemcintosh@...> wrote:
>
>
> Hi,
>
> I bought a TS830s a while ago with several faults. Its now down to just one issue. On 20m, with no carrier at all, in CW mode with key down, when I sweep the plate control across the 20m section of the dial the PA takes off and current is at max on the Ip meter. I drop the key instantly as obviously don't want to se this through to its obvious conclusion!
>
> Background:
>
> I replaced valves with 6146B by GE from a well known reliable source. Same with driver valve.
>
> I neutralised according to instructions.
>
> I checked values of several components in the PA circuit - the cathose resistors, the SG voltage - everything normal. No signs of overheating/damage.
>
> Prior to changing out the tubes I could tune the rig up and use it, but after a few minutes of use the fuse would blow. I figured the old tubes were arcing which is why I decided to change all.
>
> I'm getting 100w on all bands easily although on 20m, tuning up is not easy. The dip seems broader than usual. Tuning for max power never gets me there, only very careful adjustment looking for the dip gets me to 100w with 265mA current. Tuning for maximum power always seems to result in excessive current.

>
> On 28Mhz max power out coincides exactly with Ip dip.
> On 24Mhz plate dip results in 80% of power available by tuning for max.
> On 21 Mhz plate dip coincides with max power
> On 18 Mhz plate dip coincides with 90% of max power out available.
> On 14 Mhz plate dip coincides with 75-80% maximum power out.
>
>
> I've done a few CW contests in recent weeks with the rig (what a beautiful, beautiful RX with the 250Hz filters !!!!) and I can get everything working - even on 20m.
>
> BUT I feel something isn't right and I want my nice TS830s to have a happy life. It should not take off the way it does on 20m and the tuning is very difficult to manage on this band.
>
> I've been a reader of the group for some time and I've looked through a lot of posts and there are similar issues out there but I haven't seen anything that is exactly like this and I'm not sure what to do next. I'd be really grateful for any ideas.
>
> Thanks
>
> Bernie
> GM4WZG
>

31725. Re: Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 17:12:14 UTC
From: Joe
Topic: 31714 Message: 31725

Hi,

i found myself exactly in the same situation: simply inject 50 mV instead of 10 mV as stated in the service manual and you will get enough meter to align it. At the end you are balancing proc on vs. proc off positions.

73's Joe.

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi all,
>
> After aligning the rest of my TS-830s I went to do the Speech Processor
> alignment as per pages 40 & 41 of the Service Manual.
>
> States:
>
> SG SW = Off
> Mode = USB
> Meter = Comp
> Mic Gain = MIN
> Proc = ON
>
> Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to
> Send and adjust Comp Level control until the meter reading is obtained.
> Adjust L26 for Max. Meter Reading.
>
> Done all of the above and all is well.
>
> Next step:
> Set VR5 on the IF unit fully clockwise and adjust the COMP level control
> until the meter indicates S-1. Set the AG output to 50 mV
> VR5 Meter indicator 20 dB.
>
> Done all of the above and all is well.
>
> Next step:
> Meter to ALC, Adjust Mic-Gain control until the maximum meter reading is
> obtained.
> L276 Maximum meter reading.
>
> Done all of the above and all is well
>
> Next step:
> Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG

> output to 10 mV.
> Adjust the MIC GAIN control until until the meter indicates the maximum
> on-scale ALC reading. Set the PROC to ON.
> L27 - Adjust until the same meter reading is obtained (MAX ALC on-scale)
> Mic input providing the SAME ALC meter reading 10 mV (+/- 3dB).
>
>
> This is where my 830 (or me) gets stuck□..
> Every step works until I get to the point where I turn the Proc ON and
> adjust L27 for the same reading as where the PROC is off.
> On adjusting L27 with the PROC ON I get no movement on the meter at this
> point, and therefore cannot obtain the same ALC maximum reading.
>
> Any help would be gratefully appreciated.
>
> Thanks
> Chris, ZL1CDP
>
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>
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>
>
>
>
>
> [Non-text portions of this message have been removed]
>

31726. Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 17:11:13 UTC
From: Jes
Topic: 31719 Message: 31726

Thanks for the reply,and the explanation.All is now clear.

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> Hi Jes,
> Â
> You should never improperly adjust the PLATE and LOAD controls to reduce power output! Always adjust the PLATE and LOAD controls for full power output. By adjusting the PLATE and LOAD controls for a reduced RF output you are de-tuning the PI Network to an "out ot resonance" stateÂ which will result not only in higher final tube plate current and an increase in anode (plate) heat in both tubesÂ but also you run the risk of an increase inÂ harmonic radiation plus addes "undue" stress to the power supplies on the Rectifier Unit. As to whether you would be causing harm to the final tubes the answer is yes.
> Â
> You can also reduce power output by applying a negative DC voltage between 1.5VDC and 5VDC, to the REMOTE socket's "ALC" terminal and ground. See the "Files" section of this group for circuits that do just that, there are 2 circuits, one with a pot and a 9VDC battery and one with a transistor, pot, a resistor or two, and a 9VDC battery. The transistor circuit is much more linear then the pot and 9VDC battery circuit.
> Â
> To reduce power in CW, after properly tuning for maximum power output, adjust the CAR control CCW for the power level you want. In sideband, adjust the MIC gain for the power level you want.
> Â
> If you are driving an amplifier and you need a lower power output, build an RF attenutator and place it between the 830 and the amplifier.
> Â
> Â
> 73s
> Mike
> W5RKL
>
> Â
> From: Jes <jes.woodland@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Tuesday, June 7, 2011 9:22 AM
> >Subject: [TS-520_820_530_830] TS520se Tx power
> >
> >
> > Â
> >
> >If I use the plate and load setting to reduce my power,would I be causing any damage to my 520? Or is this a normal way of controlling your output?Thanks for reading..Jes-m0jsw
> >
> >

> >
> >
> >
>
> [Non-text portions of this message have been removed]
>

31727. Re: TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 18:00:11 UTC
From: puettgt2@gmail.com
Topic: 8876 Message: 31727

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
Mike

The pointer is slightly above the "0" point in receive and deflects "below zero" durning transmit. When the radio was operating properly the pointer rested on the "0" mark. I t seems that there is a small signal causing the pointer to rest above "0" in receive and when you switch to transmit something is shorting and causing the pointer to deflect "below zero". Since my last post i also removed the driver tube and the pointer still deflects in transmit. I have cleaned RL-1 on the AF board it clicks but I don't know if it is working properly electrically.

Thanks gary
KI4QDC

31728. RE: [TS-520_820_530_830] Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 18:12:50 UTC
From: Bernie McIntosh
Topic: 31720 Message: 31728

Thanks Terry,

Bias: When I checked the bias voltage it was ok so if its losing bias I think it must be a momentary loss and I'm not sure how to spot it. I have a digital scope with a one shot trigger so I can probably set it up to catch any fall. I'll be thinknig about this over a cup of tea (us brits never change....) and will have a look shortly.

Neutralising. Not tried neutralising it on 20m but your description of a symetrical dip already applies - I just checked it. It seems a bit broader than on other bands but perfectly symetrical.

Still on neutralising, I used a 50ohm dummy load and a scope to minimise rf waveform on 28Mhz.

Before I look at neutralising specifically on 20m, a friend of mine has suggested something else as a possibility. He tells me that the GE valves might have a higher gain than the original Japanese ones and that there is nothing actually wrong, other than a little too much gain causing instability on one band. He suggests putting one (unbypassed) 10 ohm resistor in series with the existing cathode resistors to provide a little negative feedback. He used to do professional high power RF design and, well lets put it like this, like many in this group he knows a lot more about it than me.

But I prefer not to mod the rig unless there's a few experts out there that support the idea and a quick google doesn't reveal that anyone has felt the need to do this before.

73

Bernie
GM4WZG

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: 07 June 2011 17:49
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only

Bernie--Yes receiver is really good. I have full filtered and CW receive is best I have ever had.

It sure sounds like it is taking off on you. Is it possible you are losing bias?

Have you tried neutralizing on 20 meters? How are you neutralizing (with scope, RF millivolt meter to see the null?) as opposed to trying to match dip and max output power.

I would try to load up on 20 meters. Keep IP at around 100 ma if you can. You will likely see one side of your dip rise more abruptly on one side than the other. Set your plate control to that side slightly and then adjust neutralizing cap. May have to repeat several times to get a smooth and equal rise on either side of max dip.

Do you have a nice smooth and equal rise in dip on say 40 meters?

Terry-K9TW

--- In TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> , "Bernie" <berniemcintosh@...> wrote:
>
>
> Hi,
>
> I bought a TS830s a while ago with several faults. Its now down to just one issue. On 20m, with no carrier at all, in CW mode with key down, when I sweep the plate control across the 20m section of the dial the PA takes off and current is at max on the Ip meter. I drop the key instantly as obviously don't want to se this through to its obvious conclusion!
>
> Background:
>
> I replaced valves with 6146B by GE from a well known reliable source. Same with driver valve.
>
> I neutralised according to instructions.
>
> I checked values of several components in the PA circuit - the cathose resistors, the SG voltage - everything normal. No signs of overheating/damage.
>
> Prior to changing out the tubes I could tune the rig up and use it, but after a few minutes of use the fuse would blow. I figured the old tubes were arcing which is why I decided to change all.
>
> I'm getting 100w on all bands easily although on 20m, tuning up is not easy. The dip seems broader than usual. Tuning for max power never gets me there, only very careful adjustment looking for the dip gets me to 100w with 265mA current. Tuning for maximum power always seems to result in excessive current.
>
> On 28Mhz max power out coincides exactly with Ip dip.
> On 24Mhz plate dip results in 80% of power available by tuning for max.
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> On 18 Mhz plate dip coincides with 90% of max power out available.

> On 14 Mhz plate dip coincides with 75-80% maximum power out.
>
>
> I've done a few CW contests in recent weeks with the rig (what a
beautiful, beautiful RX with the 250Hz filters !!!!) and I can get
everything working - even on 20m.
>
> BUT I feel something isn't right and I want my nice TS830s to have a happy
life. It should not take off the way it does on 20m and the tuning is very
difficult to manage on this band.
>
> I've been a reader of the group for some time and I've looked through a
lot of posts and there are similar issues out there but I haven't seen
anything that is exactly like this and I'm not sure what to do next. I'd be
really grateful for any ideas.
>
> Thanks
>
> Bernie
> GM4WZG
>

[Non-text portions of this message have been removed]

31729. Re: [TS-520_820_530_830] 12BY7 vs 12BY7A

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 19:33:03 UTC
From: Chris Parnell
Topic: 31715 Message: 31729

Thanks Charlie... So it will work fine in the 830....

Thanks
Chris

Sent from my iPhone

On 8/06/2011, at 1:48 AM, Charles Rodecap <millwrightmonkey@yahoo.com> wrote:

> The "A" is to designate a faster warm up for the tube (approximate 11 seconds).
>
> The 'non A is supposedly longer.
> How much longer probably will not matter.
> Most of us turn on the rig and wait 5 minutes for it to settle down anyway.
>
> Charlie
>
> --- On Tue, 6/7/11, Chris Parnell <cparnell1001@...> wrote:
>
> From: Chris Parnell <cparnell1001@...>
> Subject: [TS-520_820_530_830] 12BY7 vs 12BY7A
> To: "TS-830 Yahoo Group" <TS-520_820_530_830@yahoogroups.com>
> Date: Tuesday, June 7, 2011, 8:26 AM
>
>
>
> Hi all,
>
> What's the main difference between a 12BY7 driver and the 12BY7A? - Assume
>
> the hybrids would be happy with either?
>
> Thanks
>
> Chris
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31730. Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 19:38:04 UTC
From: ktwhy2003
Topic: 31674 Message: 31730

Just noticed the IP is running at about 40ma? Is this normal after a repair of this kind? Just want to know before I try turning it up on the back of the radio. Tuning in to a dummy load on 20m.

--- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...> wrote:
>
> Got the new caps for the radio today, and took a lot of pics installing them. Probably post them on my website and here when I have time. My high voltage is back where it belong and a solid 100 watts on a CW send.
>
> THANK YOU for pointing out where the problem was for me.
>
> next project is fixing the power switch soon as the one i ordered gets here..An interesting discovery though, I found a single thin blue wire cut and taped on the bottom near where the caps are..
> and it has the CW filter YK-88C installed. not that I do CW, but nice to know.
>
> Kent
> VE3KNT
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > If the HV is only 400VDC then one of the HV filter capacitors has failed.
> >
> > I recommend replacing both HV filter capacitors with new caps, obtained from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and .01ufd disc capacitors with new components along with new HV filter caps. Ken, K4EAA, sells a HV rebuild kit which as all these components.
> >
> > When you replace the HV caps, pay attention to the leads. Remember, "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps have a strip down the side of the capacitor that points to the "negative" terminal. If you have a high res digital camera, take a picture of how the leads of the failed capacitors are connected. The HV supply in the 830, just like all the other hybrids, is a voltage "doubling" supply. The two HV filter capacitors are wired in "series" NOT "parallel"!
> >
> > If there is any doubt in your ability to perform the capacitor replacement, locate a local ham who has experience and knowledge to help you. Don't try it if you have any doubt you can do the job successfully and "safely".
> >
> > If you do it yourself, thoroughly check your work to ensure the capacitors are connected properly BEFORE you apply power! Don't be in a hurry, take your time.
> >

> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@> wrote:
> > >
> > > 400 volts on the HV
> > >
> > > about 125ma on CW send mode. so both about half normal.
> > > I'll check the rely after dinner, don't want to be opening it up while cooking.
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> > > >
> > > > I seriously doubt the lightning arrestor has anything to do with your problem.
> > > >
> > > > You didn't say what the HV meter indicated when the 830's tuned for maximum power output (Red meter scale).
> > > >
> > > > Also, what is the IP meter showing at maximum power output (top meter scale).
> > > >
> > > > It's also possible the AF Unit relay is going bad, not unusual for this relay to fail and affect transmit and receive. You might try tapping lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If power output changes, increases, then replace the relay on the AF Unit board (see Ken, K4EAA, for details on replacement AF Unit relays).
> > > >
> > > >
> > > > 73s
> > > > Mike
> > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > > >_____
> > > > >From: ktwhy2003 <ktwhy2003@>
> > > > >To: TS-520_820_530_830@yahoogroups.com
> > > > >Sent: Saturday, June 4, 2011 3:20 PM
> > > > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> > > > >
> > > > >
> > > > >Â
> > > > >It was working fine last i tried transmitting a couple days ago. Just went to tune it up and I'm hardly getting any power output when I went to tune up...
> > > > >
> > > > >On BIAS it's only showing 20ma now (mode USB, meter IP)
> > > > >and all the rest of the tune up process is correspondingly low.

> > > > >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic lightning arrester out on my antenna this past week, but that's not involved in the tune up of course, and I was on the air a few days ago since adding the arrester. Could it have damaged my radio?
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > >
> > > > [Non-text portions of this message have been removed]
> > > > >
> > > >
> > >
>

31731. Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 20:18:18 UTC
From: Terry Wagoner
Topic: 31720 Message: 31731

Bernie--I dont know how you would get an unbypassed 10 ohm resistor in series with the existing 4 parallel 20 ohm resistors. Perhaps cut the circuit foil at the cathode and bridge it with the 10 ohm resistor. I know I would never do that on my rig. There are hundreds if not thousands of these rigs in service without need for negative feedback mod. If you can get a hold of another set of tubes try them. One of the GE tubes you just put in may be gassy and causing current runaway? Resting plate current is different than bias. If you have the covers off you can monitor bias voltage at FG terminal on the RF board. Pretty well exhausted my suggestions. Others please jump in. Good luck--Terry K9TW
--- In TS-520_820_530_830@yahoogroups.com, "Bernie McIntosh" <berniemcintosh@...> wrote:
>
> Thanks Terry,
>
> Bias: When I checked the bias voltage it was ok so if its losing bias I
> think it must be a momentary loss and I'm not sure how to spot it. I have a
> digital scope with a one shot trigger so I can probably set it up to catch
> any fall. I'll be thinknig about this over a cup of tea (us brits never
> change....) and will have a look shortly.
>
> Neutralising. Not tried neutralising it on 20m but your description of a
> symetrical dip already applies - I just checked it. It seems a bit broader
> than on other bands but perfectly symetrical.
>
> Still on neutralising, I used a 50ohm dummy load and a scope to minimise rf
> waveform on 28Mhz.
>
> Before I look at neutralising specifically on 20m, a friend of mine has
> suggested something else as a possibility. He tells me that the GE valves
> might have a higher gain than the original Japanese ones and that there is
> nothing actually wrong, other than a little too much gain causing
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> support the idea and a quick google doesn't reveal that anyone has felt the
> need to do this before.
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> 73
>
> Bernie
> GM4WZG
>
>

>
>
> _____
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> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> Sent: 07 June 2011 17:49
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
>
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> Terry-K9TW
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> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com> , "Bernie"
> <berniemcintosh@> wrote:
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> > Hi,
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> > I replaced valves with 6146B by GE from a well known reliable source. Same
> with driver valve.

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> > I checked values of several components in the PA circuit - the cathose
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> easy. The dip seems broader than usual. Tuning for max power never gets me
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> 265mA current. Tuning for maximum power always seems to result in excessive
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> > On 28Mhz max power out coincides exactly with Ip dip.
> > On 24Mhz plate dip results in 80% of power available by tuning for max.
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> [Non-text portions of this message have been removed]
>

31732. Re: [TS-520_820_530_830] Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 20:57:18 UTC
From: Terry Wagoner
Topic: 31720 Message: 31732

Bernie--I forgot to mention if you do monitor Bias I would use both a Scope and VTVM. Scope to see if you have AC ripple. There is difference between instability where tube breaks into oscillation (VHF or HF) and tube IP current drifting high and ultimately blowing fuse. The more I think about it your description is more the latter? If so, I would take a hard look at Bias. Still wont hurt to re-neutralize on band where you are having the problem. If that doesnt help you can go back and neutralize on 10 meters. Terry

---

From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 7, 2011 4:18:18 PM
Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only

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> Sent: 07 June 2011 17:49
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
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>
>
> [Non-text portions of this message have been removed]
>

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31733. Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 22:52:06 UTC
From: Bernie
Topic: 31720 Message: 31733

Thanks Terry - that's quite a few very good suggestions and I'll follow them all over the next day or so when I can get the bench cleared.

I fell in love with the rig that much that when I bought the tubes I actually bought two pairs so I can just try swapping the tubes out too.

Will report back with, I hope, a success story.

73 and thanks again for taking the time and trouble to help.

Bernie
GM4WZG

--- In TS-520_820_530_830@...m, Terry Wagoner <wagstw46@...> wrote:
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> Bernie--I forgot to mention if you do monitor Bias I would use both a Scope and
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> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 7, 2011 4:18:18 PM
> Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
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> Bernie--I dont know how you would get an unbypassed 10 ohm resistor in series
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> --- In TS-520_820_530_830@yahoogroups.com, "Bernie McIntosh"
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> > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> > Sent: 07 June 2011 17:49
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
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31734. Re: [TS-520_820_530_830] Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-07 23:48:25 UTC
From: Terry Wagoner
Topic: 31720 Message: 31734

Bernie --Please do report back especially what you found to fix problem so we can all learn from it. I think most of us on here fell in love with these classic rigs. I have never operated a modern DSP rig or SDR and I am sure they are fine, but something about real knobs and dip and load has big attraction for me. Besides performance I just like the way it looks. 73s Terry K9TW

From: Bernie <berniemcintosh@yahoo.es>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 7, 2011 6:52:06 PM
Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only

Thanks Terry - that's quite a few very good suggestions and I'll follow them all over the next day or so when I can get the bench cleared.

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Will report back with, I hope, a success story.

73 and thanks again for taking the time and trouble to help.

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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 7, 2011 4:18:18 PM
> Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
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[Non-text portions of this message have been removed]

31735. TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 02:05:11 UTC
From: ww8x_joe
Topic: 31735 Message: 31735

I hope you guys aren't tired of this topic yet? Anyway, if you've been reading the threads related to my adventures with my low receive problem, I discovered an important clue.

When I take an 18 inch test lead and connect it to one of the lugs on variable capacitor VC1 I hear fairly loud signals. When I connect the same test lead to my outside antenna feedline to the one of the lugs on VC1 the signals jump up very loud with normal noise and S meter readings at S9 and above -- just as the set used to have before my problems started. Here's the curious thing: When I connect the same test lead that's connected to the antenna to the center of the SO239 antenna jack on the rear of the rig... the signals drop way off as if there's hardly an antenna connected. So in addition to having to rewind the L41 (which I've already done), there apparently is also something going on with my receive. I think I'm on to something. What do you think?
Thanks,
WW8X
Joe

31736. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 02:48:57 UTC
From: Terry Wagoner
Topic: 31735 Message: 31736

Joe--When you touch center conductor of your antenna coax to stationary plate lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41 transformer. You are down stream of them. You are coupling signals directly to the gate of receive RF amp Q1. It proves Q1 and D2 are good. (I believe you replaced both?)

Try touching ant coax center conductor to TP-1 on the RF board. You will be on "input" side of L4 and L41. If your signal is weak when touching TP-1 it means something wrong with either L4 and/or L41.

If signal still strong at TP-1 then move to Pin 3 labeled ANT on Connector 3 of RF board. Gently wiggle Connector 3 while applying center conductor of antenna coax. If signal comes and goes you have bad solder joint or bad foil at that connector.

Use your schematic and keep working your way back to your SO-239 connector on rear panel. Next place would be RF attenuator switch. Then Xverter connector switch , then antenna relay RL-1.

I had asked you about Xtal Calibrator or Marker signal and I believe you said it was down as well. If Xtal calibrator signal is strong then L4 and L41 are OK.
Terry-K9TW

From: ww8x_joe <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 7, 2011 10:05:11 PM
Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem

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31737. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 03:42:42 UTC
From: Joe Loverti
Topic: 31735 Message: 31737

Terry:
Interesting. Touching the antenna to TP-1 drops the signal way down. So, I guess I still have a problem with L4 or L41? I adjusted the L41 to Gordon's suggestion and was able to get a 20+ db calibrator signal reading at 1.900mhz by turning its slug slowly. Which makes me think I did OK with the rewinding. I don't think rewinding it again would make any difference? I am certainly willing to do that if you think it would be helpful. The L4 was a replacement Gordon sent me and have no reason to believe it's not working. I checked it for continuity and it seemed fine. BTW, I ordered a NTE222 and a replacement for D1and D2 on the RF board, but haven't received them yet. At this point I think I'll just save them as spares, because as you state, Q1 and D2 are good.

It was great to hear the receive come back alive when touching the antenna to VC-1, now I just have to come up with a permanent fix. Baby steps :?)

Thanks,
73
WW8X
Joe

On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner <wagstw46@...> wrote:

>
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> Joe--When you touch center conductor of your antenna coax to stationary
> plate
> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
> transformer.
> You are down stream of them. You are coupling signals directly to the gate
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> Try touching ant coax center conductor to TP-1 on the RF board. You will be
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> If signal still strong at TP-1 then move to Pin 3 labeled ANT on Connector
> 3 of
> RF board. Gently wiggle Connector 3 while applying center conductor of
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> coax. If signal comes and goes you have bad solder joint or bad foil at
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> connector.
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> Use your schematic and keep working your way back to your SO-239 connector
> on
> rear panel. Next place would be RF attenuator switch. Then Xverter
> connector
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> I had asked you about Xtal Calibrator or Marker signal and I believe you
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> was down as well. If Xtal calibrator signal is strong then L4 and L41 are
> OK.
> Terry-K9TW
>
> _____
> From: ww8x_joe <ww8x.joe@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 7, 2011 10:05:11 PM
> Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
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> I hope you guys aren't tired of this topic yet? Anyway, if you've been
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> [Non-text portions of this message have been removed]
>
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31738. dg5 counter displaying 999999

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 06:58:34 UTC
From: lw8eoq
Topic: 31738 Message: 31738

Hello,

I'am currently trying to get a dg5 counter to work. Checked a lot of solder points, thru holes, etc.

I have it running now, but in counter mode it reads 99.999.9 with only the power cord connected. On display mode I only see the dots. When I connect it to the 520S, I also get 999999 on display mode.

I read other posts regarding power failure causing power resistors to get hot. I noticed that they do get warm... is it ok? Maybe I would have to check that too. It is 4 a.m. and I give up for today.

Thanks in advance for your kind assistance.

73 de Guido, LW8EOQ
Argentina

31739. RE: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 06:58:47 UTC
From: fpath fpath
Topic: 31735 Message: 31739

Hey Joe,

Haven't read all the thread, but sounds like a relay that is burnt out, it's in a metal case, will have a look at a diagram and revert back shortly. Only reason saying that is I did a stupid thing about 25 years ago to my 530s, tune it up without a load and the relay died, cost me $90 back then!!

Dave
VK5PDL

To: TS-520_820_530_830@yahoogroups.com
From: ww8x.joe@...
Date: Wed, 8 Jun 2011 02:05:11 +0000
Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem

I hope you guys aren't tired of this topic yet? Anyway, if you've been reading the threads related to my adventures with my low receive problem, I discovered an important clue.

When I take an 18 inch test lead and connect it to one of the lugs on variable capacitor VC1 I hear fairly loud signals. When I connect the same test lead to my outside antenna feedline to the one of the lugs on VC1 the signals jump up very loud with normal noise and S meter readings at S9 and above -- just as the set used to have before my problems started. Here's the curious thing: When I connect the same test lead that's connected to the antenna to the center of the SO239 antenna jack on the rear of the rig... the signals drop way off as if there's hardly an antenna connected. So in addition to having to rewind the L41 (which I've already done), there apparently is also something going on with my receive. I think I'm on to something. What do you think?
Thanks,
WW8X
Joe

[Non-text portions of this message have been removed]

31740. Re: [TS-520_820_530_830] TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 10:15:18 UTC
From: Dave
Topic: 31719 Message: 31740

Hi Mike,
"In sideband, adjust the MIC gain for the power level you want."
Did you mean for PSK?
(Previous posts have indicatedthat in SSB voice mode, the MIC control should not be used for power reduction)
73 Dave f4eyk

31741. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 10:37:10 UTC
From: Terry Wagoner
Topic: 31735 Message: 31741

Joe--Normal failure at Connector 3 Pin 3 would be a loose or intermittent connection and not a short to ground. So if signal is weak applied at TP-1 it points downstream from there. Only place you worked was at L4 and L41.

What is confusing me is --Are you getting good marker signal? Have you tried it on bands other than 1.9?

If you are getting 20 over marker signal and can peak L41 your rewind and re-solder sounds good.

With 20 over marker signal on 1.9 you should want to turn AF gain down as volume would be rattling the speaker. Same for any other band. If this is true then you know L4 and L41 are ok. I would try marker on 20 (14.175) meters. With it on peak the drive for max s-meter reading. If you dont want to reach for AF control to turn down the volume then adequate marker signal is not passing L4/L41.

Only other components in signal path between TP-1 and L4/L41 are coupling caps C1 and C3 and associated filter network caps/coils. Would be very rare for any of these to fail.

I guess you could take a jumper from Pin 2 of Connector 4 and inject your marker signal at stationary plates of VC-1 and see if marker signal increases significantly?

Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 7, 2011 11:42:42 PM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Terry:
Interesting. Touching the antenna to TP-1 drops the signal way down. So, I guess I still have a problem with L4 or L41? I adjusted the L41 to Gordon's suggestion and was able to get a 20+ db calibrator signal reading at 1.900mhz by turning its slug slowly. Which makes me think I did OK with the rewinding. I don't think rewinding it again would make any difference? I am certainly willing to do that if you think it would be helpful. The L4 was a replacement Gordon sent me and have no reason to believe it's not working. I checked it for continuity and it seemed fine. BTW, I ordered a NTE222 and a replacement for D1and D2 on the RF board, but haven't received them yet. At this point I think I'll just save them as spares, because as you state, Q1 and D2 are good.

It was great to hear the receive come back alive when touching the antenna to VC-1, now I just have to come up with a permanent fix. Baby steps :-)

Thanks,
73
WW8X
Joe

On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner <wagstw46@...> wrote:

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Yahoo! Groups Links

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31742. Re: [TS-520_820_530_830] TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 11:11:34 UTC
From: W5RKL
Topic: 31719 Message: 31742

Hi Dave,

You said

"Did you mean PSK?"

No I was not referring to PSK.

PSK and normal sideband voice both use the same speech amplifier. The output level of the speech amplifier is controlled by the front panel MIC gain control. By varying the MIC gain setting the transceiver's RF output is controlled. That was the sole purpose of my statement regarding RF output in sideband mode, nothing more. This can be clearly seen when operating PSK since PSK uses the same speech amplifier that normal sideband voice uses and by varying the MIC gain, the transceiver's RF output is varied.

The Kenwood hybrids do not have the same RF OUTPUT control that modern day menu driven transceivers have. That leaves the MIC gain and ALC as the 2 players in controlling RF output in sideband transmissions with the hybrids.

73s
Mike
W5RKL

>_____
>From: Dave <dave.crooks@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 5:15 AM
>Subject: Re: [TS-520_820_530_830] TS520se Tx power
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>Hi Mike,
>"In sideband, adjust the MIC gain for the power level you want."
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>(Previous posts have indicatedthat in SSB voice mode, the MIC control should not be used
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31743. Re: [TS-520_820_530_830] TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 13:08:37 UTC
From: Dave
Topic: 31719 Message: 31743

Hi Mike,
I thought the purpose of the homebrew 9v circuit was to adjust power in SSB without changing the alc action on voice peaks.
I read in previous posts that turning down the mic gain to reduce power can degrade audio. (see Message #19563 and others)
At my age, I probably couldn't tell the difference anyway.
Thanks
Dave

31744. ts520s tuning.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 14:09:14 UTC
From: Joao
Topic: 31744 Message: 31744

hello folks.

just one question.

on tuning,

(plate part)

the 80m is the bar all the way up, right?

not only up to the ' 7 ' part.

it goes past that, am i correct?

thanks.

john

31745. Re: [TS-520_820_530_830] TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 14:34:31 UTC
From: W5RKL
Topic: 31719 Message: 31745

Hi Dave,
If you really think how the battery circuit works and how it controls the first IF amplifier's gain (Q1) in sideband transmit and how ALC controls the gain of Q1, you will see it works exactly like the RF Gain control and AGC voltage does in receive in controlling the gain of first IF amp Q1. The RF Gain control also controls the gain of the RF Unit's receiver RF amplifier but since we are talking about transmit, I'll stick with Q1 on the IF Unit's gain control.

Take, for example, if you adjust the RF gain control CCW to a point where the S meter rises to and stops at S9. You have been listeing to an S5 signal and you should still hear the S5 signal but the S5 signal doesn't cause the S meter to move. Why? Because the RF Gain control is controlling the gain of Q1 on the IF Unit. By controlling the gain of Q1 you also control the production of AGC voltage.

By adjusting the battery and pot in sideband transmit to a point where the peak RF output is say 25 watts, I seriously doubt there will be any ALC produced. Therefore, at 25 watts peak RF output which will not result in ALC being produced, the idea that the battery circuit does not affect ALC production is not true. Remember, by reducing the gain of the first IF amplifier Q1 you also reduce the level of the 8Mhz "TIF" RF signal that is applied to the transmit mixer. By reducing the TIF signal level you reduce the level of RF output from the transmit mixer, driver tubes, and ultimately the RF drive to the final amplifier, hence a reduction in RF output. By reducing the peak RF output you also affect the production of ALC because the level of RF applied to the final tube grids from the driver tube is such that the grids of the final tubes never swing positive, hence no grid current and no ALC is produced. So, yes the battery circuit can affect/reduce/eliminate the production of ALC.

73s
Mike
W5RKL

>_____
>From: Dave <dave.crooks@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 8:08 AM
>Subject: Re: [TS-520_820_530_830] TS520se Tx power
>
>
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>Hi Mike,
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>(see Message #19563 and others)
>At my age, I probably couldn't tell the difference anyway.
>Thanks

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31746. Re: [TS-520_820_530_830] ts520s tuning.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 14:38:29 UTC
From: W5RKL
Topic: 31744 Message: 31746

The 80 meter front panel "arc" covers no only 80 meters but also 40 meters. Depending on the 80 meter frequency determines the approximate position the PLATE knob pointer will end up pointing at when the IP dip occurs. If you tune up at the top of 80 meters, say 3.980, the PLATE knob pointer will be pointing more towards to top end of the arc while tuning up on the low end of 75 say, 3.525, the PLATE knob pointer will point more towards the bottom end of the arc.

The same applies to 40 meters, 7.290 the plate knob pointer will point more towards the top of the arc while 7.025 will point more towards the middle to lower area on the arc.

73s
Mike
W5RKL

>_____
>From: Joao <phoenixproject@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 9:09 AM
>Subject: [TS-520_820_530_830] ts520s tuning.
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31747. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 14:53:26 UTC
From: Joe Loverti
Topic: 31735 Message: 31747

Terry:
At 14.175 mhz with the drive peaked, I get an S7 calibrator reading. Quite different than I get 1.9 mhz -- you're correct, it buzzes the speaker. I'll try your other suggestions when I get a chance later on this evening. I probably should think about checking the relay as Dave suggested.

One other thing that may be related, is that when I'm on a strong signal the S-meter fades. In other words, as it is now the strongest signals are around S7 or so... when I tune on them by watching the S meter, after a few seconds the S meter drops off and comes back up and drops off. When I connect the antenna to VC-1 lug the S meter does not fade -- nor does it fade on the calibrator signal.
73,
WW8X
Joe

On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner <wagstw46@...> wrote:

>
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> Joe--Normal failure at Connector 3 Pin 3 would be a loose or intermittent
> connection and not a short to ground. So if signal is weak applied at TP-1
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> From: Joe Loverti <ww8x.joe@...>
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> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 7, 2011 11:42:42 PM
> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
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> Yahoo! Groups Links
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31748. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 15:53:51 UTC
From: Terry Wagoner
Topic: 31735 Message: 31748

Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would say that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20 with driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all cases I need to turn down the AF gain when Marker is on and Drive is peaked.

1. There are 3 possible failure modes 1. Open signal path 2. Shorted or Shunted signal path 3. Intermittent signal path (doesnt fit your symptoms)

2. We have determined that signal path from Marker to Speaker is good/normal.

3. We have determined that signal path from VC-1 is good/normal (including AGC action?)

4. We have determined that signal injected at TP-1 produces significantly weaker output. What components and what failure mode are in path from TP-1 to VC-1?

5. L4/L41 share path with Marker and antenna signal and Marker is good therefore L4/L41 are good.

6. When you apply coax signal to TP-1 you say signals are much weaker than when touched to VC-1. As I mentioned the coupling caps and what I believe are band-pass components (probably broadcast band?) are the only components in path from TP-1 to L4/L41. These components typically dont go bad. These components are not in the circuit when you use the Marker.

7. So, is it possible that something is shunting/shorting the signal to ground at TP-1?

8. Can you unplug Connector 3 carefully and then re-apply coax signal to TP-1? If signal comes up to near same as when touched at VC-1 then you know coupling caps and band-pass filter components are all good. The fault then has to be something shunting the signal to ground upstream of TP-1. If signal does not come up, then coupling caps, bandpass filter components are shunting signal to ground.

9. You could unplug and clean Ant Relay contacts. Normal failure here is bad contacts which could cause weak and/or intermittent signal with coax connected to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to shunt signal to ground and affect any signal applied at TP-1.

ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report back.
73s Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 8, 2011 10:53:26 AM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Terry:
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> Sent: Tue, June 7, 2011 11:42:42 PM
> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
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Yahoo! Groups Links

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31749. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 16:03:44 UTC
From: Terry Wagoner
Topic: 31735 Message: 31749

Mike/Gordon--I do not want to abandon Joe, but I have exhausted my knowledge/experience with his problem. He does not have the test equipment necessary to use Level diagrams so is using antenna coax to inject signal. He is good downstream of L4/L41 with antenna coax signal applied at VC-1. He is not good with antenna coax signal applied at TP-1. Marker signal is good. I am not sure what the components are after TP-1. They appear to make up a band-pass filter (perhaps broadcast band?) and I cant imagine any of these failing open or shunting signal to ground. Appreciate it if you guys could add to what I have suggested and/or take off and run with this one. 73s Terry

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From: Terry Wagoner <wagstw46@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 8, 2011 11:53:51 AM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would say that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20 with

driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all cases

I need to turn down the AF gain when Marker is on and Drive is peaked.

1. There are 3 possible failure modes 1. Open signal path 2. Shorted or Shunted signal path 3. Intermittent signal path (doesnt fit your symptoms)

2. We have determined that signal path from Marker to Speaker is good/normal.

3. We have determined that signal path from VC-1 is good/normal (including AGC action?)

4. We have determined that signal injected at TP-1 produces significantly weaker

output. What components and what failure mode are in path from TP-1 to VC-1?

5. L4/L41 share path with Marker and antenna signal and Marker is good therefore L4/L41 are good.

6. When you apply coax signal to TP-1 you say signals are much weaker than when touched to VC-1. As I mentioned the coupling caps and what I believe are band-pass components (probably broadcast band?) are the only components in path from TP-1 to L4/L41. These components typically dont go bad. These components are not in the circuit when you use the Marker.

7. So, is it possible that something is shunting/shorting the signal to ground at TP-1?

8. Can you unplug Connector 3 carefully and then re-apply coax signal to TP-1? If signal comes up to near same as when touched at VC-1 then you know coupling caps and band-pass filter components are all good. The fault then has to be something shunting the signal to ground upstream of TP-1. If signal does not come up, then coupling caps, bandpass filter components are shunting signal to ground.

9. You could unplug and clean Ant Relay contacts. Normal failure here is bad contacts which could cause weak and/or intermittent signal with coax connected to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to shunt

signal to ground and affect any signal applied at TP-1.

ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report back.
73s Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 8, 2011 10:53:26 AM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

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31750. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 17:00:37 UTC
From: W5RKL
Topic: 31735 Message: 31750

The coils, L3 and L4, after TP1 on the RF Unit are the 8.83Mhz "traps". There is an adjustment for these in the 830 service manual.

If the Marker signal is good but incoming signals are not then the problem is before the RF Unit or possibly a bad solder connection on the ANT pin. It also could be caused by a bad RF ATTN switch. The Marker signal does not flow through the RF ATTN switch. It also could be a very dirty or bad antenna relay connection.

Joe would need to walk a signal from a generator starting at the SO-239 connector (coax connector on the rear panel) to each point along the path to the RF Unit's "ANT" connection. At some point he will find the signal becomes strong which will tell him the problem is just before that point. A simple signal generator such as a Heathkit IG-102 will do the trick. He doesn't need an expensive signal generator to perform this diagnostic test but he will need a signal generator none the less. The Marker signal is applied directly to the RF Unit, it doesn't flow through the same path as the incoming signal does, from the SO-239, through the antenna relay, the RF ATTN switch, then to the RF Unit.

73s
Mike
W5RKL

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>From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 11:03 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
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>> > was down as well. If Xtal calibrator signal is strong then L4 and L41 are
>> > OK.
>> > Terry-K9TW
>> >
>> > _____
>> > From: ww8x_joe <ww8x.joe@gmail.com>
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Sent: Tue, June 7, 2011 10:05:11 PM
>> > Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem
>> >
>> >
>> > I hope you guys aren't tired of this topic yet? Anyway, if you've been
>> > reading
>> > the threads related to my adventures with my low receive problem, I
>> > discovered
>> > an important clue.
>> >
>> > When I take an 18 inch test lead and connect it to one of the lugs on
>> > variable
>> > capacitor VC1 I hear fairly loud signals. When I connect the same test
>> lead
>> > to
>> > my outside antenna feedline to the one of the lugs on VC1 the signals
>> jump

>> > up
>> > very loud with normal noise and S meter readings at S9 and above -- just
>> as
>> > the
>> > set used to have before my problems started. Here's the curious thing:
>> When
>> > I
>> > connect the same test lead that's connected to the antenna to the center
>> of
>> > the
>> > SO239 antenna jack on the rear of the rig... the signals drop way off as
>> if
>> >
>> > there's hardly an antenna connected. So in addition to having to rewind
>> the
>> > L41
>> > (which I've already done), there apparently is also something going on
>> with
>> > my
>> > receive. I think I'm on to something. What do you think?
>> > Thanks,
>> > WW8X
>> > Joe
>> >
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31751. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 17:02:25 UTC
From: W5RKL
Topic: 31735 Message: 31751

One more thing. If the Marker signal is strong, S9 or better, then L3 and L4 are more than likely not the source of weak receive signals. If L3 and/or L4 were the source of the problem the Marker signal would be weak just like the incoming signals are.

73s
Mike
W5RKL

>_____
>From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 11:03 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>
>
>Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>knowledge/experience with his problem. He does not have the test equipment
>necessary to use Level diagrams so is using antenna coax to inject signal. He is
>good downstream of L4/L41 with antenna coax signal applied at VC-1. He is not
>good with antenna coax signal applied at TP-1. Marker signal is good. I am not
>sure what the components are after TP-1. They appear to make up a band-pass
>filter (perhaps broadcast band?) and I cant imagine any of these failing open or
>shunting signal to ground. Appreciate it if you guys could add to what I have
>suggested and/or take off and run with this one. 73s Terry
>
>_____
>From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wed, June 8, 2011 11:53:51 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would say
>that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20 with
>
>driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all cases
>
>I need to turn down the AF gain when Marker is on and Drive is peaked.
>
>1. There are 3 possible failure modes 1. Open signal path 2. Shorted or Shunted
>signal path 3. Intermittent signal path (doesnt fit your symptoms)
>
>2. We have determined that signal path from Marker to Speaker is good/normal.
>
>3. We have determined that signal path from VC-1 is good/normal (including AGC

>action?)
>
>4. We have determined that signal injected at TP-1 produces significantly weaker
>
>output. What components and what failure mode are in path from TP-1 to VC-1?
>
>5. L4/L41 share path with Marker and antenna signal and Marker is good
>therefore L4/L41 are good.
>
>6. When you apply coax signal to TP-1 you say signals are much weaker than when
>touched to VC-1. As I mentioned the coupling caps and what I believe are
>band-pass components (probably broadcast band?) are the only components in path
>from TP-1 to L4/L41. These components typically dont go bad. These components
>are not in the circuit when you use the Marker.
>
>7. So, is it possible that something is shunting/shorting the signal to ground
>at TP-1?
>
>8. Can you unplug Connector 3 carefully and then re-apply coax signal to TP-1?
>If signal comes up to near same as when touched at VC-1 then you know coupling
>caps and band-pass filter components are all good. The fault then has to be
>something shunting the signal to ground upstream of TP-1. If signal does not
>come up, then coupling caps, bandpass filter components are shunting signal to
>ground.
>
>9. You could unplug and clean Ant Relay contacts. Normal failure here is bad
>contacts which could cause weak and/or intermittent signal with coax connected
>to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to shunt
>
>signal to ground and affect any signal applied at TP-1.
>
>ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report back.
>73s Terry
>
>_______________________________
>From: Joe Loverti <ww8x.joe@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wed, June 8, 2011 10:53:26 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>Terry:
>At 14.175 mhz with the drive peaked, I get an S7 calibrator reading. Quite
>different than I get 1.9 mhz -- you're correct, it buzzes the speaker. I'll
>try your other suggestions when I get a chance later on this evening. I
>probably should think about checking the relay as Dave suggested.
>
>One other thing that may be related, is that when I'm on a strong signal the
>S-meter fades. In other words, as it is now the strongest signals are around
>S7 or so... when I tune on them by watching the S meter, after a few seconds
>the S meter drops off and comes back up and drops off. When I connect the

>antenna to VC-1 lug the S meter does not fade -- nor does it fade on the
>calibrator signal.
>73,
>WW8X
>Joe
>
>On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner <wagstw46@...> wrote:
>
>>
>>
>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or intermittent
>> connection and not a short to ground. So if signal is weak applied at TP-1
>> it
>> points downstream from there. Only place you worked was at L4 and L41.
>>
>> What is confusing me is --Are you getting good marker signal? Have you
>> tried it
>> on bands other than 1.9?
>>
>> If you are getting 20 over marker signal and can peak L41 your rewind and
>> re-solder sounds good.
>>
>> With 20 over marker signal on 1.9 you should want to turn AF gain down as
>> volume
>> would be rattling the speaker. Same for any other band. If this is true
>> then you
>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters. With it
>> on
>> peak the drive for max s-meter reading. If you dont want to reach for AF
>> control
>> to turn down the volume then adequate marker signal is not passing L4/L41.
>>
>> Only other components in signal path between TP-1 and L4/L41 are coupling
>> caps
>> C1 and C3 and associated filter network caps/coils. Would be very rare for
>> any
>> of these to fail.
>>
>> I guess you could take a jumper from Pin 2 of Connector 4 and inject your
>> marker
>> signal at stationary plates of VC-1 and see if marker signal increases
>> significantly?
>>
>> Terry
>>
>> _____
>> From: Joe Loverti <ww8x.joe@...>
>>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Tue, June 7, 2011 11:42:42 PM

>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>>
>>
>> Terry:
>> Interesting. Touching the antenna to TP-1 drops the signal way down. So, I
>> guess I still have a problem with L4 or L41? I adjusted the L41 to Gordon's
>> suggestion and was able to get a 20+ db calibrator signal reading at
>> 1.900mhz by turning its slug slowly. Which makes me think I did OK with the
>> rewinding. I don't think rewinding it again would make any difference? I am
>> certainly willing to do that if you think it would be helpful. The L4 was a
>> replacement Gordon sent me and have no reason to believe it's not working.
>> I
>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222 and a
>> replacement for D1and D2 on the RF board, but haven't received them yet. At
>> this point I think I'll just save them as spares, because as you state, Q1
>> and D2 are good.
>>
>> It was great to hear the receive come back alive when touching the antenna
>> to VC-1, now I just have to come up with a permanent fix. Baby steps :-)
>>
>> Thanks,
>> 73
>> WW8X
>> Joe
>>
>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner <wagstw46@...> wrote:
>>
>> >
>> >
>> > Joe--When you touch center conductor of your antenna coax to stationary
>> > plate
>> > lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>> > transformer.
>> > You are down stream of them. You are coupling signals directly to the
>> gate
>> > of
>> > receive RF amp Q1. It proves Q1 and D2 are good. (I believe you replaced
>> > both?)
>> >
>> > Try touching ant coax center conductor to TP-1 on the RF board. You will
>> be
>> > on
>> > "input" side of L4 and L41. If your signal is weak when touching TP-1 it
>> > means
>> > something wrong with either L4 and/or L41.
>> >
>> > If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>> Connector
>> > 3 of
>> > RF board. Gently wiggle Connector 3 while applying center conductor of

>> > antenna
>> > coax. If signal comes and goes you have bad solder joint or bad foil at
>> > that
>> > connector.
>> >
>> > Use your schematic and keep working your way back to your SO-239
>> connector
>> > on
>> > rear panel. Next place would be RF attenuator switch. Then Xverter
>> > connector
>> > switch , then antenna relay RL-1.
>> >
>> > I had asked you about Xtal Calibrator or Marker signal and I believe you
>> > said it
>> > was down as well. If Xtal calibrator signal is strong then L4 and L41 are
>> > OK.
>> > Terry-K9TW
>> >
>> > _____
>> > From: ww8x_joe <ww8x.joe@...>
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Sent: Tue, June 7, 2011 10:05:11 PM
>> > Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem
>> >
>> >
>> > I hope you guys aren't tired of this topic yet? Anyway, if you've been
>> > reading
>> > the threads related to my adventures with my low receive problem, I
>> > discovered
>> > an important clue.
>> >
>> > When I take an 18 inch test lead and connect it to one of the lugs on
>> > variable
>> > capacitor VC1 I hear fairly loud signals. When I connect the same test
>> lead
>> > to
>> > my outside antenna feedline to the one of the lugs on VC1 the signals
>> jump
>> > up
>> > very loud with normal noise and S meter readings at S9 and above -- just
>> as
>> > the
>> > set used to have before my problems started. Here's the curious thing:
>> When
>> > I
>> > connect the same test lead that's connected to the antenna to the center
>> of
>> > the
>> > SO239 antenna jack on the rear of the rig... the signals drop way off as
>> if

>> >
>> > there's hardly an antenna connected. So in addition to having to rewind
>> the
>> > L41
>> > (which I've already done), there apparently is also something going on
>> with
>> > my
>> > receive. I think I'm on to something. What do you think?
>> > Thanks,
>> > WW8X
>> > Joe
>> >
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31752. Re: ts520s tuning.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 17:36:52 UTC
From: Joao
Topic: 31744 Message: 31752

Ok Mike, like i was thinking.

Thanks.

Hope to meet you on the bands.

(off topic
lots of stations overseas have been comin in,
both on 40 and 20, although we've been havin
a lot of thunderstorm static. if youre in any freq or net,
let me know, if you will. me, i make some calls, and sometimes
ppl answer :P)

cheerio.

john

ct2izo

--- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@...> wrote:
>
> The 80 meter front panel "arc" covers no only 80 meters but also 40 meters.Â Depending on the 80 meter frequency determines the approximate position the PLATE knob pointer will end up pointing at when the IP dip occurs. If you tune up at the top of 80 meters, say 3.980, the PLATE knob pointer will be pointing more towards to top end of the arc while tuning up on the low end of 75 say, 3.525, the PLATE knob pointer will point more towards the bottom end of the arc.
>
> The same applies to 40 meters, 7.290 the plate knob pointer will point more towards the top of the arc while 7.025 will point more towards the middle to lower area on the arc.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
> >_____
> >From: Joao <phoenixproject@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Wednesday, June 8, 2011 9:09 AM
> >Subject: [TS-520_820_530_830] ts520s tuning.
> >
> >
> >Â

> >hello folks.
> >
> >just one question.
> >
> >on tuning,
> >
> >(plate part)
> >
> >the 80m is the bar all the way up, right?
> >
> >not only up to the ' 7 ' part.
> >
> >it goes past that, am i correct?
> >
> >thanks.
> >
> >john
> >
> >
> >
> >
> >
>
> [Non-text portions of this message have been removed]
>

31753. Re: [TS-520_820_530_830] Re: suddenly weak TX on TS-830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 18:27:40 UTC
From: Charles Coffee
Topic: 31674 Message: 31753

Ken;
The idle current should be set @ 60ma per the service manual - Use the bias pot on the rear to set this
and follow the instructions in the service manual.

Chuck, KJ4GU

On Tue, Jun 7, 2011 at 3:38 PM, ktwhy2003 <ktwhy2003@...> wrote:

> Just noticed the IP is running at about 40ma? Is this normal after a
> repair of this kind? Just want to know before I try turning it up on the
> back of the radio. Tuning in to a dummy load on 20m.
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@...>
> wrote:
> >
> > Got the new caps for the radio today, and took a lot of pics installing
> them. Probably post them on my website and here when I have time. My high
> voltage is back where it belong and a solid 100 watts on a CW send.
> >
> > THANK YOU for pointing out where the problem was for me.
> >
> > next project is fixing the power switch soon as the one i ordered gets
> here..An interesting discovery though, I found a single thin blue wire cut
> and taped on the bottom near where the caps are..
> > and it has the CW filter YK-88C installed. not that I do CW, but nice to
> know.
> >
> > Kent
> > VE3KNT
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > If the HV is only 400VDC then one of the HV filter capacitors has
> failed.
> > >
> > > I recommend replacing both HV filter capacitors with new caps, obtained
> from Ken, K4EAA. Don't forget to replace the two 470K 1/2 watt resistors and
> .01ufd disc capacitors with new components along with new HV filter caps.
> Ken, K4EAA, sells a HV rebuild kit which as all these components.
> > >
> > > When you replace the HV caps, pay attention to the leads. Remember,

> "BLACK" on the HV cap terminal means "Negative" NOT "Positive". Some caps
> have a strip down the side of the capacitor that points to the "negative"
> terminal. If you have a high res digital camera, take a picture of how the
> leads of the failed capacitors are connected. The HV supply in the 830, just
> like all the other hybrids, is a voltage "doubling" supply. The two HV
> filter capacitors are wired in "series" NOT "parallel"!
> > >
> > > If there is any doubt in your ability to perform the capacitor
> replacement, locate a local ham who has experience and knowledge to help
> you. Don't try it if you have any doubt you can do the job successfully and
> "safely".
> > >
> > > If you do it yourself, thoroughly check your work to ensure the
> capacitors are connected properly BEFORE you apply power! Don't be in a
> hurry, take your time.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "ktwhy2003" <ktwhy2003@>
> wrote:
> > > >
> > > > 400 volts on the HV
> > > >
> > > > about 125ma on CW send mode. so both about half normal.
> > > > I'll check the rely after dinner, don't want to be opening it up
> while cooking.
> > > >
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, W5RKL <w5rkl@> wrote:
> > > > >
> > > > > I seriously doubt the lightning arrestor has anything to do with
> your problem.
> > > > >
> > > > > You didn't say what the HV meter indicated when the 830's tuned for
> maximum power output (Red meter scale).
> > > > >
> > > > > Also, what is the IP meter showing at maximum power output (top
> meter scale).
> > > > >
> > > > > It's also possible the AF Unit relay is going bad, not unusual for
> this relay to fail and affect transmit and receive. You might try tapping
> lightly on the AF Unit relay when keying the 830 in TUNE and/or CW mode. If
> power output changes, increases, then replace the relay on the AF Unit board
> (see Ken, K4EAA, for details on replacement AF Unit relays).
> > > > >
> > > > >

> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > >________________________________
> > > > > >From: ktwhy2003 <ktwhy2003@>
> > > > > >To: TS-520_820_530_830@yahoogroups.com
> > > > > >Sent: Saturday, June 4, 2011 3:20 PM
> > > > > >Subject: [TS-520_820_530_830] suddenly weak TX on TS-830S
> > > > > >
> > > > > >
> > > > > >Â
> > > > > >It was working fine last i tried transmitting a couple days ago.
> Just went to tune it up and I'm hardly getting any power output when I went
> to tune up...
> > > > > >
> > > > > >On BIAS it's only showing 20ma now (mode USB, meter IP)
> > > > > >and all the rest of the tune up process is correspondingly low.
> > > > > >I'm tuning in to the dummy load of my MFJ-949E I did ad a basic
> lightning arrester out on my antenna this past week, but that's not involved
> in the tune up of course, and I was on the air a few days ago since adding
> the arrester. Could it have damaged my radio?
> > > > > >
> > > > > >
> > > > > >
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31754. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 19:04:30 UTC
From: Terry Wagoner
Topic: 31735 Message: 31754

Mike--I was talking about the components between TP-1 and L4. In addition to coupling caps appears to be a band-pass filter? and I suspect is for broadcast band, but I am not sure. Cant imagine any of these caps or inductors being bad.?

I understand L3 and L4.

Since he replaced L4 and L41 I wanted to make sure they were good. Since L4 and L41 are common path for rf signal and marker signal and he gets strong marker signal (S9 +) I assumed that L4 and L41 replacement was no longer his problem.

He is now injecting signal at TP-1 and the signal is significantly weaker. My logic says either "bandpass filter" components are bad or Pin 3 Ant terminal is grounded? I recommended that he unplug Conn 3 and see if signal now injected at TP-1 is strong.

I agree it looks like problem is at or before Ant terminal. I guess I would have believed likely failure mode at ANT terminal would be open or intermittent and signal injected at TP-1 should still be strong in that case. Terry

---

From: W5RKL <w5rkl@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, June 8, 2011 1:00:37 PM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

The coils, L3 and L4, after TP1 on the RF Unit are the 8.83Mhz "traps". There is an adjustment for these in the 830 service manual.

If the Marker signal is good but incoming signals are not then the problem is before the RF Unit or possibly a bad solder connection on the ANT pin. It also could be caused by a bad RF ATTN switch. The Marker signal does not flow through the RF ATTN switch. It also could be a very dirty or bad antenna relay connection.

Joe would need to walk a signal from a generator starting at the SO-239 connector (coax connector on the rear panel) to each point along the path to the RF Unit's "ANT" connection. At some point he will find the signal becomes strong which will tell him the problem is just before that point. A simple signal generator such as a Heathkit IG-102 will do the trick. He doesn't need an expensive signal generator to perform this diagnostic test but he will need a signal generator none the less. The Marker signal is applied directly to the RF Unit, it doesn't flow through the same path as the incoming signal does, from the SO-239, through the antenna relay, the RF ATTN switch, then to the RF Unit.

73s
Mike

W5RKL

>_____
>From: Terry Wagoner <wagstw46@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 11:03 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>
>
>Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>knowledge/experience with his problem. He does not have the test equipment
>necessary to use Level diagrams so is using antenna coax to inject signal. He is
>
>good downstream of L4/L41 with antenna coax signal applied at VC-1. He is not
>good with antenna coax signal applied at TP-1. Marker signal is good. I am not
>sure what the components are after TP-1. They appear to make up a band-pass
>filter (perhaps broadcast band?) and I cant imagine any of these failing open or
>
>shunting signal to ground. Appreciate it if you guys could add to what I have
>suggested and/or take off and run with this one. 73s Terry
>
>_____
>From: Terry Wagoner <wagstw46@yahoo.com>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wed, June 8, 2011 11:53:51 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would say
>that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20 with
>
>
>driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all cases
>
>
>I need to turn down the AF gain when Marker is on and Drive is peaked.
>
>1. There are 3 possible failure modes 1. Open signal path 2. Shorted or Shunted

>signal path 3. Intermittent signal path (doesnt fit your symptoms)
>
>2. We have determined that signal path from Marker to Speaker is good/normal.
>
>3. We have determined that signal path from VC-1 is good/normal (including AGC
>action?)
>
>4. We have determined that signal injected at TP-1 produces significantly weaker
>
>
>output. What components and what failure mode are in path from TP-1 to VC-1?
>

>5. L4/L41 share path with Marker and antenna signal and Marker is good
>therefore L4/L41 are good.
>
>6. When you apply coax signal to TP-1 you say signals are much weaker than when

>touched to VC-1. As I mentioned the coupling caps and what I believe are
>band-pass components (probably broadcast band?) are the only components in path

>from TP-1 to L4/L41. These components typically dont go bad. These components
>are not in the circuit when you use the Marker.
>
>7. So, is it possible that something is shunting/shorting the signal to ground
>at TP-1?
>
>8. Can you unplug Connector 3 carefully and then re-apply coax signal to TP-1?
>If signal comes up to near same as when touched at VC-1 then you know coupling
>caps and band-pass filter components are all good. The fault then has to be
>something shunting the signal to ground upstream of TP-1. If signal does not
>come up, then coupling caps, bandpass filter components are shunting signal to
>ground.
>
>9. You could unplug and clean Ant Relay contacts. Normal failure here is bad
>contacts which could cause weak and/or intermittent signal with coax connected
>to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to shunt
>
>
>signal to ground and affect any signal applied at TP-1.
>
>ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report back.
>73s Terry
>
>_________________________________
>From: Joe Loverti <ww8x.joe@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wed, June 8, 2011 10:53:26 AM
>Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>
>Terry:
>At 14.175 mhz with the drive peaked, I get an S7 calibrator reading. Quite
>different than I get 1.9 mhz -- you're correct, it buzzes the speaker. I'll
>try your other suggestions when I get a chance later on this evening. I
>probably should think about checking the relay as Dave suggested.
>
>One other thing that may be related, is that when I'm on a strong signal the
>S-meter fades. In other words, as it is now the strongest signals are around
>S7 or so... when I tune on them by watching the S meter, after a few seconds
>the S meter drops off and comes back up and drops off. When I connect the
>antenna to VC-1 lug the S meter does not fade -- nor does it fade on the
>calibrator signal.
>73,
>WW8X

>Joe
>
>On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner <wagstw46@...> wrote:
>
>>
>>
>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or intermittent
>> connection and not a short to ground. So if signal is weak applied at TP-1
>> it
>> points downstream from there. Only place you worked was at L4 and L41.
>>
>> What is confusing me is --Are you getting good marker signal? Have you
>> tried it
>> on bands other than 1.9?
>>
>> If you are getting 20 over marker signal and can peak L41 your rewind and
>> re-solder sounds good.
>>
>> With 20 over marker signal on 1.9 you should want to turn AF gain down as
>> volume
>> would be rattling the speaker. Same for any other band. If this is true
>> then you
>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters. With it
>> on
>> peak the drive for max s-meter reading. If you dont want to reach for AF
>> control
>> to turn down the volume then adequate marker signal is not passing L4/L41.
>>
>> Only other components in signal path between TP-1 and L4/L41 are coupling
>> caps
>> C1 and C3 and associated filter network caps/coils. Would be very rare for
>> any
>> of these to fail.
>>
>> I guess you could take a jumper from Pin 2 of Connector 4 and inject your
>> marker
>> signal at stationary plates of VC-1 and see if marker signal increases
>> significantly?
>>
>> Terry
>>
>> _____
>> From: Joe Loverti <ww8x.joe@...>
>>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Tue, June 7, 2011 11:42:42 PM
>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>>
>>
>> Terry:

>> Interesting. Touching the antenna to TP-1 drops the signal way down. So, I
>> guess I still have a problem with L4 or L41? I adjusted the L41 to Gordon's
>> suggestion and was able to get a 20+ db calibrator signal reading at
>> 1.900mhz by turning its slug slowly. Which makes me think I did OK with the
>> rewinding. I don't think rewinding it again would make any difference? I am
>> certainly willing to do that if you think it would be helpful. The L4 was a
>> replacement Gordon sent me and have no reason to believe it's not working.
>> I
>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222 and a
>> replacement for D1and D2 on the RF board, but haven't received them yet. At
>> this point I think I'll just save them as spares, because as you state, Q1
>> and D2 are good.
>>
>> It was great to hear the receive come back alive when touching the antenna
>> to VC-1, now I just have to come up with a permanent fix. Baby steps :-)
>>
>> Thanks,
>> 73
>> WW8X
>> Joe
>>
>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner <wagstw46@...> wrote:
>>
>> >
>> >
>> > Joe--When you touch center conductor of your antenna coax to stationary
>> > plate
>> > lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>> > transformer.
>> > You are down stream of them. You are coupling signals directly to the
>> gate
>> > of
>> > receive RF amp Q1. It proves Q1 and D2 are good. (I believe you replaced
>> > both?)
>> >
>> > Try touching ant coax center conductor to TP-1 on the RF board. You will
>> be
>> > on
>> > "input" side of L4 and L41. If your signal is weak when touching TP-1 it
>> > means
>> > something wrong with either L4 and/or L41.
>> >
>> > If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>> Connector
>> > 3 of
>> > RF board. Gently wiggle Connector 3 while applying center conductor of
>> > antenna
>> > coax. If signal comes and goes you have bad solder joint or bad foil at
>> > that
>> > connector.

>> >
>> > Use your schematic and keep working your way back to your SO-239
>> connector
>> > on
>> > rear panel. Next place would be RF attenuator switch. Then Xverter
>> > connector
>> > switch , then antenna relay RL-1.
>> >
>> > I had asked you about Xtal Calibrator or Marker signal and I believe you
>> > said it
>> > was down as well. If Xtal calibrator signal is strong then L4 and L41 are
>> > OK.
>> > Terry-K9TW
>> >
>> > _____
>> > From: ww8x_joe <ww8x.joe@gmail.com>
>> > To: TS-520_820_530_830@yahoogroups.com
>> > Sent: Tue, June 7, 2011 10:05:11 PM
>> > Subject: [TS-520_820_530_830] TS-830S closing in on low receive problem
>> >
>> >
>> > I hope you guys aren't tired of this topic yet? Anyway, if you've been
>> > reading
>> > the threads related to my adventures with my low receive problem, I
>> > discovered
>> > an important clue.
>> >
>> > When I take an 18 inch test lead and connect it to one of the lugs on
>> > variable
>> > capacitor VC1 I hear fairly loud signals. When I connect the same test
>> lead
>> > to
>> > my outside antenna feedline to the one of the lugs on VC1 the signals
>> jump
>> > up
>> > very loud with normal noise and S meter readings at S9 and above -- just
>> as
>> > the
>> > set used to have before my problems started. Here's the curious thing:
>> When
>> > I
>> > connect the same test lead that's connected to the antenna to the center
>> of
>> > the
>> > SO239 antenna jack on the rear of the rig... the signals drop way off as
>> if
>> >
>> > there's hardly an antenna connected. So in addition to having to rewind
>> the
>> > L41

>> > (which I've already done), there apparently is also something going on
>> with
>> > my
>> > receive. I think I'm on to something. What do you think?
>> > Thanks,
>> > WW8X
>> > Joe
>> >
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31755. Re: Instability on one band, 20m, only

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 21:18:46 UTC
From: David
Topic: 31720 Message: 31755

After recently changing the final tubes, I had all kinds of poor stability on the lower bands when neutralizing them on ten meters. It included blowing fuses. As soon as I did the neutralization on 20 meters everything worked great on all bands, the current draw went way down, and no more blown fuses.

Think about it

David - KE6YX

--- In TS-520_820_530_830@...m, Terry Wagoner <wagstw46@...> wrote:
>
> Bernie --Please do report back especially what you found to fix problem so we
> can all learn from it. I think most of us on here fell in love with these
> classic rigs. I have never operated a modern DSP rig or SDR and I am sure they
> are fine, but something about real knobs and dip and load has big attraction for
> me. Besides performance I just like the way it looks. 73s Terry K9TW
>
>
>
> _____
> From: Bernie <berniemcintosh@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 7, 2011 6:52:06 PM
> Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
>
>
> Thanks Terry - that's quite a few very good suggestions and I'll follow them all
> over the next day or so when I can get the bench cleared.
>
>
> I fell in love with the rig that much that when I bought the tubes I actually
> bought two pairs so I can just try swapping the tubes out too.
>
> Will report back with, I hope, a success story.
>
> 73 and thanks again for taking the time and trouble to help.
>
> Bernie
> GM4WZG
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > Bernie--I forgot to mention if you do monitor Bias I would use both a Scope and
> >
> > VTVM. Scope to see if you have AC ripple. There is difference between
> > instability where tube breaks into oscillation (VHF or HF) and tube IP current

> >
> > drifting high and ultimately blowing fuse. The more I think about it your
> > description is more the latter? If so, I would take a hard look at Bias. Still
>
> > wont hurt to re-neutralize on band where you are having the problem. If that
> > doesnt help you can go back and neutralize on 10 meters. Terry
> >
> >
> >
> > _____
> > From: Terry Wagoner <wagstw46@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tue, June 7, 2011 4:18:18 PM
> > Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
> >
> >
> > Bernie--I dont know how you would get an unbypassed 10 ohm resistor in series
> > with the existing 4 parallel 20 ohm resistors. Perhaps cut the circuit foil at
>
> > the cathode and bridge it with the 10 ohm resistor. I know I would never do
> >that
> >
> > on my rig. There are hundreds if not thousands of these rigs in service without
> >
> > need for negative feedback mod. If you can get a hold of another set of tubes
> > try them. One of the GE tubes you just put in may be gassy and causing current
>
> > runaway? Resting plate current is different than bias. If you have the covers
> > off you can monitor bias voltage at FG terminal on the RF board. Pretty well
> > exhausted my suggestions. Others please jump in. Good luck--Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bernie McIntosh"
> > <berniemcintosh@> wrote:
> > >
> > > Thanks Terry,
> > >
> > > Bias: When I checked the bias voltage it was ok so if its losing bias I
> > > think it must be a momentary loss and I'm not sure how to spot it. I have a
> > > digital scope with a one shot trigger so I can probably set it up to catch
> > > any fall. I'll be thinknig about this over a cup of tea (us brits never
> > > change....) and will have a look shortly.
> > >
> > > Neutralising. Not tried neutralising it on 20m but your description of a
> > > symetrical dip already applies - I just checked it. It seems a bit broader
> > > than on other bands but perfectly symetrical.
> > >
> > > Still on neutralising, I used a 50ohm dummy load and a scope to minimise rf
> > > waveform on 28Mhz.
> > >
> > > Before I look at neutralising specifically on 20m, a friend of mine has

> > > suggested something else as a possibility. He tells me that the GE valves
> > > might have a higher gain than the original Japanese ones and that there is
> > > nothing actually wrong, other than a little too much gain causing
> > > instability on one band. He suggests putting one (unbypassed) 10 ohm
> > > resistor in series with the existing cathode resistors to provide a little
> > > negative feedback. He used to do professional high power RF design and, well
> > > lets put it like this, like many in this group he knows a lot more about it
> > > than me.
> > >
> > > But I prefer not to mod the rig unless there's a few experts out there that
> > > support the idea and a quick google doesn't reveal that anyone has felt the
> > > need to do this before.
> > >
> > > 73
> > >
> > > Bernie
> > > GM4WZG
> > >
> > >
> > >
> > >
> > > _____
> > >
> > > From: TS-520_820_530_830@yahoogroups.com
> > > [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
> > > Sent: 07 June 2011 17:49
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: [TS-520_820_530_830] Re: Instability on one band, 20m, only
> > >
> > >
> > >
> > >
> > > Bernie--Yes receiver is really good. I have full filtered and CW receive is
> > > best I have ever had.
> > >
> > > It sure sounds like it is taking off on you. Is it possible you are losing
> > > bias?
> > >
> > > Have you tried neutralizing on 20 meters? How are you neutralizing (with
> > > scope, RF millivolt meter to see the null?) as opposed to trying to match
> > > dip and max output power.
> > >
> > > I would try to load up on 20 meters. Keep IP at around 100 ma if you can.
> > > You will likely see one side of your dip rise more abruptly on one side than
> > > the other. Set your plate control to that side slightly and then adjust
> > > neutralizing cap. May have to repeat several times to get a smooth and equal
> > > rise on either side of max dip.
> > >
> > > Do you have a nice smooth and equal rise in dip on say 40 meters?
> > >

> > > Terry-K9TW
> > >
>
>
>
>
> [Non-text portions of this message have been removed]
>

31756. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 21:37:50 UTC
From: Joe Loverti
Topic: 31735 Message: 31756

Thanks Mike and Terry...
You guys have given me plenty of time and advice -- I appreciate it very much.
I have a signal generator... an old Eico 324 and a qrpkits signal injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may work also, so I can try what you are suggesting. As far as marker signals go: I get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a peak, but at 14.175 mhz, the marker signal is only S7.

What ever took out the L41 (remember I said the secondary winding was open -- a inch of the wire was missing, but the windings were intact and not burnt), probably also took out something else, which is continuing to be a problem. Before rewinding the L41, I had virtually no signal -- after replacing L41, the signal came back and is now weak. Only when I put the antenna input at VC-1 does the signal come up to sounding like a properly operating receiver.

Wish me luck and thanks again.

73,
WW8X
Joe

On Wed, Jun 8, 2011 at 1:02 PM, W5RKL <w5rkl@...> wrote:

>
>
> One more thing. If the Marker signal is strong, S9 or better, then L3 and
> L4 are more than likely not the source of weak receive signals. If L3 and/or
> L4 were the source of the problem the Marker signal would be weak just like
> the incoming signals are.
>
> 73s
> Mike
> W5RKL
>
>
> >_____
> >From: Terry Wagoner <wagstw46@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Wednesday, June 8, 2011 11:03 AM
>
> >Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
> >
> >

> >
> >Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> >knowledge/experience with his problem. He does not have the test equipment
>
> >necessary to use Level diagrams so is using antenna coax to inject signal.
> He is
> >good downstream of L4/L41 with antenna coax signal applied at VC-1. He is
> not
> >good with antenna coax signal applied at TP-1. Marker signal is good. I am
> not
> >sure what the components are after TP-1. They appear to make up a
> band-pass
> >filter (perhaps broadcast band?) and I cant imagine any of these failing
> open or
> >shunting signal to ground. Appreciate it if you guys could add to what I
> have
> >suggested and/or take off and run with this one. 73s Terry
> >
> >_________________________________
> >From: Terry Wagoner <wagstw46@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Wed, June 8, 2011 11:53:51 AM
> >Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
> >
> >Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would
> say
> >that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20
> with
> >
> >driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all
> cases
> >
> >I need to turn down the AF gain when Marker is on and Drive is peaked.
> >
> >1. There are 3 possible failure modes 1. Open signal path 2. Shorted or
> Shunted
> >signal path 3. Intermittent signal path (doesnt fit your symptoms)
> >
> >2. We have determined that signal path from Marker to Speaker is
> good/normal.
> >
> >3. We have determined that signal path from VC-1 is good/normal (including
> AGC
> >action?)
> >
> >4. We have determined that signal injected at TP-1 produces significantly
> weaker
> >
> >output. What components and what failure mode are in path from TP-1 to

> VC-1?
> >
> >5. L4/L41 share path with Marker and antenna signal and Marker is good
> >therefore L4/L41 are good.
> >
> >6. When you apply coax signal to TP-1 you say signals are much weaker than
> when
> >touched to VC-1. As I mentioned the coupling caps and what I believe are
> >band-pass components (probably broadcast band?) are the only components in
> path
> >from TP-1 to L4/L41. These components typically dont go bad. These
> components
> >are not in the circuit when you use the Marker.
> >
> >7. So, is it possible that something is shunting/shorting the signal to
> ground
> >at TP-1?
> >
> >8. Can you unplug Connector 3 carefully and then re-apply coax signal to
> TP-1?
> >If signal comes up to near same as when touched at VC-1 then you know
> coupling
> >caps and band-pass filter components are all good. The fault then has to
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> >something shunting the signal to ground upstream of TP-1. If signal does
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> >come up, then coupling caps, bandpass filter components are shunting
> signal to
> >ground.
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> >9. You could unplug and clean Ant Relay contacts. Normal failure here is
> bad
> >contacts which could cause weak and/or intermittent signal with coax
> connected
> >to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to
> shunt
> >
> >signal to ground and affect any signal applied at TP-1.
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> >ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report
> back.
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> >From: Joe Loverti <ww8x.joe@...>
> >To: TS-520_820_530_830@yahoogroups.com
> >Sent: Wed, June 8, 2011 10:53:26 AM
> >Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
> >

> >Terry:
> >At 14.175 mhz with the drive peaked, I get an S7 calibrator reading. Quite
> >different than I get 1.9 mhz -- you're correct, it buzzes the speaker.
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> >probably should think about checking the relay as Dave suggested.
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> the
> >S-meter fades. In other words, as it is now the strongest signals are
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> >the S meter drops off and comes back up and drops off. When I connect the
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> >calibrator signal.
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> >WW8X
> >Joe
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> >On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner <wagstw46@...> wrote:
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> >>
> >> Terry
> >>
> >> _____
> >> From: Joe Loverti <ww8x.joe@...>
> >>
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Sent: Tue, June 7, 2011 11:42:42 PM
> >> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
> >>
> >>
> >> Terry:
> >> Interesting. Touching the antenna to TP-1 drops the signal way down. So,
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> >>
> >> Thanks,
> >> 73
> >> WW8X
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> >>
> >> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner <wagstw46@...>
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> >>
> >> >
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> >> > coax. If signal comes and goes you have bad solder joint or bad foil
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> >> > that
> >> > connector.
> >> >
> >> > Use your schematic and keep working your way back to your SO-239
> >> connector
> >> > on
> >> > rear panel. Next place would be RF attenuator switch. Then Xverter
> >> > connector

> >> > switch , then antenna relay RL-1.
> >> >
> >> > I had asked you about Xtal Calibrator or Marker signal and I believe
> you
> >> > said it
> >> > was down as well. If Xtal calibrator signal is strong then L4 and L41
> are
> >> > OK.
> >> > Terry-K9TW
> >> >
> >> > _____
> >> > From: ww8x_joe <ww8x.joe@...>
> >> > To: TS-520_820_530_830@yahoogroups.com
> >> > Sent: Tue, June 7, 2011 10:05:11 PM
> >> > Subject: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
> >> >
> >> >
> >> > I hope you guys aren't tired of this topic yet? Anyway, if you've been
> >> > reading
> >> > the threads related to my adventures with my low receive problem, I
> >> > discovered
> >> > an important clue.
> >> >
> >> > When I take an 18 inch test lead and connect it to one of the lugs on
> >> > variable
> >> > capacitor VC1 I hear fairly loud signals. When I connect the same test
> >> lead
> >> > to
> >> > my outside antenna feedline to the one of the lugs on VC1 the signals
> >> jump
> >> > up
> >> > very loud with normal noise and S meter readings at S9 and above --
> just
> >> as
> >> > the
> >> > set used to have before my problems started. Here's the curious thing:
> >> When
> >> > I
> >> > connect the same test lead that's connected to the antenna to the
> center
> >> of
> >> > the
> >> > SO239 antenna jack on the rear of the rig... the signals drop way off
> as
> >> if
> >> >
> >> > there's hardly an antenna connected. So in addition to having to
> rewind
> >> the

> >> > L41
> >> > (which I've already done), there apparently is also something going on
> >> with
> >> > my
> >> > receive. I think I'm on to something. What do you think?
> >> > Thanks,
> >> > WW8X
> >> > Joe
> >> >
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31757. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 21:51:26 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31757

Joe,
Insert a 14.175 signal at the center of the SO-239 and take a reading on
the S-meter. then insert the same signal at TP-1 on the RF board and
again look at the S-meter. tell me what readings you get.
they should be virtually identical.
Once we have that info, we can move on

Gordon

On 6/8/2011 2:37 PM, Joe Loverti wrote:
> Thanks Mike and Terry...
> You guys have given me plenty of time and advice -- I appreciate it very
> much.
> I have a signal generator... an old Eico 324 and a qrpkits signal
> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may work
> also, so I can try what you are suggesting. As far as marker signals go: I
> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a peak,
> but at 14.175 mhz, the marker signal is only S7.
>
> What ever took out the L41 (remember I said the secondary winding was open
> -- a inch of the wire was missing, but the windings were intact and not
> burnt), probably also took out something else, which is continuing to be a
> problem. Before rewinding the L41, I had virtually no signal -- after
> replacing L41, the signal came back and is now weak. Only when I put the
> antenna input at VC-1 does the signal come up to sounding like a properly
> operating receiver.
>
> Wish me luck and thanks again.
>
> 73,
> WW8X
> Joe
>
>
>
> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
>
>>
>> One more thing. If the Marker signal is strong, S9 or better, then L3 and
>> L4 are more than likely not the source of weak receive signals. If L3 and/or
>> L4 were the source of the problem the Marker signal would be weak just like
>> the incoming signals are.
>>
>> 73s
>> Mike

>> W5RKL
>>
>>
>>> _____
>>> From: Terry Wagoner<wagstw46@...>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Wednesday, June 8, 2011 11:03 AM
>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>> problem
>>>
>>>
>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>>> knowledge/experience with his problem. He does not have the test equipment
>>> necessary to use Level diagrams so is using antenna coax to inject signal.
>> He is
>>> good downstream of L4/L41 with antenna coax signal applied at VC-1. He is
>> not
>>> good with antenna coax signal applied at TP-1. Marker signal is good. I am
>> not
>>> sure what the components are after TP-1. They appear to make up a
>> band-pass
>>> filter (perhaps broadcast band?) and I cant imagine any of these failing
>> open or
>>> shunting signal to ground. Appreciate it if you guys could add to what I
>> have
>>> suggested and/or take off and run with this one. 73s Terry
>>>
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>>> From: Terry Wagoner<wagstw46@...>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Wed, June 8, 2011 11:53:51 AM
>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>> problem
>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I would
>> say
>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40, 20
>> with
>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies. In all
>> cases
>>> I need to turn down the AF gain when Marker is on and Drive is peaked.
>>>
>>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted or
>> Shunted
>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
>>>
>>> 2. We have determined that signal path from Marker to Speaker is
>> good/normal.
>>> 3. We have determined that signal path from VC-1 is good/normal (including
>> AGC
>>> action?)

>>>
>>> 4. We have determined that signal injected at TP-1 produces significantly
>> weaker
>>> output. What components and what failure mode are in path from TP-1 to
>> VC-1?
>>> 5. L4/L41 share path with Marker and antenna signal and Marker is good
>>> therefore L4/L41 are good.
>>>
>>> 6. When you apply coax signal to TP-1 you say signals are much weaker than
>> when
>>> touched to VC-1. As I mentioned the coupling caps and what I believe are
>>> band-pass components (probably broadcast band?) are the only components in
>> path
>> >from TP-1 to L4/L41. These components typically dont go bad. These
>> components
>>> are not in the circuit when you use the Marker.
>>>
>>> 7. So, is it possible that something is shunting/shorting the signal to
>> ground
>>> at TP-1?
>>>
>>> 8. Can you unplug Connector 3 carefully and then re-apply coax signal to
>> TP-1?
>>> If signal comes up to near same as when touched at VC-1 then you know
>> coupling
>>> caps and band-pass filter components are all good. The fault then has to
>> be
>>> something shunting the signal to ground upstream of TP-1. If signal does
>> not
>>> come up, then coupling caps, bandpass filter components are shunting
>> signal to
>>> ground.
>>>
>>> 9. You could unplug and clean Ant Relay contacts. Normal failure here is
>> bad
>>> contacts which could cause weak and/or intermittent signal with coax
>> connected
>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1 to
>> shunt
>>> signal to ground and affect any signal applied at TP-1.
>>>
>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report
>> back.
>>> 73s Terry
>>>
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>>> From: Joe Loverti<ww8x.joe@...>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Wed, June 8, 2011 10:53:26 AM
>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive

>> problem
>>> Terry:
>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator reading. Quite
>>> different than I get 1.9 mhz -- you're correct, it buzzes the speaker.
>> I'll
>>> try your other suggestions when I get a chance later on this evening. I
>>> probably should think about checking the relay as Dave suggested.
>>>
>>> One other thing that may be related, is that when I'm on a strong signal
>> the
>>> S-meter fades. In other words, as it is now the strongest signals are
>> around
>>> S7 or so... when I tune on them by watching the S meter, after a few
>> seconds
>>> the S meter drops off and comes back up and drops off. When I connect the
>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade on the
>>> calibrator signal.
>>> 73,
>>> WW8X
>>> Joe
>>>
>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...> wrote:
>>>
>>>>
>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>> intermittent
>>>> connection and not a short to ground. So if signal is weak applied at
>> TP-1
>>>> it
>>>> points downstream from there. Only place you worked was at L4 and L41.
>>>>
>>>> What is confusing me is --Are you getting good marker signal? Have you
>>>> tried it
>>>> on bands other than 1.9?
>>>>
>>>> If you are getting 20 over marker signal and can peak L41 your rewind
>> and
>>>> re-solder sounds good.
>>>>
>>>> With 20 over marker signal on 1.9 you should want to turn AF gain down
>> as
>>>> volume
>>>> would be rattling the speaker. Same for any other band. If this is true
>>>> then you
>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters. With
>> it
>>>> on
>>>> peak the drive for max s-meter reading. If you dont want to reach for AF
>>>> control
>>>> to turn down the volume then adequate marker signal is not passing

>> L4/L41.
>>>> Only other components in signal path between TP-1 and L4/L41 are
>> coupling
>>>> caps
>>>> C1 and C3 and associated filter network caps/coils. Would be very rare
>> for
>>>> any
>>>> of these to fail.
>>>>
>>>> I guess you could take a jumper from Pin 2 of Connector 4 and inject
>> your
>>>> marker
>>>> signal at stationary plates of VC-1 and see if marker signal increases
>>>> significantly?
>>>>
>>>> Terry
>>>>
>>>> _____
>>>> From: Joe Loverti<ww8x.joe@...>
>>>>
>>>> To: TS-520_820_530_830@yahoogroups.com
>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>> problem
>>>>
>>>> Terry:
>>>> Interesting. Touching the antenna to TP-1 drops the signal way down. So,
>> I
>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>> Gordon's
>>>> suggestion and was able to get a 20+ db calibrator signal reading at
>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK with
>> the
>>>> rewinding. I don't think rewinding it again would make any difference? I
>> am
>>>> certainly willing to do that if you think it would be helpful. The L4
>> was a
>>>> replacement Gordon sent me and have no reason to believe it's not
>> working.
>>>> I
>>>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222
>> and a
>>>> replacement for D1and D2 on the RF board, but haven't received them yet.
>> At
>>>> this point I think I'll just save them as spares, because as you state,
>> Q1
>>>> and D2 are good.
>>>>
>>>> It was great to hear the receive come back alive when touching the
>> antenna

>>>> to VC-1, now I just have to come up with a permanent fix. Baby steps :?)
>>>>
>>>> Thanks,
>>>> 73
>>>> WW8X
>>>> Joe
>>>>
>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...>
>> wrote:
>>>>>
>>>>> Joe--When you touch center conductor of your antenna coax to
>> stationary
>>>>> plate
>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>>>>> transformer.
>>>>> You are down stream of them. You are coupling signals directly to the
>>>> gate
>>>>> of
>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
>> replaced
>>>>> both?)
>>>>>
>>>>> Try touching ant coax center conductor to TP-1 on the RF board. You
>> will
>>>> be
>>>>> on
>>>>> "input" side of L4 and L41. If your signal is weak when touching TP-1
>> it
>>>>> means
>>>>> something wrong with either L4 and/or L41.
>>>>>
>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>>>> Connector
>>>>> 3 of
>>>>> RF board. Gently wiggle Connector 3 while applying center conductor of
>>>>> antenna
>>>>> coax. If signal comes and goes you have bad solder joint or bad foil
>> at
>>>>> that
>>>>> connector.
>>>>>
>>>>> Use your schematic and keep working your way back to your SO-239
>>>> connector
>>>>> on
>>>>> rear panel. Next place would be RF attenuator switch. Then Xverter
>>>>> connector
>>>>> switch , then antenna relay RL-1.
>>>>>
>>>>> I had asked you about Xtal Calibrator or Marker signal and I believe
>> you

>>>>> said it
>>>>> was down as well. If Xtal calibrator signal is strong then L4 and L41
>> are
>>>>> OK.
>>>>> Terry-K9TW
>>>>>
>>>>> _____
>>>>> From: ww8x_joe<ww8x.joe@...>
>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
>> problem
>>>>>
>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've been
>>>>> reading
>>>>> the threads related to my adventures with my low receive problem, I
>>>>> discovered
>>>>> an important clue.
>>>>>
>>>>> When I take an 18 inch test lead and connect it to one of the lugs on
>>>>> variable
>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same test
>>>> lead
>>>>> to
>>>>> my outside antenna feedline to the one of the lugs on VC1 the signals
>>>> jump
>>>>> up
>>>>> very loud with normal noise and S meter readings at S9 and above --
>> just
>>>> as
>>>>> the
>>>>> set used to have before my problems started. Here's the curious thing:
>>>> When
>>>>> I
>>>>> connect the same test lead that's connected to the antenna to the
>> center
>>>> of
>>>>> the
>>>>> SO239 antenna jack on the rear of the rig... the signals drop way off
>> as
>>>> if
>>>>> there's hardly an antenna connected. So in addition to having to
>> rewind
>>>> the
>>>>> L41
>>>>> (which I've already done), there apparently is also something going on
>>>> with
>>>>> my
>>>>> receive. I think I'm on to something. What do you think?
>>>>> Thanks,

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>>>>> Joe
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31758. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:22:16 UTC
From: Joe Loverti
Topic: 31735 Message: 31758

Gordon,
The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
can get it reading from a BK frequency counter) are:
SO239 is slightly less than S7
TP-1 is slightly less than S7
TC-1 is 20 over S9
TP-2 is 20 over S9

WW8X

On Wed, Jun 8, 2011 at 5:51 PM, <n6wk@...> wrote:

> Joe,
> Insert a 14.175 signal at the center of the SO-239 and take a reading on
> the S-meter. then insert the same signal at TP-1 on the RF board and
> again look at the S-meter. tell me what readings you get.
> they should be virtually identical.
> Once we have that info, we can move on
>
> Gordon
>
>
> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> > Thanks Mike and Terry...
> > You guys have given me plenty of time and advice -- I appreciate it very
> > much.
> > I have a signal generator... an old Eico 324 and a qrpkits signal
> > injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may
> work
> > also, so I can try what you are suggesting. As far as marker signals go:
> I
> > get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
> peak,
> > but at 14.175 mhz, the marker signal is only S7.
> >
> > What ever took out the L41 (remember I said the secondary winding was
> open
> > -- a inch of the wire was missing, but the windings were intact and not
> > burnt), probably also took out something else, which is continuing to be
> a
> > problem. Before rewinding the L41, I had virtually no signal -- after
> > replacing L41, the signal came back and is now weak. Only when I put the
> > antenna input at VC-1 does the signal come up to sounding like a properly
> > operating receiver.
> >
> > Wish me luck and thanks again.

> >
> > 73,
> > WW8X
> > Joe
> >
> >
> >
> > On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >
> >>
> >> One more thing. If the Marker signal is strong, S9 or better, then L3
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> >> L4 are more than likely not the source of weak receive signals. If L3
> and/or
> >> L4 were the source of the problem the Marker signal would be weak just
> like
> >> the incoming signals are.
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> >> Mike
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> >>
> >>> _____
> >>> From: Terry Wagoner<wagstw46@...>
> >>> To: TS-520_820_530_830@yahoogroups.com
> >>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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> >>>
> >>>
> >>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> >>> knowledge/experience with his problem. He does not have the test
> equipment
> >>> necessary to use Level diagrams so is using antenna coax to inject
> signal.
> >> He is
> >>> good downstream of L4/L41 with antenna coax signal applied at VC-1. He
> is
> >> not
> >>> good with antenna coax signal applied at TP-1. Marker signal is good. I
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> >> band-pass
> >>> filter (perhaps broadcast band?) and I cant imagine any of these
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> >>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I
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> >>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40,
> 20
> >> with
> >>> driver peaked. Maybe around S9 to 5 over on the higher frequencies. In
> all
> >> cases
> >>> I need to turn down the AF gain when Marker is on and Drive is peaked.
> >>>
> >>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted or
> >> Shunted
> >>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
> >>>
> >>> 2. We have determined that signal path from Marker to Speaker is
> >> good/normal.
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> (including
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> >>> 4. We have determined that signal injected at TP-1 produces
> significantly
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> >> VC-1?
> >>> 5. L4/L41 share path with Marker and antenna signal and Marker is good
> >>> therefore L4/L41 are good.
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> >>> 6. When you apply coax signal to TP-1 you say signals are much weaker
> than
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> in
> >> path
> >> >from TP-1 to L4/L41. These components typically dont go bad. These
> >> components
> >>> are not in the circuit when you use the Marker.

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> >>> 7. So, is it possible that something is shunting/shorting the signal to
> >> ground
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> >>> 8. Can you unplug Connector 3 carefully and then re-apply coax signal
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> >>> 9. You could unplug and clean Ant Relay contacts. Normal failure here
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> >>> to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1
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> >>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report
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> >>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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> Quite
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> >>>>
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> true
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> >> it
> >>>> on
> >>>> peak the drive for max s-meter reading. If you dont want to reach for
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> >>>> C1 and C3 and associated filter network caps/coils. Would be very rare
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> >>>> From: Joe Loverti<ww8x.joe@...>
> >>>>
> >>>> To: TS-520_820_530_830@yahoogroups.com
> >>>> Sent: Tue, June 7, 2011 11:42:42 PM
> >>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >> problem
> >>>>
> >>>> Terry:
> >>>> Interesting. Touching the antenna to TP-1 drops the signal way down.
> So,
> >> I
> >>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
> >> Gordon's
> >>>> suggestion and was able to get a 20+ db calibrator signal reading at
> >>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
> with
> >> the
> >>>> rewinding. I don't think rewinding it again would make any difference?
> I
> >> am
> >>>> certainly willing to do that if you think it would be helpful. The L4
> >> was a
> >>>> replacement Gordon sent me and have no reason to believe it's not
> >> working.
> >>>> I
> >>>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222
> >> and a
> >>>> replacement for D1and D2 on the RF board, but haven't received them
> yet.
> >> At
> >>>> this point I think I'll just save them as spares, because as you
> state,
> >> Q1
> >>>> and D2 are good.
> >>>>
> >>>> It was great to hear the receive come back alive when touching the

> >> antenna
> >>>> to VC-1, now I just have to come up with a permanent fix. Baby steps
> :?)
> >>>>
> >>>> Thanks,
> >>>> 73
> >>>> WW8X
> >>>> Joe
> >>>>
> >>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...>
> >> wrote:
> >>>>>
> >>>>> Joe--When you touch center conductor of your antenna coax to
> >> stationary
> >>>>> plate
> >>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
> >>>>> transformer.
> >>>>> You are down stream of them. You are coupling signals directly to the
> >>>> gate
> >>>>> of
> >>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
> >> replaced
> >>>>> both?)
> >>>>>
> >>>>> Try touching ant coax center conductor to TP-1 on the RF board. You
> >> will
> >>>> be
> >>>>> on
> >>>>> "input" side of L4 and L41. If your signal is weak when touching TP-1
> >> it
> >>>>> means
> >>>>> something wrong with either L4 and/or L41.
> >>>>>
> >>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
> >>>> Connector
> >>>>> 3 of
> >>>>> RF board. Gently wiggle Connector 3 while applying center conductor
> > of
> >>>>> antenna
> >>>>> coax. If signal comes and goes you have bad solder joint or bad foil
> >> at
> >>>>> that
> >>>>> connector.
> >>>>>
> >>>>> Use your schematic and keep working your way back to your SO-239
> >>>> connector
> >>>>> on
> >>>>> rear panel. Next place would be RF attenuator switch. Then Xverter
> >>>>> connector
> >>>>> switch , then antenna relay RL-1.

> >>>>>
> >>>>> I had asked you about Xtal Calibrator or Marker signal and I believe
> >> you
> >>>>> said it
> >>>>> was down as well. If Xtal calibrator signal is strong then L4 and L41
> >> are
> >>>>> OK.
> >>>>> Terry-K9TW
> >>>>>
> >>>>> _____
> >>>>> From: ww8x_joe<ww8x.joe@...>
> >>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
> >> problem
> >>>>>
> >>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
> been
> >>>>> reading
> >>>>> the threads related to my adventures with my low receive problem, I
> >>>>> discovered
> >>>>> an important clue.
> >>>>>
> >>>>> When I take an 18 inch test lead and connect it to one of the lugs on
> >>>>> variable
> >>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
> test
> >>>> lead
> >>>>> to
> >>>>> my outside antenna feedline to the one of the lugs on VC1 the signals
> >>>> jump
> >>>>> up
> >>>>> very loud with normal noise and S meter readings at S9 and above --
> >> just
> >>>> as
> >>>>> the
> >>>>> set used to have before my problems started. Here's the curious
> thing:
> >>>> When
> >>>>> I
> >>>>> connect the same test lead that's connected to the antenna to the
> >> center
> >>>> of
> >>>>> the
> >>>>> SO239 antenna jack on the rear of the rig... the signals drop way off
> >> as
> >>>> if
> >>>>> there's hardly an antenna connected. So in addition to having to
> >> rewind
> >>>> the

> >>>>> L41
> >>>>> (which I've already done), there apparently is also something going
> on
> >>>> with
> >>>>> my
> >>>>> receive. I think I'm on to something. What do you think?
> >>>>> Thanks,
> >>>>> WW8X
> >>>>> Joe
> >>>>>
> >>>>> [Non-text portions of this message have been removed]
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> >>>> ------------------------------------
> >>>>
> >>>> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31759. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:29:13 UTC
From: Terry Wagoner
Topic: 31735 Message: 31759

Joe-I think you meant VC-1? Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 8, 2011 8:22:16 PM
Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Gordon,
The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
can get it reading from a BK frequency counter) are:
SO239 is slightly less than S7
TP-1 is slightly less than S7
TC-1 is 20 over S9
TP-2 is 20 over S9

WW8X

On Wed, Jun 8, 2011 at 5:51 PM, <n6wk@...> wrote:

> Joe,
> Insert a 14.175 signal at the center of the SO-239 and take a reading on
> the S-meter. then insert the same signal at TP-1 on the RF board and
> again look at the S-meter. tell me what readings you get.
> they should be virtually identical.
> Once we have that info, we can move on
>
> Gordon
>
>
> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> > Thanks Mike and Terry...
> > You guys have given me plenty of time and advice -- I appreciate it very
> > much.
> > I have a signal generator... an old Eico 324 and a qrpkits signal
> > injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may
> work
> > also, so I can try what you are suggesting. As far as marker signals go:
> I
> > get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
> peak,
> > but at 14.175 mhz, the marker signal is only S7.
> >
> > What ever took out the L41 (remember I said the secondary winding was
> open
> > -- a inch of the wire was missing, but the windings were intact and not

> > burnt), probably also took out something else, which is continuing to be
> a
> > problem. Before rewinding the L41, I had virtually no signal -- after
> > replacing L41, the signal came back and is now weak. Only when I put the
> > antenna input at VC-1 does the signal come up to sounding like a properly
> > operating receiver.
> >
> > Wish me luck and thanks again.
> >
> > 73,
> > WW8X
> > Joe
> >
> >
> >
> > On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >
> >>
> >> One more thing. If the Marker signal is strong, S9 or better, then L3
> and
> >> L4 are more than likely not the source of weak receive signals. If L3
> and/or
> >> L4 were the source of the problem the Marker signal would be weak just
> like
> >> the incoming signals are.
> >>
> >> 73s
> >> Mike
> >> W5RKL
> >>
> >>
> >>> _____
> >>> From: Terry Wagoner<wagstw46@...>
> >>> To: TS-520_820_530_830@yahoogroups.com
> >>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >> problem
> >>>
> >>>
> >>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> >>> knowledge/experience with his problem. He does not have the test
> equipment
> >>> necessary to use Level diagrams so is using antenna coax to inject
> signal.
> >> He is
> >>> good downstream of L4/L41 with antenna coax signal applied at VC-1. He
> is
> >> not
> >>> good with antenna coax signal applied at TP-1. Marker signal is good. I
> am

> >> not
> >>> sure what the components are after TP-1. They appear to make up a
> >> band-pass
> >>> filter (perhaps broadcast band?) and I cant imagine any of these
> failing
> >> open or
> >>> shunting signal to ground. Appreciate it if you guys could add to what
> I
> >> have
> >>> suggested and/or take off and run with this one. 73s Terry
> >>>
> >>> _____
> >>> From: Terry Wagoner<wagstw46@...>
> >>> To: TS-520_820_530_830@yahoogroups.com
> >>> Sent: Wed, June 8, 2011 11:53:51 AM
> >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >> problem
> >>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I
> would
> >> say
> >>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80, 40,
> 20
> >> with
> >>> driver peaked. Maybe around S9 to 5 over on the higher frequencies. In
> all
> >> cases
> >>> I need to turn down the AF gain when Marker is on and Drive is peaked.
> >>>
> >>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted or
> >> Shunted
> >>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
> >>>
> >>> 2. We have determined that signal path from Marker to Speaker is
> >> good/normal.
> >>> 3. We have determined that signal path from VC-1 is good/normal
> (including
> >> AGC
> >>> action?)
> >>>
> >>> 4. We have determined that signal injected at TP-1 produces
> significantly
> >> weaker
> >>> output. What components and what failure mode are in path from TP-1 to
> >> VC-1?
> >>> 5. L4/L41 share path with Marker and antenna signal and Marker is good
> >>> therefore L4/L41 are good.
> >>>
> >>> 6. When you apply coax signal to TP-1 you say signals are much weaker
> than
> >> when

> >>> touched to VC-1. As I mentioned the coupling caps and what I believe
> are
> >>> band-pass components (probably broadcast band?) are the only components
> in
> >> path
> >> >from TP-1 to L4/L41. These components typically dont go bad. These
> >> components
> >>> are not in the circuit when you use the Marker.
> >>>
> >>> 7. So, is it possible that something is shunting/shorting the signal to
> >> ground
> >>> at TP-1?
> >>>
> >>> 8. Can you unplug Connector 3 carefully and then re-apply coax signal
> to
> >> TP-1?
> >>> If signal comes up to near same as when touched at VC-1 then you know
> >> coupling
> >>> caps and band-pass filter components are all good. The fault then has
> to
> >> be
> >>> something shunting the signal to ground upstream of TP-1. If signal
> does
> >> not
> >>> come up, then coupling caps, bandpass filter components are shunting
> >> signal to
> >>> ground.
> >>>
> >>> 9. You could unplug and clean Ant Relay contacts. Normal failure here
> is
> >> bad
> >>> contacts which could cause weak and/or intermittent signal with coax
> >> connected
> >>> to rear chassis so-239. Would not expect bad contacts at Ant Relay RL-1
> to
> >> shunt
> >>> signal to ground and affect any signal applied at TP-1.
> >>>
> >>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and report
> >> back.
> >>> 73s Terry
> >>>
> >>> _____
> >>> From: Joe Loverti<ww8x.joe@...>
> >>> To: TS-520_820_530_830@yahoogroups.com
> >>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >> problem
> >>> Terry:
> >>> At 14.175 mhz with the drive peaked, I get an S7 calibrator reading.

> Quite
> >>> different than I get 1.9 mhz -- you're correct, it buzzes the speaker.
> >> I'll
> >>> try your other suggestions when I get a chance later on this evening. I
> >>> probably should think about checking the relay as Dave suggested.
> >>>
> >>> One other thing that may be related, is that when I'm on a strong
> signal
> >> the
> >>> S-meter fades. In other words, as it is now the strongest signals are
> >> around
> >>> S7 or so... when I tune on them by watching the S meter, after a few
> >> seconds
> >>> the S meter drops off and comes back up and drops off. When I connect
> the
> >>> antenna to VC-1 lug the S meter does not fade -- nor does it fade on
> the
> >>> calibrator signal.
> >>> 73,
> >>> WW8X
> >>> Joe
> >>>
> >>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
> wrote:
> >>>
> >>>>
> >>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> >> intermittent
> >>>> connection and not a short to ground. So if signal is weak applied at
> >> TP-1
> >>>> it
> >>>> points downstream from there. Only place you worked was at L4 and L41.
> >>>>
> >>>> What is confusing me is --Are you getting good marker signal? Have you
> >>>> tried it
> >>>> on bands other than 1.9?
> >>>>
> >>>> If you are getting 20 over marker signal and can peak L41 your rewind
> >> and
> >>>> re-solder sounds good.
> >>>>
> >>>> With 20 over marker signal on 1.9 you should want to turn AF gain down
> >> as
> >>>> volume
> >>>> would be rattling the speaker. Same for any other band. If this is
> true
> >>>> then you
> >>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters. With
> >> it
> >>>> on

> >>>> peak the drive for max s-meter reading. If you dont want to reach for
> AF
> >>>> control
> >>>> to turn down the volume then adequate marker signal is not passing
> >> L4/L41.
> >>>> Only other components in signal path between TP-1 and L4/L41 are
> >> coupling
> >>>> caps
> >>>> C1 and C3 and associated filter network caps/coils. Would be very rare
> >> for
> >>>> any
> >>>> of these to fail.
> >>>>
> >>>> I guess you could take a jumper from Pin 2 of Connector 4 and inject
> >> your
> >>>> marker
> >>>> signal at stationary plates of VC-1 and see if marker signal increases
> >>>> significantly?
> >>>>
> >>>> Terry
> >>>>
> >>>> _____
> >>>> From: Joe Loverti<ww8x.joe@...>
> >>>>
> >>>> To: TS-520_820_530_830@yahoogroups.com
> >>>> Sent: Tue, June 7, 2011 11:42:42 PM
> >>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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> >>>> Terry:
> >>>> Interesting. Touching the antenna to TP-1 drops the signal way down.
> So,
> >> I
> >>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
> >> Gordon's
> >>>> suggestion and was able to get a 20+ db calibrator signal reading at
> >>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
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> >>>> certainly willing to do that if you think it would be helpful. The L4
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> >> working.
> >>>> I
> >>>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222
> >> and a
> >>>> replacement for D1and D2 on the RF board, but haven't received them

> yet.
> >> At
> >>>> this point I think I'll just save them as spares, because as you
> state,
> >> Q1
> >>>> and D2 are good.
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> >>>> It was great to hear the receive come back alive when touching the
> >> antenna
> >>>> to VC-1, now I just have to come up with a permanent fix. Baby steps
> :-)
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> >>>>> transformer.
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> >>>> Connector
> >>>>> 3 of
> >>>>> RF board. Gently wiggle Connector 3 while applying center conductor
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> >>>>> Use your schematic and keep working your way back to your SO-239
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> >>>>> on
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> >>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
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> >>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
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> >>>>> When I take an 18 inch test lead and connect it to one of the lugs on
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> >>>> When
> >>>>> I
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> >>>>> Thanks,
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

31760. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:31:32 UTC
From: Joe Loverti
Topic: 31735 Message: 31760

Correct Terry...
The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
can get it reading from a BK frequency counter) are:
SO239 is slightly less than S7
TP-1 is slightly less than S7
VC-1 is 20 over S9
TP-2 is 20 over S9
Thanks for the catch.

On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Joe-I think you meant VC-1? Terry
>
>
> _____
> From: Joe Loverti <ww8x.joe@...>
> To: TS-520_820_530_830@yahoogroups.com
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> Gordon,
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> WW8X
>
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> > Joe,
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> > again look at the S-meter. tell me what readings you get.
> > they should be virtually identical.
> > Once we have that info, we can move on
> >
> > Gordon
> >
> >

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> > > You guys have given me plenty of time and advice -- I appreciate it
> very
> > > much.
> > > I have a signal generator... an old Eico 324 and a qrpkits signal
> > > injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may
> > work
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> go:
> > I
> > > get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
> > peak,
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> > > -- a inch of the wire was missing, but the windings were intact and not
> > > burnt), probably also took out something else, which is continuing to
> be
> > a
> > > problem. Before rewinding the L41, I had virtually no signal -- after
> > > replacing L41, the signal came back and is now weak. Only when I put
> the
> > > antenna input at VC-1 does the signal come up to sounding like a
> properly
> > > operating receiver.
> > >
> > > Wish me luck and thanks again.
> > >
> > > 73,
> > > WW8X
> > > Joe
> > >
> > >
> > >
> > > On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> > >
> > >>
> > >> One more thing. If the Marker signal is strong, S9 or better, then L3
> > and
> > >> L4 are more than likely not the source of weak receive signals. If L3
> > and/or
> > >> L4 were the source of the problem the Marker signal would be weak just
> > like
> > >> the incoming signals are.
> > >>
> > >> 73s
> > >> Mike
> > >> W5RKL

> > >>
> > >>
> > >>> _____
> > >>> From: Terry Wagoner<wagstw46@...>
> > >>> To: TS-520_820_530_830@yahoogroups.com
> > >>> Sent: Wednesday, June 8, 2011 11:03 AM
> > >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> > >> problem
> > >>>
> > >>>
> > >>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> > >>> knowledge/experience with his problem. He does not have the test
> > equipment
> > >>> necessary to use Level diagrams so is using antenna coax to inject
> > signal.
> > >> He is
> > >>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
> He
> > is
> > >> not
> > >>> good with antenna coax signal applied at TP-1. Marker signal is good.
> I
> > am
> > >> not
> > >>> sure what the components are after TP-1. They appear to make up a
> > >> band-pass
> > >>> filter (perhaps broadcast band?) and I cant imagine any of these
> > failing
> > >> open or
> > >>> shunting signal to ground. Appreciate it if you guys could add to
> what
> > I
> > >> have
> > >>> suggested and/or take off and run with this one. 73s Terry
> > >>>
> > >>> _____
> > >>> From: Terry Wagoner<wagstw46@...>
> > >>> To: TS-520_820_530_830@yahoogroups.com
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> > >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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> > >>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I
> > would
> > >> say
> > >>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
> 40,
> > 20
> > >> with
> > >>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
> In

> > all
> > >> cases
> > >>> I need to turn down the AF gain when Marker is on and Drive is
> peaked.
> > >>>
> > >>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted
> or
> > >> Shunted
> > >>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
> > >>>
> > >>> 2. We have determined that signal path from Marker to Speaker is
> > >> good/normal.
> > >>> 3. We have determined that signal path from VC-1 is good/normal
> > (including
> > >> AGC
> > >>> action?)
> > >>>
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> > significantly
> > >> weaker
> > >>> output. What components and what failure mode are in path from TP-1
> to
> > >> VC-1?
> > >>> 5. L4/L41 share path with Marker and antenna signal and Marker is
> good
> > >>> therefore L4/L41 are good.
> > >>>
> > >>> 6. When you apply coax signal to TP-1 you say signals are much weaker
> > than
> > >> when
> > >>> touched to VC-1. As I mentioned the coupling caps and what I believe
> > are
> > >>> band-pass components (probably broadcast band?) are the only
> components
> > in
> > >> path
> > >> >from TP-1 to L4/L41. These components typically dont go bad. These
> > >> components
> > >>> are not in the circuit when you use the Marker.
> > >>>
> > >>> 7. So, is it possible that something is shunting/shorting the signal
> to
> > >> ground
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> > >>> 8. Can you unplug Connector 3 carefully and then re-apply coax signal
> > to
> > >> TP-1?
> > >>> If signal comes up to near same as when touched at VC-1 then you know
> > >> coupling

> > >>> caps and band-pass filter components are all good. The fault then has
> > to
> > >> be
> > >>> something shunting the signal to ground upstream of TP-1. If signal
> > does
> > >> not
> > >>> come up, then coupling caps, bandpass filter components are shunting
> > >> signal to
> > >>> ground.
> > >>>
> > >>> 9. You could unplug and clean Ant Relay contacts. Normal failure here
> > is
> > >> bad
> > >>> contacts which could cause weak and/or intermittent signal with coax
> > >> connected
> > >>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
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> > to
> > >> shunt
> > >>> signal to ground and affect any signal applied at TP-1.
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> > >>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
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> > >> back.
> > >>> 73s Terry
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> > >>> _____
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> > >>> To: TS-520_820_530_830@yahoogroups.com
> > >>> Sent: Wed, June 8, 2011 10:53:26 AM
> > >>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> > >> problem
> > >>> Terry:
> > >>> At 14.175 mhz with the drive peaked, I get an S7 calibrator reading.
> > Quite
> > >>> different than I get 1.9 mhz -- you're correct, it buzzes the
> speaker.
> > >> I'll
> > >>> try your other suggestions when I get a chance later on this evening.
> I
> > >>> probably should think about checking the relay as Dave suggested.
> > >>>
> > >>> One other thing that may be related, is that when I'm on a strong
> > signal
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> > >>> S-meter fades. In other words, as it is now the strongest signals are
> > >> around
> > >>> S7 or so... when I tune on them by watching the S meter, after a few
> > >> seconds
> > >>> the S meter drops off and comes back up and drops off. When I connect

> > the
> > >>> antenna to VC-1 lug the S meter does not fade -- nor does it fade on
> > the
> > >>> calibrator signal.
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> > >>> WW8X
> > >>> Joe
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> > >>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> > >> intermittent
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> > >> TP-1
> > >>>> it
> > >>>> points downstream from there. Only place you worked was at L4 and
> L41.
> > >>>>
> > >>>> What is confusing me is --Are you getting good marker signal? Have
> you
> > >>>> tried it
> > >>>> on bands other than 1.9?
> > >>>>
> > >>>> If you are getting 20 over marker signal and can peak L41 your
> rewind
> > >> and
> > >>>> re-solder sounds good.
> > >>>>
> > >>>> With 20 over marker signal on 1.9 you should want to turn AF gain
> down
> > >> as
> > >>>> volume
> > >>>> would be rattling the speaker. Same for any other band. If this is
> > true
> > >>>> then you
> > >>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
> With
> > >> it
> > >>>> on
> > >>>> peak the drive for max s-meter reading. If you dont want to reach
> for
> > AF
> > >>>> control
> > >>>> to turn down the volume then adequate marker signal is not passing
> > >> L4/L41.
> > >>>> Only other components in signal path between TP-1 and L4/L41 are
> > >> coupling

> > >>>> caps
> > >>>> C1 and C3 and associated filter network caps/coils. Would be very
> rare
> > >> for
> > >>>> any
> > >>>> of these to fail.
> > >>>>
> > >>>> I guess you could take a jumper from Pin 2 of Connector 4 and inject
> > >> your
> > >>>> marker
> > >>>> signal at stationary plates of VC-1 and see if marker signal
> increases
> > >>>> significantly?
> > >>>>
> > >>>> Terry
> > >>>>
> > >>>> _____
> > >>>> From: Joe Loverti<ww8x.joe@...>
> > >>>>
> > >>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>> Sent: Tue, June 7, 2011 11:42:42 PM
> > >>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> > >> problem
> > >>>>
> > >>>> Terry:
> > >>>> Interesting. Touching the antenna to TP-1 drops the signal way down.
> > So,
> > >> I
> > >>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
> > >> Gordon's
> > >>>> suggestion and was able to get a 20+ db calibrator signal reading at
> > >>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
> > with
> > >> the
> > >>>> rewinding. I don't think rewinding it again would make any
> difference?
> > I
> > >> am
> > >>>> certainly willing to do that if you think it would be helpful. The
> L4
> > >> was a
> > >>>> replacement Gordon sent me and have no reason to believe it's not
> > >> working.
> > >>>> I
> > >>>> checked it for continuity and it seemed fine. BTW, I ordered a
> NTE222
> > >> and a
> > >>>> replacement for D1and D2 on the RF board, but haven't received them
> > yet.
> > >> At

> > >>>> this point I think I'll just save them as spares, because as you
> > state,
> > >> Q1
> > >>>> and D2 are good.
> > >>>>
> > >>>> It was great to hear the receive come back alive when touching the
> > >> antenna
> > >>>> to VC-1, now I just have to come up with a permanent fix. Baby steps
> > :?)
> > >>>>
> > >>>> Thanks,
> > >>>> 73
> > >>>> WW8X
> > >>>> Joe
> > >>>>
> > >>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...>
> > >> wrote:
> > >>>>>
> > >>>>> Joe--When you touch center conductor of your antenna coax to
> > >> stationary
> > >>>>> plate
> > >>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
> > >>>>> transformer.
> > >>>>> You are down stream of them. You are coupling signals directly to
> the
> > >>>> gate
> > >>>>> of
> > >>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
> > >> replaced
> > >>>>> both?)
> > >>>>>
> > >>>>> Try touching ant coax center conductor to TP-1 on the RF board. You
> > >> will
> > >>>> be
> > >>>>> on
> > >>>>> "input" side of L4 and L41. If your signal is weak when touching
> TP-1
> > >> it
> > >>>>> means
> > >>>>> something wrong with either L4 and/or L41.
> > >>>>>
> > >>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
> > >>>> Connector
> > >>>>> 3 of
> > >>>>> RF board. Gently wiggle Connector 3 while applying center conductor
> > of
> > >>>>> antenna
> > >>>>> coax. If signal comes and goes you have bad solder joint or bad
> foil
> > >> at

> > >>>>> that
> > >>>>> connector.
> > >>>>>
> > >>>>> Use your schematic and keep working your way back to your SO-239
> > >>>> connector
> > >>>>> on
> > >>>>> rear panel. Next place would be RF attenuator switch. Then Xverter
> > >>>>> connector
> > >>>>> switch , then antenna relay RL-1.
> > >>>>>
> > >>>>> I had asked you about Xtal Calibrator or Marker signal and I
> believe
> > >> you
> > >>>>> said it
> > >>>>> was down as well. If Xtal calibrator signal is strong then L4 and
> L41
> > >> are
> > >>>>> OK.
> > >>>>> Terry-K9TW
> > >>>>>
> > >>>>> _____
> > >>>>> From: ww8x_joe<ww8x.joe@...>
> > >>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> > >>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
> > >> problem
> > >>>>>
> > >>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
> > been
> > >>>>> reading
> > >>>>> the threads related to my adventures with my low receive problem, I
> > >>>>> discovered
> > >>>>> an important clue.
> > >>>>>
> > >>>>> When I take an 18 inch test lead and connect it to one of the lugs
> on
> > >>>>> variable
> > >>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
> > test
> > >>>> lead
> > >>>>> to
> > >>>>> my outside antenna feedline to the one of the lugs on VC1 the
> signals
> > >>>> jump
> > >>>>> up
> > >>>>> very loud with normal noise and S meter readings at S9 and above --
> > >> just
> > >>>> as
> > >>>>> the
> > >>>>> set used to have before my problems started. Here's the curious

> > thing:
> > >>>> When
> > >>>>> I
> > >>>>> connect the same test lead that's connected to the antenna to the
> > >> center
> > >>>> of
> > >>>>> the
> > >>>>> SO239 antenna jack on the rear of the rig... the signals drop way
> off
> > >> as
> > >>>> if
> > >>>>> there's hardly an antenna connected. So in addition to having to
> > >> rewind
> > >>>> the
> > >>>>> L41
> > >>>>> (which I've already done), there apparently is also something going
> > on
> > >>>> with
> > >>>>> my
> > >>>>> receive. I think I'm on to something. What do you think?
> > >>>>> Thanks,
> > >>>>> WW8X
> > >>>>> Joe
> > >>>>>
> > >>>>> [Non-text portions of this message have been removed]
> > >>>>>
> > >>>>>
> > >>>>>
> > >>>> [Non-text portions of this message have been removed]
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> > >>>>
> > >>>> Yahoo! Groups Links
> > >>>>
> > >>>>
> > >>>> [Non-text portions of this message have been removed]
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> > >
> > > Yahoo! Groups Links
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> > >
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> >
> > --
> > E-Mail Disclaimer This communication and any documents, files, or
> previous
> > e-mail messages attached to it constitute an electronic communication
> within
> > the scope of the Electronic Communication Privacy Act, 18 USCA 2510.This
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> > you are not the intended recipient, please contact the sender and delete
> all
> > copies.
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> > ------------------------------------
> >
> > Yahoo! Groups Links
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> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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31761. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:38:27 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31761

Joe,
Do you mean TC1 or VC1 ?
Also, did you mean TP2 which is the RIF terminal?

Gordon

On 6/8/2011 5:22 PM, Joe Loverti wrote:
> Gordon,
> The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
> can get it reading from a BK frequency counter) are:
> SO239 is slightly less than S7
> TP-1 is slightly less than S7
> TC-1 is 20 over S9
> TP-2 is 20 over S9
>
> WW8X
>
>
> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
>
>> Joe,
>> Insert a 14.175 signal at the center of the SO-239 and take a reading on
>> the S-meter. then insert the same signal at TP-1 on the RF board and
>> again look at the S-meter. tell me what readings you get.
>> they should be virtually identical.
>> Once we have that info, we can move on
>>
>> Gordon
>>
>>
>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
>>> Thanks Mike and Terry...
>>> You guys have given me plenty of time and advice -- I appreciate it very
>>> much.
>>> I have a signal generator... an old Eico 324 and a qrpkits signal
>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may
>> work
>>> also, so I can try what you are suggesting. As far as marker signals go:
>> I
>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
>> peak,
>>> but at 14.175 mhz, the marker signal is only S7.
>>>
>>> What ever took out the L41 (remember I said the secondary winding was
>> open

>>> -- a inch of the wire was missing, but the windings were intact and not
>>> burnt), probably also took out something else, which is continuing to be
>> a
>>> problem. Before rewinding the L41, I had virtually no signal -- after
>>> replacing L41, the signal came back and is now weak. Only when I put the
>>> antenna input at VC-1 does the signal come up to sounding like a properly
>>> operating receiver.
>>>
>>> Wish me luck and thanks again.
>>>
>>> 73,
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>> and/or
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>> like
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>> signal.
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>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1. He
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>>>> not
>>>>> good with antenna coax signal applied at TP-1. Marker signal is good. I
>> am
>>>> not

>>>>> sure what the components are after TP-1. They appear to make up a
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>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
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>>>>> band-pass components (probably broadcast band?) are the only components
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>>>> path
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>>>>>> _____
>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>> problem
>>>>>> Terry:
>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way down.
>> So,
>>>> I
>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>>>> Gordon's
>>>>>> suggestion and was able to get a 20+ db calibrator signal reading at
>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
>> with
>>>> the
>>>>>> rewinding. I don't think rewinding it again would make any difference?
>> I
>>>> am
>>>>>> certainly willing to do that if you think it would be helpful. The L4
>>>> was a
>>>>>> replacement Gordon sent me and have no reason to believe it's not
>>>> working.
>>>>>> I
>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a NTE222
>>>> and a
>>>>>> replacement for D1and D2 on the RF board, but haven't received them
>> yet.
>>>> At
>>>>>> this point I think I'll just save them as spares, because as you
>> state,

>>>> Q1
>>>>>> and D2 are good.
>>>>>>
>>>>>> It was great to hear the receive come back alive when touching the
>>>> antenna
>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby steps
>> :?)
>>>>>> Thanks,
>>>>>> 73
>>>>>> WW8X
>>>>>> Joe
>>>>>>
>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...>
>>>> wrote:
>>>>>>> Joe--When you touch center conductor of your antenna coax to
>>>> stationary
>>>>>>> plate
>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>>>>>>> transformer.
>>>>>>> You are down stream of them. You are coupling signals directly to the
>>>>>> gate
>>>>>>> of
>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
>>>> replaced
>>>>>>> both?)
>>>>>>>
>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board. You
>>>> will
>>>>>> be
>>>>>>> on
>>>>>>> "input" side of L4 and L41. If your signal is weak when touching TP-1
>>>> it
>>>>>>> means
>>>>>>> something wrong with either L4 and/or L41.
>>>>>>>
>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>>>>>> Connector
>>>>>>> 3 of
>>>>>>> RF board. Gently wiggle Connector 3 while applying center conductor
>> of
>>>>>>> antenna
>>>>>>> coax. If signal comes and goes you have bad solder joint or bad foil
>>>> at
>>>>>>> that
>>>>>>> connector.
>>>>>>>
>>>>>>> Use your schematic and keep working your way back to your SO-239
>>>>>> connector
>>>>>>> on
>>>>>>> rear panel. Next place would be RF attenuator switch. Then Xverter

>>>>>>> connector
>>>>>>> switch , then antenna relay RL-1.
>>>>>>>
>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I believe
>>>> you
>>>>>>> said it
>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and L41
>>>> are
>>>>>>> OK.
>>>>>>> Terry-K9TW
>>>>>>>
>>>>>>> _____
>>>>>>> From: ww8x_joe<ww8x.joe@...>
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
>>>> problem
>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
>> been
>>>>>>> reading
>>>>>>> the threads related to my adventures with my low receive problem, I
>>>>>>> discovered
>>>>>>> an important clue.
>>>>>>>
>>>>>>> When I take an 18 inch test lead and connect it to one of the lugs on
>>>>>>> variable
>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
>> test
>>>>>> lead
>>>>>>> to
>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the signals
>>>>>> jump
>>>>>>> up
>>>>>>> very loud with normal noise and S meter readings at S9 and above --
>>>> just
>>>>>> as
>>>>>>> the
>>>>>>> set used to have before my problems started. Here's the curious
>> thing:
>>>>>> When
>>>>>>> I
>>>>>>> connect the same test lead that's connected to the antenna to the
>>>> center
>>>>>> of
>>>>>>> the
>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way off
>>>> as
>>>>>> if
>>>>>>> there's hardly an antenna connected. So in addition to having to
>>>> rewind

>>>>>> the
>>>>>>> L41
>>>>>>> (which I've already done), there apparently is also something going
>> on
>>>>>> with
>>>>>>> my
>>>>>>> receive. I think I'm on to something. What do you think?
>>>>>>> Thanks,
>>>>>>> WW8X
>>>>>>> Joe
>>>>>>>
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31762. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:39:43 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31762

Ok, in that case, either there is a problem with L-41 or L4 needs to be
adjusted

Gordon

On 6/8/2011 5:31 PM, Joe Loverti wrote:
> Correct Terry...
> The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
> can get it reading from a BK frequency counter) are:
> SO239 is slightly less than S7
> TP-1 is slightly less than S7
> VC-1 is 20 over S9
> TP-2 is 20 over S9
> Thanks for the catch.
>
> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...> wrote:
>
>>
>> Joe-I think you meant VC-1? Terry
>>
>>
>> _____
>> From: Joe Loverti<ww8x.joe@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Wed, June 8, 2011 8:22:16 PM
>>
>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive problem
>>
>> Gordon,
>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close as I
>> can get it reading from a BK frequency counter) are:
>> SO239 is slightly less than S7
>> TP-1 is slightly less than S7
>> TC-1 is 20 over S9
>> TP-2 is 20 over S9
>>
>> WW8X
>>
>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
>>
>>> Joe,
>>> Insert a 14.175 signal at the center of the SO-239 and take a reading on
>>> the S-meter. then insert the same signal at TP-1 on the RF board and
>>> again look at the S-meter. tell me what readings you get.
>>> they should be virtually identical.

>>> Once we have that info, we can move on
>>>
>>> Gordon
>>>
>>>
>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
>>>> Thanks Mike and Terry...
>>>> You guys have given me plenty of time and advice -- I appreciate it
>> very
>>>> much.
>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which may
>>> work
>>>> also, so I can try what you are suggesting. As far as marker signals
>> go:
>>> I
>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
>>> peak,
>>>> but at 14.175 mhz, the marker signal is only S7.
>>>>
>>>> What ever took out the L41 (remember I said the secondary winding was
>>> open
>>>> -- a inch of the wire was missing, but the windings were intact and not
>>>> burnt), probably also took out something else, which is continuing to
>> be
>>> a
>>>> problem. Before rewinding the L41, I had virtually no signal -- after
>>>> replacing L41, the signal came back and is now weak. Only when I put
>> the
>>>> antenna input at VC-1 does the signal come up to sounding like a
>> properly
>>>> operating receiver.
>>>>
>>>> Wish me luck and thanks again.
>>>>
>>>> 73,
>>>> WW8X
>>>> Joe
>>>>
>>>>
>>>>
>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
>>>>
>>>>> One more thing. If the Marker signal is strong, S9 or better, then L3
>>> and
>>>>> L4 are more than likely not the source of weak receive signals. If L3
>>> and/or
>>>>> L4 were the source of the problem the Marker signal would be weak just
>>> like
>>>>> the incoming signals are.

>>>>>
>>>>> 73s
>>>>> Mike
>>>>> W5RKL
>>>>>
>>>>>
>>>>>> _____
>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>> problem
>>>>>>
>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>>>>>> knowledge/experience with his problem. He does not have the test
>>> equipment
>>>>>> necessary to use Level diagrams so is using antenna coax to inject
>>> signal.
>>>>> He is
>>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
>> He
>>> is
>>>>> not
>>>>>> good with antenna coax signal applied at TP-1. Marker signal is good.
>> I
>>> am
>>>>> not
>>>>>> sure what the components are after TP-1. They appear to make up a
>>>>> band-pass
>>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
>>> failing
>>>>> open or
>>>>>> shunting signal to ground. Appreciate it if you guys could add to
>> what
>>> I
>>>>> have
>>>>>> suggested and/or take off and run with this one. 73s Terry
>>>>>>
>>>>>> _____
>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>> problem
>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I
>>> would
>>>>> say
>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
>> 40,
>>> 20

>>>>> with
>>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
>> In
>>> all
>>>>> cases
>>>>>> I need to turn down the AF gain when Marker is on and Drive is
>> peaked.
>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted
>> or
>>>>> Shunted
>>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
>>>>>>
>>>>>> 2. We have determined that signal path from Marker to Speaker is
>>>>> good/normal.
>>>>>> 3. We have determined that signal path from VC-1 is good/normal
>>> (including
>>>>> AGC
>>>>>> action?)
>>>>>>
>>>>>> 4. We have determined that signal injected at TP-1 produces
>>> significantly
>>>>> weaker
>>>>>> output. What components and what failure mode are in path from TP-1
>> to
>>>>> VC-1?
>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
>> good
>>>>>> therefore L4/L41 are good.
>>>>>>
>>>>>> 6. When you apply coax signal to TP-1 you say signals are much weaker
>>> than
>>>>> when
>>>>>> touched to VC-1. As I mentioned the coupling caps and what I believe
>>> are
>>>>>> band-pass components (probably broadcast band?) are the only
>> components
>>> in
>>>>> path
>>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
>>>>> components
>>>>>> are not in the circuit when you use the Marker.
>>>>>>
>>>>>> 7. So, is it possible that something is shunting/shorting the signal
>> to
>>>>> ground
>>>>>> at TP-1?
>>>>>>
>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax signal
>>> to
>>>>> TP-1?

>>>>>> If signal comes up to near same as when touched at VC-1 then you know
>>>>> coupling
>>>>>> caps and band-pass filter components are all good. The fault then has
>>> to
>>>>> be
>>>>>> something shunting the signal to ground upstream of TP-1. If signal
>>> does
>>>>> not
>>>>>> come up, then coupling caps, bandpass filter components are shunting
>>>>> signal to
>>>>>> ground.
>>>>>>
>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure here
>>> is
>>>>> bad
>>>>>> contacts which could cause weak and/or intermittent signal with coax
>>>>> connected
>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
>> RL-1
>>> to
>>>>> shunt
>>>>>> signal to ground and affect any signal applied at TP-1.
>>>>>>
>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
>> report
>>>>> back.
>>>>>> 73s Terry
>>>>>>
>>>>>> _____
>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>> problem
>>>>>> Terry:
>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator reading.
>>> Quite
>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
>> speaker.
>>>>> I'll
>>>>>> try your other suggestions when I get a chance later on this evening.
>> I
>>>>>> probably should think about checking the relay as Dave suggested.
>>>>>>
>>>>>> One other thing that may be related, is that when I'm on a strong
>>> signal
>>>>> the
>>>>>> S-meter fades. In other words, as it is now the strongest signals are
>>>>> around
>>>>>> S7 or so... when I tune on them by watching the S meter, after a few

>>>>> seconds
>>>>>> the S meter drops off and comes back up and drops off. When I connect
>>> the
>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade on
>>> the
>>>>>> calibrator signal.
>>>>>> 73,
>>>>>> WW8X
>>>>>> Joe
>>>>>>
>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>>> wrote:
>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>>>>> intermittent
>>>>>>> connection and not a short to ground. So if signal is weak applied
>> at
>>>>> TP-1
>>>>>>> it
>>>>>>> points downstream from there. Only place you worked was at L4 and
>> L41.
>>>>>>> What is confusing me is --Are you getting good marker signal? Have
>> you
>>>>>>> tried it
>>>>>>> on bands other than 1.9?
>>>>>>>
>>>>>>> If you are getting 20 over marker signal and can peak L41 your
>> rewind
>>>>> and
>>>>>>> re-solder sounds good.
>>>>>>>
>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
>> down
>>>>> as
>>>>>>> volume
>>>>>>> would be rattling the speaker. Same for any other band. If this is
>>> true
>>>>>>> then you
>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
>> With
>>>>> it
>>>>>>> on
>>>>>>> peak the drive for max s-meter reading. If you dont want to reach
>> for
>>> AF
>>>>>>> control
>>>>>>> to turn down the volume then adequate marker signal is not passing
>>>>> L4/L41.
>>>>>>> Only other components in signal path between TP-1 and L4/L41 are
>>>>> coupling
>>>>>>> caps

>>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
>> rare
>>>>> for
>>>>>>> any
>>>>>>> of these to fail.
>>>>>>>
>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and inject
>>>>> your
>>>>>>> marker
>>>>>>> signal at stationary plates of VC-1 and see if marker signal
>> increases
>>>>>>> significantly?
>>>>>>>
>>>>>>> Terry
>>>>>>>
>>>>>>> _____
>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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>>>>>>> Terry:
>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way down.
>>> So,
>>>>> I
>>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>>>>> Gordon's
>>>>>>> suggestion and was able to get a 20+ db calibrator signal reading at
>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
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>> L4
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>>>>> antenna
>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby steps
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>>>>>>>>> of
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>>>>>>>>> something wrong with either L4 and/or L41.
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>>>>>>>>>
>>>>>>>>> Use your schematic and keep working your way back to your SO-239

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>>>>>>>> connector
>>>>>>>> switch , then antenna relay RL-1.
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>>>>>>>> the threads related to my adventures with my low receive problem, I
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>>>>>>>> an important clue.
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>>>>>>>> When I take an 18 inch test lead and connect it to one of the lugs
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>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
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>>>>>>>> set used to have before my problems started. Here's the curious
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>>>>>>> When
>>>>>>>> I
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>>>>> center

>>>>>>> of
>>>>>>>> the
>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way
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>>>>>>>> Thanks,
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31763. Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:44:15 UTC
From: Bill
Topic: 31719 Message: 31763

Hi Dave,

Maybe shining a different color of light on this from a different angle will help. The ALC is to prevent the final amplifier from being overdriven and causing distortion, splatter, all manner of grief. The ALC only 'engages' *if* the finals experience any overdriving condition. I think that part of the picture has been pretty well said several times.

If we reduce the power by reducing the 'carrier' in CW or the mic gain in SSB then we are NOT EVER (read as NEVER) going to overdrive the finals. If we reduce the power by using the nine volt battery trick we will have forced the ALC to reduce the transmitter power and again...the finals will never be overdriven. When we have reduced the ouput power by any substantial amount we can forget all about the ALC level.

On the rare occasions I use SSB on my Kenwood and I want to use "full" power, I adjust the mic gain up until I just get some ALC on the peaks and THEN I back it off until that just stops. I am still close enough to full power that you can't tell the difference from your QTH even with lab measurement gear. You probably couldn't measure the difference even from across the street. The reason to just 'tickle' the AGC is to know you are at the transmitter's clean operating limit. Once you know that the meter isn't needed.

I hope this helps a little.

73,

Bill KU8H

31764. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:51:03 UTC
From: Joe Loverti
Topic: 31735 Message: 31764

I got messed up... darn it.
TP-1 is less than S7
TP-2 moves to S3 then drops to S0
TP-4 is 20+
VC-1 is 20+
SO239 is 20+

Sorry about that...
WW8X
Joe

On Wed, Jun 8, 2011 at 8:39 PM, <n6wk@...> wrote:

> Ok, in that case, either there is a problem with L-41 or L4 needs to be
> adjusted
>
> Gordon
>
> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> > Correct Terry...
> > The signal from the generator (Eico 324 at 14.173 mhz (that's as close as
> I
> > can get it reading from a BK frequency counter) are:
> > SO239 is slightly less than S7
> > TP-1 is slightly less than S7
> > VC-1 is 20 over S9
> > TP-2 is 20 over S9
> > Thanks for the catch.
> >
> > On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
> wrote:
> >
> >>
> >> Joe-I think you meant VC-1? Terry
> >>
> >>
> >> _____
> >> From: Joe Loverti<ww8x.joe@...>
> >> To: TS-520_820_530_830@yahoogroups.com
> >> Sent: Wed, June 8, 2011 8:22:16 PM
> >>
> >> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> problem
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> >>
> >> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
> >>
> >>> Joe,
> >>> Insert a 14.175 signal at the center of the SO-239 and take a reading
> on
> >>> the S-meter. then insert the same signal at TP-1 on the RF board and
> >>> again look at the S-meter. tell me what readings you get.
> >>> they should be virtually identical.
> >>> Once we have that info, we can move on
> >>>
> >>> Gordon
> >>>
> >>>
> >>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> >>>> Thanks Mike and Terry...
> >>>> You guys have given me plenty of time and advice -- I appreciate it
> >> very
> >>>> much.
> >>>> I have a signal generator... an old Eico 324 and a qrpkits signal
> >>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which
> may
> >>> work
> >>>> also, so I can try what you are suggesting. As far as marker signals
> >> go:
> >>> I
> >>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
> >>> peak,
> >>>> but at 14.175 mhz, the marker signal is only S7.
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> >>> open
> >>>> -- a inch of the wire was missing, but the windings were intact and
> not
> >>>> burnt), probably also took out something else, which is continuing to
> >> be
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> >>>> problem. Before rewinding the L41, I had virtually no signal -- after
> >>>> replacing L41, the signal came back and is now weak. Only when I put
> >> the
> >>>> antenna input at VC-1 does the signal come up to sounding like a
> >> properly

> >>>> operating receiver.
> >>>>
> >>>> Wish me luck and thanks again.
> >>>>
> >>>> 73,
> >>>> WW8X
> >>>> Joe
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> >>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >>>>
> >>>>> One more thing. If the Marker signal is strong, S9 or better, then L3
> >>> and
> >>>>> L4 are more than likely not the source of weak receive signals. If L3
> >>> and/or
> >>>>> L4 were the source of the problem the Marker signal would be weak
> just
> >>> like
> >>>>> the incoming signals are.
> >>>>>
> >>>>> 73s
> >>>>> Mike
> >>>>> W5RKL
> >>>>>
> >>>>>
> >>>>>> _____
> >>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>> problem
> >>>>>>
> >>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> >>>>>> knowledge/experience with his problem. He does not have the test
> >>> equipment
> >>>>>> necessary to use Level diagrams so is using antenna coax to inject
> >>> signal.
> >>>>> He is
> >>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
> >> He
> >>> is
> >>>>> not
> >>>>>> good with antenna coax signal applied at TP-1. Marker signal is
> good.
> >> I
> >>> am
> >>>>> not
> >>>>>> sure what the components are after TP-1. They appear to make up a
> >>>>> band-pass

> >>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
> >>> failing
> >>>>> open or
> >>>>>> shunting signal to ground. Appreciate it if you guys could add to
> >> what
> >>> I
> >>>>> have
> >>>>>> suggested and/or take off and run with this one. 73s Terry
> >>>>>>
> >>>>>> _____
> >>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>> problem
> >>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open I
> >>> would
> >>>>> say
> >>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
> >> 40,
> >>> 20
> >>>>> with
> >>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
> >> In
> >>> all
> >>>>> cases
> >>>>>> I need to turn down the AF gain when Marker is on and Drive is
> >> peaked.
> >>>>>> 1. There are 3 possible failure modes 1. Open signal path 2. Shorted
> >> or
> >>>>> Shunted
> >>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
> >>>>>>
> >>>>>> 2. We have determined that signal path from Marker to Speaker is
> >>>>> good/normal.
> >>>>>> 3. We have determined that signal path from VC-1 is good/normal
> >>> (including
> >>>>> AGC
> >>>>>> action?)
> >>>>>>
> >>>>>> 4. We have determined that signal injected at TP-1 produces
> >>> significantly
> >>>>> weaker
> >>>>>> output. What components and what failure mode are in path from TP-1
> >> to
> >>>>> VC-1?
> >>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
> >> good
> >>>>>> therefore L4/L41 are good.
> >>>>>>

> >>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> weaker
> >>> than
> >>>>> when
> >>>>>> touched to VC-1. As I mentioned the coupling caps and what I believe
> >>> are
> >>>>>> band-pass components (probably broadcast band?) are the only
> >> components
> >>> in
> >>>>> path
> >>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
> >>>>> components
> >>>>>> are not in the circuit when you use the Marker.
> >>>>>>
> >>>>>> 7. So, is it possible that something is shunting/shorting the signal
> >> to
> >>>>> ground
> >>>>>> at TP-1?
> >>>>>>
> >>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> signal
> >>> to
> >>>>> TP-1?
> >>>>>> If signal comes up to near same as when touched at VC-1 then you
> know
> >>>>> coupling
> >>>>>> caps and band-pass filter components are all good. The fault then
> has
> >>> to
> >>>>> be
> >>>>>> something shunting the signal to ground upstream of TP-1. If signal
> >>> does
> >>>>> not
> >>>>>> come up, then coupling caps, bandpass filter components are shunting
> >>>>> signal to
> >>>>>> ground.
> >>>>>>
> >>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
> here
> >>> is
> >>>>> bad
> >>>>>> contacts which could cause weak and/or intermittent signal with coax
> >>>>> connected
> >>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
> >> RL-1
> >>> to
> >>>>> shunt
> >>>>>> signal to ground and affect any signal applied at TP-1.
> >>>>>>
> >>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and

> >> report
> >>>>> back.
> >>>>>> 73s Terry
> >>>>>>
> >>>>>> _____
> >>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>> problem
> >>>>>> Terry:
> >>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator reading.
> >>> Quite
> >>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> >> speaker.
> >>>>> I'll
> >>>>>> try your other suggestions when I get a chance later on this
> evening.
> >> I
> >>>>>> probably should think about checking the relay as Dave suggested.
> >>>>>>
> >>>>>> One other thing that may be related, is that when I'm on a strong
> >>> signal
> >>>>> the
> >>>>>> S-meter fades. In other words, as it is now the strongest signals
> are
> >>>>> around
> >>>>>> S7 or so... when I tune on them by watching the S meter, after a few
> >>>>> seconds
> >>>>>> the S meter drops off and comes back up and drops off. When I
> connect
> >>> the
> >>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade on
> >>> the
> >>>>>> calibrator signal.
> >>>>>> 73,
> >>>>>> WW8X
> >>>>>> Joe
> >>>>>>
> >>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
> >>> wrote:
> >>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> >>>>> intermittent
> >>>>>>> connection and not a short to ground. So if signal is weak applied
> >> at
> >>>>> TP-1
> >>>>>>> it
> >>>>>>> points downstream from there. Only place you worked was at L4 and
> >> L41.
> >>>>>>> What is confusing me is --Are you getting good marker signal? Have

> >> you
> >>>>>>> tried it
> >>>>>>> on bands other than 1.9?
> >>>>>>>
> >>>>>>> If you are getting 20 over marker signal and can peak L41 your
> >> rewind
> >>>>> and
> >>>>>>> re-solder sounds good.
> >>>>>>>
> >>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
> >> down
> >>>>> as
> >>>>>>> volume
> >>>>>>> would be rattling the speaker. Same for any other band. If this is
> >>> true
> >>>>>>> then you
> >>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
> >> With
> >>>>> it
> >>>>>>> on
> >>>>>>> peak the drive for max s-meter reading. If you dont want to reach
> >> for
> >>> AF
> >>>>>>> control
> >>>>>>> to turn down the volume then adequate marker signal is not passing
> >>>>> L4/L41.
> >>>>>>> Only other components in signal path between TP-1 and L4/L41 are
> >>>>> coupling
> >>>>>>> caps
> >>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
> >> rare
> >>>>> for
> >>>>>>> any
> >>>>>>> of these to fail.
> >>>>>>>
> >>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> inject
> >>>>> your
> >>>>>>> marker
> >>>>>>> signal at stationary plates of VC-1 and see if marker signal
> >> increases
> >>>>>>> significantly?
> >>>>>>>
> >>>>>>> Terry
> >>>>>>>
> >>>>>>> _____
> >>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>
> >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM

> >>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>> problem
> >>>>>>> Terry:
> >>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
> down.
> >>> So,
> >>>>> I
> >>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
> >>>>> Gordon's
> >>>>>>> suggestion and was able to get a 20+ db calibrator signal reading
> at
> >>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
> >>> with
> >>>>> the
> >>>>>>> rewinding. I don't think rewinding it again would make any
> >> difference?
> >>> I
> >>>>> am
> >>>>>>> certainly willing to do that if you think it would be helpful. The
> >> L4
> >>>>> was a
> >>>>>>> replacement Gordon sent me and have no reason to believe it's not
> >>>>> working.
> >>>>>>> I
> >>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
> >> NTE222
> >>>>> and a
> >>>>>>> replacement for D1and D2 on the RF board, but haven't received them
> >>> yet.
> >>>>> At
> >>>>>>> this point I think I'll just save them as spares, because as you
> >>> state,
> >>>>> Q1
> >>>>>>> and D2 are good.
> >>>>>>>
> >>>>>>> It was great to hear the receive come back alive when touching the
> >>>>> antenna
> >>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
> steps
> >>> :?)
> >>>>>>> Thanks,
> >>>>>>> 73
> >>>>>>> WW8X
> >>>>>>> Joe
> >>>>>>>
> >>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...>
> >>>>> wrote:
> >>>>>>>> Joe--When you touch center conductor of your antenna coax to
> >>>>> stationary
> >>>>>>>> plate

> >>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
> >>>>>>>> transformer.
> >>>>>>>> You are down stream of them. You are coupling signals directly to
> >> the
> >>>>>>> gate
> >>>>>>>> of
> >>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
> >>>>> replaced
> >>>>>>>> both?)
> >>>>>>>>
> >>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board.
> You
> >>>>> will
> >>>>>>> be
> >>>>>>>> on
> >>>>>>>> "input" side of L4 and L41. If your signal is weak when touching
> >> TP-1
> >>>>> it
> >>>>>>>> means
> >>>>>>>> something wrong with either L4 and/or L41.
> >>>>>>>>
> >>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
> >>>>>>> Connector
> >>>>>>>> 3 of
> >>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> conductor
> >>> of
> >>>>>>>> antenna
> >>>>>>>> coax. If signal comes and goes you have bad solder joint or bad
> >> foil
> >>>>> at
> >>>>>>>> that
> >>>>>>>> connector.
> >>>>>>>>
> >>>>>>>> Use your schematic and keep working your way back to your SO-239
> >>>>>>> connector
> >>>>>>>> on
> >>>>>>>> rear panel. Next place would be RF attenuator switch. Then Xverter
> >>>>>>>> connector
> >>>>>>>> switch , then antenna relay RL-1.
> >>>>>>>>
> >>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
> >> believe
> >>>>> you
> >>>>>>>> said it
> >>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and
> >> L41
> >>>>> are
> >>>>>>>> OK.
> >>>>>>>> Terry-K9TW

> >>>>>>>>
> >>>>>>>> _____
> >>>>>>>> From: ww8x_joe<ww8x.joe@...>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>> problem
> >>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
> >>> been
> >>>>>>>> reading
> >>>>>>>> the threads related to my adventures with my low receive problem,
> I
> >>>>>>>> discovered
> >>>>>>>> an important clue.
> >>>>>>>>
> >>>>>>>> When I take an 18 inch test lead and connect it to one of the lugs
> >> on
> >>>>>>>> variable
> >>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
> >>> test
> >>>>>>> lead
> >>>>>>>> to
> >>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
> >> signals
> >>>>>>> jump
> >>>>>>>> up
> >>>>>>>> very loud with normal noise and S meter readings at S9 and above
> --
> >>>>> just
> >>>>>>> as
> >>>>>>>> the
> >>>>>>>> set used to have before my problems started. Here's the curious
> >>> thing:
> >>>>>>> When
> >>>>>>>> I
> >>>>>>>> connect the same test lead that's connected to the antenna to the
> >>>>> center
> >>>>>>> of
> >>>>>>>> the
> >>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way
> >> off
> >>>>> as
> >>>>>>> if
> >>>>>>>> there's hardly an antenna connected. So in addition to having to
> >>>>> rewind
> >>>>>>> the
> >>>>>>>> L41
> >>>>>>>> (which I've already done), there apparently is also something
> going
> >>> on

> >>>>>>> with
> >>>>>>>> my
> >>>>>>>> receive. I think I'm on to something. What do you think?
> >>>>>>>> Thanks,
> >>>>>>>> WW8X
> >>>>>>>> Joe
> >>>>>>>>
> >>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>
> >>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>
> >>>>>>> ------------------------------------
> >>>>>>>
> >>>>>>> Yahoo! Groups Links
> >>>>>>>
> >>>>>>>
> >>>>>>> [Non-text portions of this message have been removed]
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> >>>>
> >>>>
> >>>>
> >>>> ------------------------------------
> >>>>
> >>>> Yahoo! Groups Links
> >>>>
> >>>>
> >>>>

> >>>>
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> >>> ------------------------------------
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>
>
>

[Non-text portions of this message have been removed]

31765. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 00:53:31 UTC
From: Joe Loverti
Topic: 31735 Message: 31765

I truly am sorry... still messed it up.
TP-1 is less than S7
TP-2 moves to S3 then drops to S0
TP-4 is 20+
VC-1 is 20+
SO239 is less than S7
One of those nights :?(
WW8X
Joe

On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti <ww8x.joe@...> wrote:

> I got messed up... darn it.
> TP-1 is less than S7
> *TP-2* moves to S3 then drops to S0
> TP-4 is 20+
> VC-1 is 20+
> SO239 is 20+
>
> Sorry about that...
> WW8X
> Joe
>
>
> On Wed, Jun 8, 2011 at 8:39 PM, <n6wk@...> wrote:
>
>> Ok, in that case, either there is a problem with L-41 or L4 needs to be
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>> > SO239 is slightly less than S7
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>> > VC-1 is 20 over S9
>> > TP-2 is 20 over S9
>> > Thanks for the catch.
>> >
>> > On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
>> wrote:
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>> >>
>> >> Joe-I think you meant VC-1? Terry
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>> >> _____
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>> >> To: TS-520_820_530_830@yahoogroups.com
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>> >> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
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>> >>> again look at the S-meter. tell me what readings you get.
>> >>> they should be virtually identical.
>> >>> Once we have that info, we can move on
>> >>>
>> >>> Gordon
>> >>>
>> >>>
>> >>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
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>> >>>> You guys have given me plenty of time and advice -- I appreciate it
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>> >>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which
>> may
>> >>> work
>> >>>> also, so I can try what you are suggesting. As far as marker signals
>> >> go:
>> >>> I
>> >>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
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>> >>>> but at 14.175 mhz, the marker signal is only S7.
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>> >>>> -- a inch of the wire was missing, but the windings were intact and
>> not
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>> >>>> problem. Before rewinding the L41, I had virtually no signal -- after
>> >>>> replacing L41, the signal came back and is now weak. Only when I put
>> >> the
>> >>>> antenna input at VC-1 does the signal come up to sounding like a
>> >> properly
>> >>>> operating receiver.
>> >>>>
>> >>>> Wish me luck and thanks again.
>> >>>>
>> >>>> 73,
>> >>>> WW8X
>> >>>> Joe
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>> L3
>> >>> and
>> >>>>> L4 are more than likely not the source of weak receive signals. If
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>> >>> equipment
>> >>>>>> necessary to use Level diagrams so is using antenna coax to inject
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>> >>>>> He is
>> >>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
>> >> He
>> >>> is
>> >>>>> not
>> >>>>>> good with antenna coax signal applied at TP-1. Marker signal is
>> good.
>> >> I
>> >>> am
>> >>>>> not
>> >>>>>> sure what the components are after TP-1. They appear to make up a
>> >>>>> band-pass
>> >>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
>> >>> failing
>> >>>>> open or
>> >>>>>> shunting signal to ground. Appreciate it if you guys could add to
>> >> what
>> >>> I
>> >>>>> have
>> >>>>>> suggested and/or take off and run with this one. 73s Terry
>> >>>>>>
>> >>>>>> _____
>> >>>>>> From: Terry Wagoner<wagstw46@...m>
>> >>>>>> To: TS-520_820_530_830@yahoogroups.com
>> >>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
>> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>> >>>>> problem
>> >>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open
>> I
>> >>> would
>> >>>>> say
>> >>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
>> >> 40,
>> >>> 20
>> >>>>> with
>> >>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
>> >> In
>> >>> all
>> >>>>> cases
>> >>>>>> I need to turn down the AF gain when Marker is on and Drive is
>> >> peaked.
>> >>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
>> Shorted
>> >> or
>> >>>>> Shunted
>> >>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)

>> >>>>>>
>> >>>>>> 2. We have determined that signal path from Marker to Speaker is
>> >>>>> good/normal.
>> >>>>>> 3. We have determined that signal path from VC-1 is good/normal
>> >>> (including
>> >>>>> AGC
>> >>>>>> action?)
>> >>>>>>
>> >>>>>> 4. We have determined that signal injected at TP-1 produces
>> >>> significantly
>> >>>>> weaker
>> >>>>>> output. What components and what failure mode are in path from TP-1
>> >> to
>> >>>>> VC-1?
>> >>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
>> >> good
>> >>>>>> therefore L4/L41 are good.
>> >>>>>>
>> >>>>>> 6. When you apply coax signal to TP-1 you say signals are much
>> weaker
>> >>> than
>> >>>>> when
>> >>>>>> touched to VC-1. As I mentioned the coupling caps and what I
>> believe
>> >>> are
>> >>>>>> band-pass components (probably broadcast band?) are the only
>> >> components
>> >>> in
>> >>>>> path
>> >>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
>> >>>>> components
>> >>>>>> are not in the circuit when you use the Marker.
>> >>>>>>
>> >>>>>> 7. So, is it possible that something is shunting/shorting the
>> signal
>> >> to
>> >>>>> ground
>> >>>>>> at TP-1?
>> >>>>>>
>> >>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
>> signal
>> >>> to
>> >>>>> TP-1?
>> >>>>>> If signal comes up to near same as when touched at VC-1 then you
>> know
>> >>>>> coupling
>> >>>>>> caps and band-pass filter components are all good. The fault then
>> has
>> >>> to
>> >>>>> be

>> >>>>>> something shunting the signal to ground upstream of TP-1. If signal
>> >>> does
>> >>>>> not
>> >>>>>> come up, then coupling caps, bandpass filter components are
>> shunting
>> >>>>> signal to
>> >>>>>> ground.
>> >>>>>>
>> >>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
>> here
>> >>> is
>> >>>>> bad
>> >>>>>> contacts which could cause weak and/or intermittent signal with
>> coax
>> >>>>> connected
>> >>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
>> >> RL-1
>> >>> to
>> >>>>> shunt
>> >>>>>> signal to ground and affect any signal applied at TP-1.
>> >>>>>>
>> >>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
>> >> report
>> >>>>> back.
>> >>>>>> 73s Terry
>> >>>>>>
>> >>>>>> _____
>> >>>>>> From: Joe Loverti<ww8x.joe@...>
>> >>>>>> To: TS-520_820_530_830@yahoogroups.com
>> >>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
>> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>> >>>>> problem
>> >>>>>> Terry:
>> >>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
>> reading.
>> >>> Quite
>> >>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
>> >> speaker.
>> >>>>> I'll
>> >>>>>> try your other suggestions when I get a chance later on this
>> evening.
>> >> I
>> >>>>>> probably should think about checking the relay as Dave suggested.
>> >>>>>>
>> >>>>>> One other thing that may be related, is that when I'm on a strong
>> >>> signal
>> >>>>> the
>> >>>>>> S-meter fades. In other words, as it is now the strongest signals
>> are
>> >>>>> around

>> >>>>>> S7 or so... when I tune on them by watching the S meter, after a
>> few
>> >>>>> seconds
>> >>>>>> the S meter drops off and comes back up and drops off. When I
>> connect
>> >>> the
>> >>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade
>> on
>> >>> the
>> >>>>>> calibrator signal.
>> >>>>>> 73,
>> >>>>>> WW8X
>> >>>>>> Joe
>> >>>>>>
>> >>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>> >>> wrote:
>> >>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>> >>>>> intermittent
>> >>>>>>> connection and not a short to ground. So if signal is weak applied
>> >> at
>> >>>>> TP-1
>> >>>>>>> it
>> >>>>>>> points downstream from there. Only place you worked was at L4 and
>> >> L41.
>> >>>>>>> What is confusing me is --Are you getting good marker signal? Have
>> >> you
>> >>>>>>> tried it
>> >>>>>>> on bands other than 1.9?
>> >>>>>>>
>> >>>>>>> If you are getting 20 over marker signal and can peak L41 your
>> >> rewind
>> >>>>> and
>> >>>>>>> re-solder sounds good.
>> >>>>>>>
>> >>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
>> >> down
>> >>>>> as
>> >>>>>>> volume
>> >>>>>>> would be rattling the speaker. Same for any other band. If this is
>> >>> true
>> >>>>>>> then you
>> >>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
>> >> With
>> >>>>> it
>> >>>>>>> on
>> >>>>>>> peak the drive for max s-meter reading. If you dont want to reach
>> >> for
>> >>>>> AF
>> >>>>>>> control
>> >>>>>>> to turn down the volume then adequate marker signal is not passing

>> >>>>> L4/L41.
>> >>>>>>> Only other components in signal path between TP-1 and L4/L41 are
>> >>>>> coupling
>> >>>>>>> caps
>> >>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
>> >> rare
>> >>>>> for
>> >>>>>>> any
>> >>>>>>> of these to fail.
>> >>>>>>>
>> >>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
>> inject
>> >>>>> your
>> >>>>>>> marker
>> >>>>>>> signal at stationary plates of VC-1 and see if marker signal
>> >> increases
>> >>>>>>> significantly?
>> >>>>>>>
>> >>>>>>> Terry
>> >>>>>>>
>> >>>>>>> _____
>> >>>>>>> From: Joe Loverti<ww8x.joe@...>
>> >>>>>>>
>> >>>>>>> To: TS-520_820_530_830@yahoogroups.com
>> >>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>> >>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>> receive
>> >>>>> problem
>> >>>>>>> Terry:
>> >>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
>> down.
>> >>> So,
>> >>>>> I
>> >>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>> >>>>> Gordon's
>> >>>>>>> suggestion and was able to get a 20+ db calibrator signal reading
>> at
>> >>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
>> >>> with
>> >>>>> the
>> >>>>>>> rewinding. I don't think rewinding it again would make any
>> >> difference?
>> >>> I
>> >>>>> am
>> >>>>>>> certainly willing to do that if you think it would be helpful. The
>> >> L4
>> >>>>> was a
>> >>>>>>> replacement Gordon sent me and have no reason to believe it's not
>> >>>>> working.
>> >>>>>>> I

>> >>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
>> >> NTE222
>> >>>>> and a
>> >>>>>>> replacement for D1and D2 on the RF board, but haven't received
>> them
>> >>> yet.
>> >>>>> At
>> >>>>>>> this point I think I'll just save them as spares, because as you
>> >>> state,
>> >>>>> Q1
>> >>>>>>> and D2 are good.
>> >>>>>>>
>> >>>>>>> It was great to hear the receive come back alive when touching the
>> >>>>> antenna
>> >>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
>> steps
>> >>> :?)
>> >>>>>>> Thanks,
>> >>>>>>> 73
>> >>>>>>> WW8X
>> >>>>>>> Joe
>> >>>>>>>
>> >>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...m
>> >
>> >>>>> wrote:
>> >>>>>>>> Joe--When you touch center conductor of your antenna coax to
>> >>>>> stationary
>> >>>>>>>> plate
>> >>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>> >>>>>>>> transformer.
>> >>>>>>>> You are down stream of them. You are coupling signals directly to
>> >> the
>> >>>>>>> gate
>> >>>>>>>> of
>> >>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
>> >>>>> replaced
>> >>>>>>>> both?)
>> >>>>>>>>
>> >>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board.
>> You
>> >>>>> will
>> >>>>>>> be
>> >>>>>>>> on
>> >>>>>>>> "input" side of L4 and L41. If your signal is weak when touching
>> >> TP-1
>> >>>>> it
>> >>>>>>>> means
>> >>>>>>>> something wrong with either L4 and/or L41.
>> >>>>>>>>
>> >>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on

>> >>>>>>> Connector
>> >>>>>>>> 3 of
>> >>>>>>>> RF board. Gently wiggle Connector 3 while applying center
>> conductor
>> >>> of
>> >>>>>>>> antenna
>> >>>>>>>> coax. If signal comes and goes you have bad solder joint or bad
>> >> foil
>> >>>>> at
>> >>>>>>>> that
>> >>>>>>>> connector.
>> >>>>>>>>
>> >>>>>>>> Use your schematic and keep working your way back to your SO-239
>> >>>>>>> connector
>> >>>>>>>> on
>> >>>>>>>> rear panel. Next place would be RF attenuator switch. Then
>> Xverter
>> >>>>>>>> connector
>> >>>>>>>> switch , then antenna relay RL-1.
>> >>>>>>>>
>> >>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
>> >> believe
>> >>>>> you
>> >>>>>>>> said it
>> >>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and
>> >> L41
>> >>>>> are
>> >>>>>>>> OK.
>> >>>>>>>> Terry-K9TW
>> >>>>>>>>
>> >>>>>>>> _____
>> >>>>>>>> From: ww8x_joe<ww8x.joe@gmail.com>
>> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>> >>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>> >>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
>> >>>>> problem
>> >>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
>> >>> been
>> >>>>>>>> reading
>> >>>>>>>> the threads related to my adventures with my low receive problem,
>> I
>> >>>>>>>> discovered
>> >>>>>>>> an important clue.
>> >>>>>>>>
>> >>>>>>>> When I take an 18 inch test lead and connect it to one of the
>> lugs
>> >> on
>> >>>>>>>> variable
>> >>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
>> >>> test

>> >>>>>>> lead
>> >>>>>>>> to
>> >>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
>> >> signals
>> >>>>>>> jump
>> >>>>>>>> up
>> >>>>>>>> very loud with normal noise and S meter readings at S9 and above
>> --
>> >>>>> just
>> >>>>>>> as
>> >>>>>>>> the
>> >>>>>>>> set used to have before my problems started. Here's the curious
>> >>> thing:
>> >>>>>>> When
>> >>>>>>>> I
>> >>>>>>>> connect the same test lead that's connected to the antenna to the
>> >>>>> center
>> >>>>>>> of
>> >>>>>>>> the
>> >>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way
>> >> off
>> >>>>> as
>> >>>>>>> if
>> >>>>>>>> there's hardly an antenna connected. So in addition to having to
>> >>>>> rewind
>> >>>>>>> the
>> >>>>>>>> L41
>> >>>>>>>> (which I've already done), there apparently is also something
>> going
>> >>> on
>> >>>>>>> with
>> >>>>>>>> my
>> >>>>>>>> receive. I think I'm on to something. What do you think?
>> >>>>>>>> Thanks,
>> >>>>>>>> WW8X
>> >>>>>>>> Joe
>> >>>>>>>>
>> >>>>>>>> [Non-text portions of this message have been removed]
>> >>>>>>>>
>> >>>>>>>>
>> >>>>>>>>
>> >>>>>>> [Non-text portions of this message have been removed]
>> >>>>>>>
>> >>>>>>> ------------------------------------
>> >>>>>>>
>> >>>>>>> Yahoo! Groups Links
>> >>>>>>>
>> >>>>>>>
>> >>>>>>> [Non-text portions of this message have been removed]
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>> >>>>>>
>> >>>>>> ------------------------------------
>> >>>>>>
>> >>>>>> Yahoo! Groups Links
>> >>>>>>
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>> >>>> [Non-text portions of this message have been removed]
>> >>>>
>> >>>>
>> >>>>
>> >>>> ------------------------------------
>> >>>>
>> >>>> Yahoo! Groups Links
>> >>>>
>> >>>>
>> >>>>
>> >>>>
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>> > Yahoo! Groups Links
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>> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31766. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 01:23:46 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31766

No problem Joe,
Been there and Done that LOL

Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
even L3. look at the schematic and you can easily follow the circuit.
It could also be one of the caps in that associated circuit, such as C1,
C3 or C4 but I doubt that.
I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
me is that the marker signal seems to be good.
Are all bands low? Maybe you need to do the Antenna and RFcoil
adjustments for all bands.

Gordon

On 6/8/2011 5:53 PM, Joe Loverti wrote:
> I truly am sorry... still messed it up.
> TP-1 is less than S7
> *TP-2* moves to S3 then drops to S0
> TP-4 is 20+
> VC-1 is 20+
> SO239 is less than S7
> One of those nights :?(
> WW8X
> Joe
>
>
> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
>
>> I got messed up... darn it.
>> TP-1 is less than S7
>> *TP-2* moves to S3 then drops to S0
>> TP-4 is 20+
>> VC-1 is 20+
>> SO239 is 20+
>>
>> Sorry about that...
>> WW8X
>> Joe
>>
>>
>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
>>
>>> Ok, in that case, either there is a problem with L-41 or L4 needs to be
>>> adjusted
>>>
>>> Gordon

>>>
>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
>>>> Correct Terry...
>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
>>> as I
>>>> can get it reading from a BK frequency counter) are:
>>>> SO239 is slightly less than S7
>>>> TP-1 is slightly less than S7
>>>> VC-1 is 20 over S9
>>>> TP-2 is 20 over S9
>>>> Thanks for the catch.
>>>>
>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
>>> wrote:
>>>>> Joe-I think you meant VC-1? Terry
>>>>>
>>>>>
>>>>> _____
>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
>>>>>
>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>> problem
>>>>> Gordon,
>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
>>> as I
>>>>> can get it reading from a BK frequency counter) are:
>>>>> SO239 is slightly less than S7
>>>>> TP-1 is slightly less than S7
>>>>> TC-1 is 20 over S9
>>>>> TP-2 is 20 over S9
>>>>>
>>>>> WW8X
>>>>>
>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
>>>>>
>>>>>> Joe,
>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a reading
>>> on
>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board and
>>>>>> again look at the S-meter. tell me what readings you get.
>>>>>> they should be virtually identical.
>>>>>> Once we have that info, we can move on
>>>>>>
>>>>>> Gordon
>>>>>>
>>>>>>
>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
>>>>>>> Thanks Mike and Terry...

>>>>>>> You guys have given me plenty of time and advice -- I appreciate it
>>>>> very
>>>>>>> much.
>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which
>>> may
>>>>>> work
>>>>>>> also, so I can try what you are suggesting. As far as marker signals
>>>>> go:
>>>>>> I
>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
>>>>>> peak,
>>>>>>> but at 14.175 mhz, the marker signal is only S7.
>>>>>>>
>>>>>>> What ever took out the L41 (remember I said the secondary winding was
>>>>>> open
>>>>>>> -- a inch of the wire was missing, but the windings were intact and
>>> not
>>>>>>> burnt), probably also took out something else, which is continuing to
>>>>> be
>>>>>> a
>>>>>>> problem. Before rewinding the L41, I had virtually no signal -- after
>>>>>>> replacing L41, the signal came back and is now weak. Only when I put
>>>>> the
>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
>>>>> properly
>>>>>>> operating receiver.
>>>>>>>
>>>>>>> Wish me luck and thanks again.
>>>>>>>
>>>>>>> 73,
>>>>>>> WW8X
>>>>>>> Joe
>>>>>>>
>>>>>>>
>>>>>>>
>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
>>>>>>>
>>>>>>>>> One more thing. If the Marker signal is strong, S9 or better, then
>>> L3
>>>>>> and
>>>>>>>>> L4 are more than likely not the source of weak receive signals. If
>>> L3
>>>>>> and/or
>>>>>>>>> L4 were the source of the problem the Marker signal would be weak
>>> just
>>>>>> like
>>>>>>>>> the incoming signals are.
>>>>>>>>>
>>>>>>>>> 73s

>>>>>>>> Mike
>>>>>>>> W5RKL
>>>>>>>>
>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>> problem
>>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>>>>>>>>> knowledge/experience with his problem. He does not have the test
>>>>>> equipment
>>>>>>>>> necessary to use Level diagrams so is using antenna coax to inject
>>>>>> signal.
>>>>>>>> He is
>>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
>>>>> He
>>>>>> is
>>>>>>>> not
>>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is
>>> good.
>>>>> I
>>>>>> am
>>>>>>>> not
>>>>>>>>> sure what the components are after TP-1. They appear to make up a
>>>>>>>> band-pass
>>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
>>>>>> failing
>>>>>>>> open or
>>>>>>>>> shunting signal to ground. Appreciate it if you guys could add to
>>>>> what
>>>>>> I
>>>>>>>> have
>>>>>>>>> suggested and/or take off and run with this one. 73s Terry
>>>>>>>>>
>>>>>>>>> _____
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>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>> problem
>>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open
>>> I
>>>>>> would
>>>>>>>> say
>>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
>>>>> 40,
>>>>>> 20
>>>>>>>> with

>>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
>>>>> In
>>>>>> all
>>>>>>>> cases
>>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
>>>>> peaked.
>>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
>>> Shorted
>>>>> or
>>>>>>>> Shunted
>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
>>>>>>>>>
>>>>>>>>> 2. We have determined that signal path from Marker to Speaker is
>>>>>>>> good/normal.
>>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
>>>>>> (including
>>>>>>>> AGC
>>>>>>>>> action?)
>>>>>>>>>
>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
>>>>>> significantly
>>>>>>>> weaker
>>>>>>>>> output. What components and what failure mode are in path from TP-1
>>>>> to
>>>>>>>> VC-1?
>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
>>>>> good
>>>>>>>>> therefore L4/L41 are good.
>>>>>>>>>
>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
>>> weaker
>>>>>> than
>>>>>>>> when
>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
>>> believe
>>>>>> are
>>>>>>>>> band-pass components (probably broadcast band?) are the only
>>>>> components
>>>>>> in
>>>>>>>> path
>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
>>>>>>>> components
>>>>>>>>> are not in the circuit when you use the Marker.
>>>>>>>>>
>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
>>> signal
>>>>> to
>>>>>>>> ground
>>>>>>>>> at TP-1?
>>>>>>>>>

>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
>>> signal
>>>>>> to
>>>>>>>> TP-1?
>>>>>>>>> If signal comes up to near same as when touched at VC-1 then you
>>> know
>>>>>>>> coupling
>>>>>>>>> caps and band-pass filter components are all good. The fault then
>>> has
>>>>>> to
>>>>>>>> be
>>>>>>>>> something shunting the signal to ground upstream of TP-1. If signal
>>>>>> does
>>>>>>>> not
>>>>>>>>> come up, then coupling caps, bandpass filter components are
>>> shunting
>>>>>>>> signal to
>>>>>>>>> ground.
>>>>>>>>>
>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
>>> here
>>>>>> is
>>>>>>>> bad
>>>>>>>>> contacts which could cause weak and/or intermittent signal with
>>> coax
>>>>>>>> connected
>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
>>>>> RL-1
>>>>>> to
>>>>>>>> shunt
>>>>>>>>> signal to ground and affect any signal applied at TP-1.
>>>>>>>>>
>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
>>>>> report
>>>>>>>> back.
>>>>>>>>> 73s Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>> problem
>>>>>>>>> Terry:
>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
>>> reading.
>>>>>> Quite
>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
>>>>> speaker.
>>>>>>>> I'll

>>>>>>>>> try your other suggestions when I get a chance later on this
>>> evening.
>>>>> I
>>>>>>>>> probably should think about checking the relay as Dave suggested.
>>>>>>>>>
>>>>>>>>> One other thing that may be related, is that when I'm on a strong
>>>>>> signal
>>>>>>>> the
>>>>>>>>> S-meter fades. In other words, as it is now the strongest signals
>>> are
>>>>>>>> around
>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after a
>>> few
>>>>>>>> seconds
>>>>>>>>> the S meter drops off and comes back up and drops off. When I
>>> connect
>>>>>> the
>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade
>>> on
>>>>>> the
>>>>>>>>> calibrator signal.
>>>>>>>>> 73,
>>>>>>>>> WW8X
>>>>>>>>> Joe
>>>>>>>>>
>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>>>>>> wrote:
>>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>>>>>>>> intermittent
>>>>>>>>>> connection and not a short to ground. So if signal is weak applied
>>>>> at
>>>>>>>> TP-1
>>>>>>>>>> it
>>>>>>>>>> points downstream from there. Only place you worked was at L4 and
>>>>> L41.
>>>>>>>>>> What is confusing me is --Are you getting good marker signal? Have
>>>>> you
>>>>>>>>>> tried it
>>>>>>>>>> on bands other than 1.9?
>>>>>>>>>>
>>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
>>>>> rewind
>>>>>>>> and
>>>>>>>>>> re-solder sounds good.
>>>>>>>>>>
>>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
>>>>> down
>>>>>>>> as
>>>>>>>>>> volume
>>>>>>>>>> would be rattling the speaker. Same for any other band. If this is

>>>>>> true
>>>>>>>>>> then you
>>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
>>>>> With
>>>>>>>> it
>>>>>>>>>> on
>>>>>>>>>> peak the drive for max s-meter reading. If you dont want to reach
>>>>> for
>>>>>> AF
>>>>>>>>>> control
>>>>>>>>>> to turn down the volume then adequate marker signal is not passing
>>>>>>>> L4/L41.
>>>>>>>>>> Only other components in signal path between TP-1 and L4/L41 are
>>>>>>>> coupling
>>>>>>>>>> caps
>>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
>>>>> rare
>>>>>>>> for
>>>>>>>>>> any
>>>>>>>>>> of these to fail.
>>>>>>>>>>
>>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
>>> inject
>>>>>>>> your
>>>>>>>>>> marker
>>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
>>>>> increases
>>>>>>>>>> significantly?
>>>>>>>>>>
>>>>>>>>>> Terry
>>>>>>>>>>
>>>>>>>>>> _____
>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>>>>
>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>>> receive
>>>>>>>> problem
>>>>>>>>>> Terry:
>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
>>> down.
>>>>>>> So,
>>>>>>>> I
>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>>>>>>>> Gordon's
>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal reading
>>> at
>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
>>>>>>> with

>>>>>>>> the
>>>>>>>>> rewinding. I don't think rewinding it again would make any
>>>>> difference?
>>>>>> I
>>>>>>>> am
>>>>>>>>> certainly willing to do that if you think it would be helpful. The
>>>>> L4
>>>>>>>> was a
>>>>>>>>> replacement Gordon sent me and have no reason to believe it's not
>>>>>>>> working.
>>>>>>>>> I
>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
>>>>> NTE222
>>>>>>>> and a
>>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
>>> them
>>>>>> yet.
>>>>>>>> At
>>>>>>>>> this point I think I'll just save them as spares, because as you
>>>>>> state,
>>>>>>>> Q1
>>>>>>>>> and D2 are good.
>>>>>>>>>
>>>>>>>>> It was great to hear the receive come back alive when touching the
>>>>>>>> antenna
>>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
>>> steps
>>>>>> :?)
>>>>>>>>> Thanks,
>>>>>>>>> 73
>>>>>>>>> WW8X
>>>>>>>>> Joe
>>>>>>>>>
>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...
>>>>>>>> wrote:
>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
>>>>>>>> stationary
>>>>>>>>>> plate
>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
>>>>>>>>>> transformer.
>>>>>>>>>> You are down stream of them. You are coupling signals directly to
>>>>> the
>>>>>>>>> gate
>>>>>>>>>> of
>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
>>>>>>>> replaced
>>>>>>>>>> both?)
>>>>>>>>>>
>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board.
>>> You

>>>>>>>> will
>>>>>>>>> be
>>>>>>>>>> on
>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when touching
>>>>> TP-1
>>>>>>>> it
>>>>>>>>>> means
>>>>>>>>>> something wrong with either L4 and/or L41.
>>>>>>>>>>
>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>>>>>>>>>> Connector
>>>>>>>>>> 3 of
>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
>>> conductor
>>>>>> of
>>>>>>>>>> antenna
>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or bad
>>>>> foil
>>>>>>>> at
>>>>>>>>>> that
>>>>>>>>>> connector.
>>>>>>>>>>
>>>>>>>>>> Use your schematic and keep working your way back to your SO-239
>>>>>>>>>> connector
>>>>>>>>>> on
>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
>>> Xverter
>>>>>>>>>> connector
>>>>>>>>>> switch , then antenna relay RL-1.
>>>>>>>>>>
>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
>>>>> believe
>>>>>>>> you
>>>>>>>>>> said it
>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and
>>>>> L41
>>>>>>>> are
>>>>>>>>>> OK.
>>>>>>>>>> Terry-K9TW
>>>>>>>>>>
>>>>>>>>>> _____
>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>> problem
>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
>>>>>> been
>>>>>>>>>> reading
>>>>>>>>>> the threads related to my adventures with my low receive problem,

>>> I
>>>>>>>>>>> discovered
>>>>>>>>>>> an important clue.
>>>>>>>>>>>
>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
>>> lugs
>>>>> on
>>>>>>>>>>> variable
>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
>>>>>> test
>>>>>>>>>> lead
>>>>>>>>>>> to
>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
>>>>> signals
>>>>>>>>>> jump
>>>>>>>>>>> up
>>>>>>>>>>> very loud with normal noise and S meter readings at S9 and above
>>> --
>>>>>>>> just
>>>>>>>>>> as
>>>>>>>>>>> the
>>>>>>>>>>> set used to have before my problems started. Here's the curious
>>>>>> thing:
>>>>>>>>>> When
>>>>>>>>>>> I
>>>>>>>>>>> connect the same test lead that's connected to the antenna to the
>>>>>>>> center
>>>>>>>>>> of
>>>>>>>>>>> the
>>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way
>>>>> off
>>>>>>>>>> as
>>>>>>>>>>> if
>>>>>>>>>>> there's hardly an antenna connected. So in addition to having to
>>>>>>>> rewind
>>>>>>>>>> the
>>>>>>>>>>> L41
>>>>>>>>>>> (which I've already done), there apparently is also something
>>> going
>>>>>> on
>>>>>>>>>> with
>>>>>>>>>>> my
>>>>>>>>>>> receive. I think I'm on to something. What do you think?
>>>>>>>>>>> Thanks,
>>>>>>>>>>> WW8X
>>>>>>>>>>> Joe
>>>>>>>>>>>
>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>

>>>>>>>>>>>
>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>
>>>>>>>>>> Yahoo! Groups Links
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>>>>>>>
>>>>>>> Yahoo! Groups Links
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>>>
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>>> ------------------------------------
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> Yahoo! Groups Links
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31767. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 01:27:41 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31767

Joe,
one pother question, You did wind L41 correctly as far as primary and
secondary pins on the coil... correct?
The primary also is wound on the bottom 1/3 of the bobbin while the
secondary is wound on the top 2/3 of the bobbin

Gordon

On 6/8/2011 6:23 PM, n6wk@... wrote:
> No problem Joe,
> Been there and Done that LOL
>
> Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
> even L3. look at the schematic and you can easily follow the circuit.
> It could also be one of the caps in that associated circuit, such as C1,
> C3 or C4 but I doubt that.
> I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> me is that the marker signal seems to be good.
> Are all bands low? Maybe you need to do the Antenna and RFcoil
> adjustments for all bands.
>
> Gordon
>
>
> On 6/8/2011 5:53 PM, Joe Loverti wrote:
>> I truly am sorry... still messed it up.
>> TP-1 is less than S7
>> *TP-2* moves to S3 then drops to S0
>> TP-4 is 20+
>> VC-1 is 20+
>> SO239 is less than S7
>> One of those nights :?(
>> WW8X
>> Joe
>>
>>
>> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
>>
>>> I got messed up... darn it.
>>> TP-1 is less than S7
>>> *TP-2* moves to S3 then drops to S0
>>> TP-4 is 20+
>>> VC-1 is 20+
>>> SO239 is 20+
>>>

>>> Sorry about that...
>>> WW8X
>>> Joe
>>>
>>>
>>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
>>>
>>>> Ok, in that case, either there is a problem with L-41 or L4 needs to be
>>>> adjusted
>>>>
>>>> Gordon
>>>>
>>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
>>>>> Correct Terry...
>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
>>>> as I
>>>>> can get it reading from a BK frequency counter) are:
>>>>> SO239 is slightly less than S7
>>>>> TP-1 is slightly less than S7
>>>>> VC-1 is 20 over S9
>>>>> TP-2 is 20 over S9
>>>>> Thanks for the catch.
>>>>>
>>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
>>>> wrote:
>>>>>> Joe-I think you meant VC-1? Terry
>>>>>>
>>>>>>
>>>>>> _____
>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
>>>>>>
>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>> problem
>>>>>> Gordon,
>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
>>>> as I
>>>>>> can get it reading from a BK frequency counter) are:
>>>>>> SO239 is slightly less than S7
>>>>>> TP-1 is slightly less than S7
>>>>>> TC-1 is 20 over S9
>>>>>> TP-2 is 20 over S9
>>>>>>
>>>>>> WW8X
>>>>>>
>>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
>>>>>>
>>>>>>> Joe,
>>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a reading

>>>> on
>>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board and
>>>>>>> again look at the S-meter. tell me what readings you get.
>>>>>>> they should be virtually identical.
>>>>>>> Once we have that info, we can move on
>>>>>>>
>>>>>>> Gordon
>>>>>>>
>>>>>>>
>>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
>>>>>>>> Thanks Mike and Terry...
>>>>>>>> You guys have given me plenty of time and advice -- I appreciate it
>>>>>> very
>>>>>>>> much.
>>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
>>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which
>>>> may
>>>>>>> work
>>>>>>>> also, so I can try what you are suggesting. As far as marker signals
>>>>>> go:
>>>>>>> I
>>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
>>>>>>> peak,
>>>>>>>> but at 14.175 mhz, the marker signal is only S7.
>>>>>>>>
>>>>>>>> What ever took out the L41 (remember I said the secondary winding was
>>>>>>> open
>>>>>>>> -- a inch of the wire was missing, but the windings were intact and
>>>> not
>>>>>>>> burnt), probably also took out something else, which is continuing to
>>>>>> be
>>>>>>> a
>>>>>>>> problem. Before rewinding the L41, I had virtually no signal -- after
>>>>>>>> replacing L41, the signal came back and is now weak. Only when I put
>>>>>> the
>>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
>>>>>> properly
>>>>>>>> operating receiver.
>>>>>>>>
>>>>>>>> Wish me luck and thanks again.
>>>>>>>>
>>>>>>>> 73,
>>>>>>>> WW8X
>>>>>>>> Joe
>>>>>>>>
>>>>>>>>
>>>>>>>>
>>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
>>>>>>>>
>>>>>>>>> One more thing. If the Marker signal is strong, S9 or better, then

>>>> L3
>>>>>>> and
>>>>>>>> L4 are more than likely not the source of weak receive signals. If
>>>> L3
>>>>>>> and/or
>>>>>>>> L4 were the source of the problem the Marker signal would be weak
>>>> just
>>>>>>> like
>>>>>>>> the incoming signals are.
>>>>>>>>
>>>>>>>> 73s
>>>>>>>> Mike
>>>>>>>> W5RKL
>>>>>>>>
>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>> problem
>>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
>>>>>>>>> knowledge/experience with his problem. He does not have the test
>>>>>>> equipment
>>>>>>>>> necessary to use Level diagrams so is using antenna coax to inject
>>>>>>> signal.
>>>>>>>> He is
>>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
>>>>>> He
>>>>>>> is
>>>>>>>> not
>>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is
>>>> good.
>>>>>> I
>>>>>>> am
>>>>>>>> not
>>>>>>>>> sure what the components are after TP-1. They appear to make up a
>>>>>>>> band-pass
>>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
>>>>>>> failing
>>>>>>>> open or
>>>>>>>>> shunting signal to ground. Appreciate it if you guys could add to
>>>>>> what
>>>>>>> I
>>>>>>>> have
>>>>>>>>> suggested and/or take off and run with this one. 73s Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com

>>>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>>> problem
>>>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open
>>>> I
>>>>>>> would
>>>>>>>>> say
>>>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
>>>>>> 40,
>>>>>>> 20
>>>>>>>>> with
>>>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
>>>>>> In
>>>>>>> all
>>>>>>>>> cases
>>>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
>>>>>> peaked.
>>>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
>>>> Shorted
>>>>>> or
>>>>>>>>> Shunted
>>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
>>>>>>>>>>
>>>>>>>>>> 2. We have determined that signal path from Marker to Speaker is
>>>>>>>>> good/normal.
>>>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
>>>>>>> (including
>>>>>>>>> AGC
>>>>>>>>>> action?)
>>>>>>>>>>
>>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
>>>>>>> significantly
>>>>>>>>> weaker
>>>>>>>>>> output. What components and what failure mode are in path from TP-1
>>>>>> to
>>>>>>>>> VC-1?
>>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
>>>>>> good
>>>>>>>>>> therefore L4/L41 are good.
>>>>>>>>>>
>>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
>>>> weaker
>>>>>>> than
>>>>>>>>> when
>>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
>>>> believe
>>>>>>> are
>>>>>>>>>> band-pass components (probably broadcast band?) are the only
>>>>>> components
>>>>>>> in

>>>>>>>>> path
>>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
>>>>>>>>> components
>>>>>>>>>> are not in the circuit when you use the Marker.
>>>>>>>>>>
>>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
>>>> signal
>>>>>> to
>>>>>>>>> ground
>>>>>>>>>> at TP-1?
>>>>>>>>>>
>>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
>>>> signal
>>>>>>> to
>>>>>>>>> TP-1?
>>>>>>>>>> If signal comes up to near same as when touched at VC-1 then you
>>>> know
>>>>>>>>> coupling
>>>>>>>>>> caps and band-pass filter components are all good. The fault then
>>>> has
>>>>>>> to
>>>>>>>>> be
>>>>>>>>>> something shunting the signal to ground upstream of TP-1. If signal
>>>>>>> does
>>>>>>>>> not
>>>>>>>>>> come up, then coupling caps, bandpass filter components are
>>>> shunting
>>>>>>>>> signal to
>>>>>>>>>> ground.
>>>>>>>>>>
>>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
>>>> here
>>>>>>> is
>>>>>>>>> bad
>>>>>>>>>> contacts which could cause weak and/or intermittent signal with
>>>> coax
>>>>>>>>> connected
>>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
>>>>>> RL-1
>>>>>>> to
>>>>>>>>> shunt
>>>>>>>>>> signal to ground and affect any signal applied at TP-1.
>>>>>>>>>>
>>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
>>>>>> report
>>>>>>>>> back.
>>>>>>>>>> 73s Terry
>>>>>>>>>>
>>>>>>>>>> _____
>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>

>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>>> problem
>>>>>>>>>> Terry:
>>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
>>>> reading.
>>>>>>> Quite
>>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
>>>>>> speaker.
>>>>>>>>> I'll
>>>>>>>>>> try your other suggestions when I get a chance later on this
>>>> evening.
>>>>>> I
>>>>>>>>>> probably should think about checking the relay as Dave suggested.
>>>>>>>>>>
>>>>>>>>>> One other thing that may be related, is that when I'm on a strong
>>>>>>> signal
>>>>>>>>> the
>>>>>>>>>> S-meter fades. In other words, as it is now the strongest signals
>>>> are
>>>>>>>>> around
>>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after a
>>>> few
>>>>>>>>> seconds
>>>>>>>>>> the S meter drops off and comes back up and drops off. When I
>>>> connect
>>>>>>>>> the
>>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade
>>>> on
>>>>>>>>> the
>>>>>>>>>> calibrator signal.
>>>>>>>>>> 73,
>>>>>>>>>> WW8X
>>>>>>>>>> Joe
>>>>>>>>>>
>>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>>>>>>> wrote:
>>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>>>>>>>>> intermittent
>>>>>>>>>> connection and not a short to ground. So if signal is weak applied
>>>>>> at
>>>>>>>>> TP-1
>>>>>>>>>> it
>>>>>>>>>> points downstream from there. Only place you worked was at L4 and
>>>>>> L41.
>>>>>>>>>> What is confusing me is --Are you getting good marker signal? Have
>>>>>> you
>>>>>>>>>> tried it
>>>>>>>>>> on bands other than 1.9?

>>>>>>>>>>>
>>>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
>>>>>> rewind
>>>>>>>>> and
>>>>>>>>>>> re-solder sounds good.
>>>>>>>>>>>
>>>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
>>>>>> down
>>>>>>>>> as
>>>>>>>>>>> volume
>>>>>>>>>>> would be rattling the speaker. Same for any other band. If this is
>>>>>>> true
>>>>>>>>>>> then you
>>>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
>>>>>> With
>>>>>>>>> it
>>>>>>>>>>> on
>>>>>>>>>>> peak the drive for max s-meter reading. If you dont want to reach
>>>>>> for
>>>>>>> AF
>>>>>>>>>>> control
>>>>>>>>>>> to turn down the volume then adequate marker signal is not passing
>>>>>>>>> L4/L41.
>>>>>>>>>>> Only other components in signal path between TP-1 and L4/L41 are
>>>>>>>>> coupling
>>>>>>>>>>> caps
>>>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
>>>>>> rare
>>>>>>>>> for
>>>>>>>>>>> any
>>>>>>>>>>> of these to fail.
>>>>>>>>>>>
>>>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
>>>> inject
>>>>>>>>> your
>>>>>>>>>>> marker
>>>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
>>>>>> increases
>>>>>>>>>>> significantly?
>>>>>>>>>>>
>>>>>>>>>>> Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>>>>>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>>>> receive
>>>>>>>>> problem

>>>>>>>>>>> Terry:
>>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
>>>> down.
>>>>>>> So,
>>>>>>>>> I
>>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
>>>>>>>>> Gordon's
>>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal reading
>>>> at
>>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
>>>>>>> with
>>>>>>>>> the
>>>>>>>>>>> rewinding. I don't think rewinding it again would make any
>>>>>> difference?
>>>>>>> I
>>>>>>>>> am
>>>>>>>>>>> certainly willing to do that if you think it would be helpful. The
>>>>>> L4
>>>>>>>>> was a
>>>>>>>>>>> replacement Gordon sent me and have no reason to believe it's not
>>>>>>>>> working.
>>>>>>>>>>> I
>>>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
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>>>>>>>>> and a
>>>>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
>>>> them
>>>>>>> yet.
>>>>>>>>> At
>>>>>>>>>>> this point I think I'll just save them as spares, because as you
>>>>>>> state,
>>>>>>>>> Q1
>>>>>>>>>>> and D2 are good.
>>>>>>>>>>>
>>>>>>>>>>> It was great to hear the receive come back alive when touching the
>>>>>>>>> antenna
>>>>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
>>>> steps
>>>>>>> :?)
>>>>>>>>>>> Thanks,
>>>>>>>>>>> 73
>>>>>>>>>>> WW8X
>>>>>>>>>>> Joe
>>>>>>>>>>>
>>>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...
>>>>>>>>> wrote:
>>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
>>>>>>>>> stationary
>>>>>>>>>>> plate
>>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41

>>>>>>>>>>>> transformer.
>>>>>>>>>>>> You are down stream of them. You are coupling signals directly to
>>>>>> the
>>>>>>>>>>>> gate
>>>>>>>>>>>> of
>>>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
>>>>>>>>> replaced
>>>>>>>>>>>> both?)
>>>>>>>>>>>>
>>>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board.
>>>> You
>>>>>>>>> will
>>>>>>>>>>>> be
>>>>>>>>>>>> on
>>>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when touching
>>>>>> TP-1
>>>>>>>>> it
>>>>>>>>>>>> means
>>>>>>>>>>>> something wrong with either L4 and/or L41.
>>>>>>>>>>>>
>>>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
>>>>>>>>>>> Connector
>>>>>>>>>>>> 3 of
>>>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
>>>> conductor
>>>>>>> of
>>>>>>>>>>>> antenna
>>>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or bad
>>>>>> foil
>>>>>>>>> at
>>>>>>>>>>>> that
>>>>>>>>>>>> connector.
>>>>>>>>>>>>
>>>>>>>>>>>> Use your schematic and keep working your way back to your SO-239
>>>>>>>>>>> connector
>>>>>>>>>>>> on
>>>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
>>>> Xverter
>>>>>>>>>>>> connector
>>>>>>>>>>>> switch , then antenna relay RL-1.
>>>>>>>>>>>>
>>>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
>>>>>> believe
>>>>>>>>> you
>>>>>>>>>>>> said it
>>>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and
>>>>>> L41
>>>>>>>>> are
>>>>>>>>>>>> OK.
>>>>>>>>>>>> Terry-K9TW

>>>>>>>>>>>>
>>>>>>>>>>>> _____
>>>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>>>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>>>>> problem
>>>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
>>>>>>> been
>>>>>>>>>>>> reading
>>>>>>>>>>>> the threads related to my adventures with my low receive problem,
>>>> I
>>>>>>>>>>>> discovered
>>>>>>>>>>>> an important clue.
>>>>>>>>>>>>
>>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
>>>> lugs
>>>>>> on
>>>>>>>>>>>> variable
>>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
>>>>>>> test
>>>>>>>>>>>> lead
>>>>>>>>>>>> to
>>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
>>>>>> signals
>>>>>>>>>>>> jump
>>>>>>>>>>>> up
>>>>>>>>>>>> very loud with normal noise and S meter readings at S9 and above
>>>> --
>>>>>>>>>>>> just
>>>>>>>>>>>> as
>>>>>>>>>>>> the
>>>>>>>>>>>> set used to have before my problems started. Here's the curious
>>>>>>> thing:
>>>>>>>>>>>> When
>>>>>>>>>>>> I
>>>>>>>>>>>> connect the same test lead that's connected to the antenna to the
>>>>>>>>>>>> center
>>>>>>>>>>>> of
>>>>>>>>>>>> the
>>>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way
>>>>>> off
>>>>>>>>>>>> as
>>>>>>>>>>>> if
>>>>>>>>>>>> there's hardly an antenna connected. So in addition to having to
>>>>>>>>>>>> rewind
>>>>>>>>>>>> the
>>>>>>>>>>>> L41
>>>>>>>>>>>> (which I've already done), there apparently is also something
>>>> going

>>>>>>> on
>>>>>>>>>> with
>>>>>>>>>>> my
>>>>>>>>>>> receive. I think I'm on to something. What do you think?
>>>>>>>>>>> Thanks,
>>>>>>>>>>> WW8X
>>>>>>>>>>> Joe
>>>>>>>>>>>
>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>> Yahoo! Groups Links
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>>>> Yahoo! Groups Links
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31768. Re: [TS-520_820_530_830] Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 02:02:16 UTC
From: W5RKL
Topic: 31719 Message: 31768

I agree with Bill.

73s
Mike
W5RKL

>_____
>From: Bill <w_r_cromwell@...>
>To: TS-520_820_530_830@yahoogroups.com
>Sent: Wednesday, June 8, 2011 7:44 PM
>Subject: [TS-520_820_530_830] Re: TS520se Tx power
>
>
>
>Hi Dave,
>
>Maybe shining a different color of light on this from a different angle will help. The ALC is to prevent the final amplifier from being overdriven and causing distortion, splatter, all manner of grief. The ALC only 'engages' *if* the finals experience any overdriving condition. I think that part of the picture has been pretty well said several times.
>
>If we reduce the power by reducing the 'carrier' in CW or the mic gain in SSB then we are NOT EVER (read as NEVER) going to overdrive the finals. If we reduce the power by using the nine volt battery trick we will have forced the ALC to reduce the transmitter power and again...the finals will never be overdriven. When we have reduced the ouput power by any substantial amount we can forget all about the ALC level.
>
>On the rare occasions I use SSB on my Kenwood and I want to use "full" power, I adjust the mic gain up until I just get some ALC on the peaks and THEN I back it off until that just stops. I am still close enough to full power that you can't tell the difference from your QTH even with lab measurement gear. You probably couldn't measure the difference even from across the street. The reason to just 'tickle' the AGC is to know you are at the transmitter's clean operating limit. Once you know that the meter isn't needed.
>
>I hope this helps a little.
>
>73,
>
>Bill KU8H
>
>
>
>
>

[Non-text portions of this message have been removed]

31769. Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 02:04:39 UTC
From: Terry Wagoner
Topic: 31735 Message: 31769

Gordon--Good marker thru me off as well. Since L4/L41 are common path for marker and RF signals.

How about injecting signal at Diode D1 by Marker pin. It is near TP2 and cathode end of diode is accessible. If signal is 20+ injecting here it cant be L4/L41--Terry
--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> No problem Joe,
> Been there and Done that LOL
>
> Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
> even L3. look at the schematic and you can easily follow the circuit.
> It could also be one of the caps in that associated circuit, such as C1,
> C3 or C4 but I doubt that.
> I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> me is that the marker signal seems to be good.
> Are all bands low? Maybe you need to do the Antenna and RFcoil
> adjustments for all bands.
>
> Gordon
>
>
> On 6/8/2011 5:53 PM, Joe Loverti wrote:
> > I truly am sorry... still messed it up.
> > TP-1 is less than S7
> > *TP-2* moves to S3 then drops to S0
> > TP-4 is 20+
> > VC-1 is 20+
> > SO239 is less than S7
> > One of those nights :☐(
> > WW8X
> > Joe
> >
> >
> > On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
> >
> >> I got messed up... darn it.
> >> TP-1 is less than S7
> >> *TP-2* moves to S3 then drops to S0
> >> TP-4 is 20+
> >> VC-1 is 20+
> >> SO239 is 20+
> >>
> >> Sorry about that...

> >> WW8X
> >> Joe
> >>
> >>
> >> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
> >>
> >>> Ok, in that case, either there is a problem with L-41 or L4 needs to be
> >>> adjusted
> >>>
> >>> Gordon
> >>>
> >>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> >>>> Correct Terry...
> >>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
> >>> as I
> >>>> can get it reading from a BK frequency counter) are:
> >>>> SO239 is slightly less than S7
> >>>> TP-1 is slightly less than S7
> >>>> VC-1 is 20 over S9
> >>>> TP-2 is 20 over S9
> >>>> Thanks for the catch.
> >>>>
> >>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
> >>> wrote:
> >>>>> Joe-I think you meant VC-1? Terry
> >>>>>
> >>>>>
> >>>>> _____
> >>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>> Sent: Wed, June 8, 2011 8:22:16 PM
> >>>>>
> >>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>> problem
> >>>>> Gordon,
> >>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as close
> >>> as I
> >>>>> can get it reading from a BK frequency counter) are:
> >>>>> SO239 is slightly less than S7
> >>>>> TP-1 is slightly less than S7
> >>>>> TC-1 is 20 over S9
> >>>>> TP-2 is 20 over S9
> >>>>>
> >>>>> WW8X
> >>>>>
> >>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
> >>>>>
> >>>>>> Joe,
> >>>>>> Insert a 14.175 signal at the center of the SO-239 and take a reading

> >>> on
> >>>>>> the S-meter. then insert the same signal at TP-1 on the RF board and
> >>>>>> again look at the S-meter. tell me what readings you get.
> >>>>>> they should be virtually identical.
> >>>>>> Once we have that info, we can move on
> >>>>>>
> >>>>>> Gordon
> >>>>>>
> >>>>>>
> >>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> >>>>>>> Thanks Mike and Terry...
> >>>>>>> You guys have given me plenty of time and advice -- I appreciate it
> >>>>> very
> >>>>>>> much.
> >>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
> >>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html) which
> >>> may
> >>>>>> work
> >>>>>>> also, so I can try what you are suggesting. As far as marker signals
> >>>>> go:
> >>>>>> I
> >>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for a
> >>>>>> peak,
> >>>>>>> but at 14.175 mhz, the marker signal is only S7.
> >>>>>>>
> >>>>>>> What ever took out the L41 (remember I said the secondary winding was
> >>>>>> open
> >>>>>>> -- a inch of the wire was missing, but the windings were intact and
> >>> not
> >>>>>>> burnt), probably also took out something else, which is continuing to
> >>>>> be
> >>>>>> a
> >>>>>>> problem. Before rewinding the L41, I had virtually no signal -- after
> >>>>>>> replacing L41, the signal came back and is now weak. Only when I put
> >>>>> the
> >>>>>>> antenna input at VC-1 does the signal come up to sounding like a
> >>>>> properly
> >>>>>>> operating receiver.
> >>>>>>>
> >>>>>>> Wish me luck and thanks again.
> >>>>>>>
> >>>>>>> 73,
> >>>>>>> WW8X
> >>>>>>> Joe
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >>>>>>>

> >>>>>>>> One more thing. If the Marker signal is strong, S9 or better, then
> >>> L3
> >>>>>> and
> >>>>>>>> L4 are more than likely not the source of weak receive signals. If
> >>> L3
> >>>>>> and/or
> >>>>>>>> L4 were the source of the problem the Marker signal would be weak
> >>> just
> >>>>>> like
> >>>>>>>> the incoming signals are.
> >>>>>>>>
> >>>>>>>> 73s
> >>>>>>>> Mike
> >>>>>>>> W5RKL
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>>>>> problem
> >>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted my
> >>>>>>>>> knowledge/experience with his problem. He does not have the test
> >>>>>> equipment
> >>>>>>>>> necessary to use Level diagrams so is using antenna coax to inject
> >>>>>> signal.
> >>>>>>>> He is
> >>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at VC-1.
> >>>>> He
> >>>>>> is
> >>>>>>>> not
> >>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is
> >>> good.
> >>>>> I
> >>>>>> am
> >>>>>>>> not
> >>>>>>>>> sure what the components are after TP-1. They appear to make up a
> >>>>>>>> band-pass
> >>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
> >>>>>> failing
> >>>>>>>> open or
> >>>>>>>>> shunting signal to ground. Appreciate it if you guys could add to
> >>>>> what
> >>>>>> I
> >>>>>>>> have
> >>>>>>>>> suggested and/or take off and run with this one. 73s Terry
> >>>>>>>>>
> >>>>>>>>> _____

> >>>>>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>>>>> problem
> >>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide open
> >>> I
> >>>>>> would
> >>>>>>>> say
> >>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on 80,
> >>>>> 40,
> >>>>>> 20
> >>>>>>>> with
> >>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher frequencies.
> >>>>> In
> >>>>>> all
> >>>>>>>> cases
> >>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
> >>>>> peaked.
> >>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
> >>> Shorted
> >>>>> or
> >>>>>>>> Shunted
> >>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your symptoms)
> >>>>>>>>>
> >>>>>>>>> 2. We have determined that signal path from Marker to Speaker is
> >>>>>>>> good/normal.
> >>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
> >>>>>> (including
> >>>>>>>> AGC
> >>>>>>>>> action?)
> >>>>>>>>>
> >>>>>>>>> 4. We have determined that signal injected at TP-1 produces
> >>>>>> significantly
> >>>>>>>> weaker
> >>>>>>>>> output. What components and what failure mode are in path from TP-1
> >>>>> to
> >>>>>>>> VC-1?
> >>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker is
> >>>>> good
> >>>>>>>>> therefore L4/L41 are good.
> >>>>>>>>>
> >>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> >>> weaker
> >>>>>> than
> >>>>>>>> when
> >>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
> >>> believe
> >>>>>> are

> >>>>>>>>> band-pass components (probably broadcast band?) are the only
> >>>>> components
> >>>>>> in
> >>>>>>>> path
> >>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad. These
> >>>>>>>> components
> >>>>>>>>> are not in the circuit when you use the Marker.
> >>>>>>>>>
> >>>>>>>>> 7. So, is it possible that something is shunting/shorting the
> >>> signal
> >>>>> to
> >>>>>>>> ground
> >>>>>>>>> at TP-1?
> >>>>>>>>>
> >>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> >>> signal
> >>>>>> to
> >>>>>>>> TP-1?
> >>>>>>>>> If signal comes up to near same as when touched at VC-1 then you
> >>> know
> >>>>>>> coupling
> >>>>>>>>> caps and band-pass filter components are all good. The fault then
> >>> has
> >>>>>> to
> >>>>>>>> be
> >>>>>>>>> something shunting the signal to ground upstream of TP-1. If signal
> >>>>>> does
> >>>>>>>> not
> >>>>>>>>> come up, then coupling caps, bandpass filter components are
> >>> shunting
> >>>>>>> signal to
> >>>>>>>>> ground.
> >>>>>>>>>
> >>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
> >>> here
> >>>>>> is
> >>>>>>>> bad
> >>>>>>>>> contacts which could cause weak and/or intermittent signal with
> >>> coax
> >>>>>>> connected
> >>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant Relay
> >>>>> RL-1
> >>>>>>>> to
> >>>>>>>>> shunt
> >>>>>>>>> signal to ground and affect any signal applied at TP-1.
> >>>>>>>>>
> >>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
> >>>>> report
> >>>>>>>> back.

> >>>>>>>>> 73s Terry
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>>>>> problem
> >>>>>>>>> Terry:
> >>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
> >>> reading.
> >>>>>> Quite
> >>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> >>>>> speaker.
> >>>>>>>> I'll
> >>>>>>>>> try your other suggestions when I get a chance later on this
> >>> evening.
> >>>>> I
> >>>>>>>>> probably should think about checking the relay as Dave suggested.
> >>>>>>>>>
> >>>>>>>>> One other thing that may be related, is that when I'm on a strong
> >>>>>> signal
> >>>>>>>> the
> >>>>>>>>> S-meter fades. In other words, as it is now the strongest signals
> >>> are
> >>>>>>>> around
> >>>>>>>>> S7 or so... when I tune on them by watching the S meter, after a
> >>> few
> >>>>>>>> seconds
> >>>>>>>>> the S meter drops off and comes back up and drops off. When I
> >>> connect
> >>>>>> the
> >>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it fade
> >>> on
> >>>>>> the
> >>>>>>>>> calibrator signal.
> >>>>>>>>> 73,
> >>>>>>>>> WW8X
> >>>>>>>>> Joe
> >>>>>>>>>
> >>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
> >>>>>> wrote:
> >>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> >>>>>>>> intermittent
> >>>>>>>>>> connection and not a short to ground. So if signal is weak applied
> >>>>> at
> >>>>>>>> TP-1
> >>>>>>>>>> it
> >>>>>>>>>> points downstream from there. Only place you worked was at L4 and

> >>>>> L41.
> >>>>>>>>>> What is confusing me is --Are you getting good marker signal? Have
> >>>>> you
> >>>>>>>>>> tried it
> >>>>>>>>>> on bands other than 1.9?
> >>>>>>>>>>
> >>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
> >>>>> rewind
> >>>>>>>>> and
> >>>>>>>>>> re-solder sounds good.
> >>>>>>>>>>
> >>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF gain
> >>>>> down
> >>>>>>>>> as
> >>>>>>>>>> volume
> >>>>>>>>>> would be rattling the speaker. Same for any other band. If this is
> >>>>>> true
> >>>>>>>>>> then you
> >>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175) meters.
> >>>>> With
> >>>>>>>>> it
> >>>>>>>>>> on
> >>>>>>>>>> peak the drive for max s-meter reading. If you dont want to reach
> >>>>> for
> >>>>>> AF
> >>>>>>>>>> control
> >>>>>>>>>> to turn down the volume then adequate marker signal is not passing
> >>>>>>>>> L4/L41.
> >>>>>>>>>> Only other components in signal path between TP-1 and L4/L41 are
> >>>>>>>>> coupling
> >>>>>>>>>> caps
> >>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be very
> >>>>> rare
> >>>>>>>>> for
> >>>>>>>>>> any
> >>>>>>>>>> of these to fail.
> >>>>>>>>>>
> >>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> >>> inject
> >>>>>>>>> your
> >>>>>>>>>> marker
> >>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
> >>>>> increases
> >>>>>>>>>> significantly?
> >>>>>>>>>>
> >>>>>>>>>> Terry
> >>>>>>>>>>
> >>>>>>>>>> _____
> >>>>>>>>>> From: Joe Loverti<ww8x.joe@...>

> >>>>>>>>>>
> >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
> >>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >>> receive
> >>>>>>>> problem
> >>>>>>>>>> Terry:
> >>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
> >>> down.
> >>>>>> So,
> >>>>>>>> I
> >>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41 to
> >>>>>>>> Gordon's
> >>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal reading
> >>> at
> >>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did OK
> >>>>>> with
> >>>>>>>> the
> >>>>>>>>>> rewinding. I don't think rewinding it again would make any
> >>>>> difference?
> >>>>>> I
> >>>>>>>> am
> >>>>>>>>>> certainly willing to do that if you think it would be helpful. The
> >>>>> L4
> >>>>>>>> was a
> >>>>>>>>>> replacement Gordon sent me and have no reason to believe it's not
> >>>>>>>> working.
> >>>>>>>>>> I
> >>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
> >>>>> NTE222
> >>>>>>>> and a
> >>>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
> >>> them
> >>>>>> yet.
> >>>>>>>> At
> >>>>>>>>>> this point I think I'll just save them as spares, because as you
> >>>>>> state,
> >>>>>>>> Q1
> >>>>>>>>>> and D2 are good.
> >>>>>>>>>>
> >>>>>>>>>> It was great to hear the receive come back alive when touching the
> >>>>>>>> antenna
> >>>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
> >>> steps
> >>>>>> :□)
> >>>>>>>>>> Thanks,
> >>>>>>>>>> 73
> >>>>>>>>>> WW8X
> >>>>>>>>>> Joe

> >>>>>>>>>>
> >>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...
> >>>>>>>> wrote:
> >>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
> >>>>>>>> stationary
> >>>>>>>>>> plate
> >>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound L41
> >>>>>>>>>> transformer.
> >>>>>>>>>> You are down stream of them. You are coupling signals directly to
> >>>>> the
> >>>>>>>>>> gate
> >>>>>>>>>> of
> >>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe you
> >>>>>>>> replaced
> >>>>>>>>>> both?)
> >>>>>>>>>>
> >>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF board.
> >>> You
> >>>>>>>> will
> >>>>>>>>>> be
> >>>>>>>>>> on
> >>>>>>>>>> "input" side of L4 and L41. If your signal is weak when touching
> >>>>> TP-1
> >>>>>>>> it
> >>>>>>>>>> means
> >>>>>>>>>> something wrong with either L4 and/or L41.
> >>>>>>>>>>
> >>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT on
> >>>>>>>>>> Connector
> >>>>>>>>>> 3 of
> >>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> >>> conductor
> >>>>>>>> of
> >>>>>>>>>> antenna
> >>>>>>>>>> coax. If signal comes and goes you have bad solder joint or bad
> >>>>> foil
> >>>>>>>> at
> >>>>>>>>>> that
> >>>>>>>>>> connector.
> >>>>>>>>>>
> >>>>>>>>>> Use your schematic and keep working your way back to your SO-239
> >>>>>>>>>> connector
> >>>>>>>>>> on
> >>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
> >>> Xverter
> >>>>>>>>>> connector
> >>>>>>>>>> switch , then antenna relay RL-1.
> >>>>>>>>>>
> >>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I

> >>>>> believe
> >>>>>>>> you
> >>>>>>>>>> said it
> >>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4 and
> >>>>> L41
> >>>>>>>> are
> >>>>>>>>>> OK.
> >>>>>>>>>> Terry-K9TW
> >>>>>>>>>>
> >>>>>>>>>> _____
> >>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
> >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>>>>>> problem
> >>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if you've
> >>>>>> been
> >>>>>>>>>> reading
> >>>>>>>>>> the threads related to my adventures with my low receive problem,
> >>> I
> >>>>>>>>>> discovered
> >>>>>>>>>> an important clue.
> >>>>>>>>>>
> >>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
> >>> lugs
> >>>>> on
> >>>>>>>>>> variable
> >>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the same
> >>>>>> test
> >>>>>>>>>> lead
> >>>>>>>>>> to
> >>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
> >>>>> signals
> >>>>>>>>>> jump
> >>>>>>>>>> up
> >>>>>>>>>> very loud with normal noise and S meter readings at S9 and above
> >>> --
> >>>>>>>> just
> >>>>>>>>>> as
> >>>>>>>>>> the
> >>>>>>>>>> set used to have before my problems started. Here's the curious
> >>>>>> thing:
> >>>>>>>>>> When
> >>>>>>>>>> I
> >>>>>>>>>> connect the same test lead that's connected to the antenna to the
> >>>>>>>> center
> >>>>>>>>>> of
> >>>>>>>>>> the
> >>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop way

> >>>>> off
> >>>>>>>> as
> >>>>>>>>>> if
> >>>>>>>>>>> there's hardly an antenna connected. So in addition to having to
> >>>>>>>> rewind
> >>>>>>>>>> the
> >>>>>>>>>>> L41
> >>>>>>>>>>> (which I've already done), there apparently is also something
> >>> going
> >>>>>> on
> >>>>>>>>>> with
> >>>>>>>>>>> my
> >>>>>>>>>>> receive. I think I'm on to something. What do you think?
> >>>>>>>>>>> Thanks,
> >>>>>>>>>>> WW8X
> >>>>>>>>>>> Joe
> >>>>>>>>>>>
> >>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>
> >>>>>>>>>> ---
> >>>>>>>>>>
> >>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>>>>>
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> >>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>
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> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>> ------------------------------------
> >>>>>>>
> >>>>>>> Yahoo! Groups Links
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>> --
> >>>>>> E-Mail Disclaimer This communication and any documents, files, or
> >>>>> previous
> >>>>>> e-mail messages attached to it constitute an electronic communication
> >>>>> within
> >>>>>> the scope of the Electronic Communication Privacy Act, 18 USCA
> >>> 2510.This
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> >>>>>> information intended for the sole use of the intended recipient(s).
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> >>>>>> prohibited under 18 USCA 2511. Any review, reliance, or distribution
> >>> by
> >>>>>> others or forwarding without expressed permission is strictly
> >>> prohibited.
> >>>>> If
> >>>>>> you are not the intended recipient, please contact the sender and
> >>> delete
> >>>>> all
> >>>>>> copies.
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> >>>>>> Yahoo! Groups Links
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> >>>>> ------------------------------------
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> >>>>> Yahoo! Groups Links

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> >>>> ---
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> >>>> Yahoo! Groups Links
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> >>> communication may contain non-public, confidential, or legally privileged
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> >>> Yahoo! Groups Links
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>

31770. Re: [TS-520_820_530_830] TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 02:32:32 UTC
From: Joe Loverti
Topic: 31735 Message: 31770

On Wed, Jun 8, 2011 at 9:27 PM, <n6wk@...> wrote:

> Joe,
> one pother question, You did wind L41 correctly as far as primary and
> secondary pins on the coil... correct?
> The primary also is wound on the bottom 1/3 of the bobbin while the
> secondary is wound on the top 2/3 of the bobbin
>
> Gordon
>
>
>
> On 6/8/2011 6:23 PM, n6wk@... wrote:
> > No problem Joe,
> > Been there and Done that LOL
> >
> > Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
> > even L3. look at the schematic and you can easily follow the circuit.
> > It could also be one of the caps in that associated circuit, such as C1,
> > C3 or C4 but I doubt that.
> > I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> > me is that the marker signal seems to be good.
> > Are all bands low? Maybe you need to do the Antenna and RFcoil
> > adjustments for all bands.
> >
> > Gordon
> >
> >
> > On 6/8/2011 5:53 PM, Joe Loverti wrote:
> >> I truly am sorry... still messed it up.
> >> TP-1 is less than S7
> >> *TP-2* moves to S3 then drops to S0
> >> TP-4 is 20+
> >> VC-1 is 20+
> >> SO239 is less than S7
> >> One of those nights :?(
> >> WW8X
> >> Joe
> >>
> >>
> >> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...>
> wrote:
> >>
> >>> I got messed up... darn it.
> >>> TP-1 is less than S7

> >>> *TP-2* moves to S3 then drops to S0
> >>> TP-4 is 20+
> >>> VC-1 is 20+
> >>> SO239 is 20+
> >>>
> >>> Sorry about that...
> >>> WW8X
> >>> Joe
> >>>
> >>>
> >>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
> >>>
> >>>> Ok, in that case, either there is a problem with L-41 or L4 needs to
> be
> >>>> adjusted
> >>>>
> >>>> Gordon
> >>>>
> >>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> >>>>> Correct Terry...
> >>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> close
> >>>> as I
> >>>>> can get it reading from a BK frequency counter) are:
> >>>>> SO239 is slightly less than S7
> >>>>> TP-1 is slightly less than S7
> >>>>> VC-1 is 20 over S9
> >>>>> TP-2 is 20 over S9
> >>>>> Thanks for the catch.
> >>>>>
> >>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
> >>>> wrote:
> >>>>>> Joe-I think you meant VC-1? Terry
> >>>>>>
> >>>>>>
> >>>>>> _____
> >>>>>> From: Joe Loverti<ww8x.joe@gmail.com>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
> >>>>>>
> >>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> >>>> problem
> >>>>>> Gordon,
> >>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> close
> >>>> as I
> >>>>>> can get it reading from a BK frequency counter) are:
> >>>>>> SO239 is slightly less than S7
> >>>>>> TP-1 is slightly less than S7
> >>>>>> TC-1 is 20 over S9

> >>>>>> TP-2 is 20 over S9
> >>>>>>
> >>>>>> WW8X
> >>>>>>
> >>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
> >>>>>>
> >>>>>>> Joe,
> >>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a
> reading
> >>>> on
> >>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board
> and
> >>>>>>> again look at the S-meter. tell me what readings you get.
> >>>>>>> they should be virtually identical.
> >>>>>>> Once we have that info, we can move on
> >>>>>>>
> >>>>>>> Gordon
> >>>>>>>
> >>>>>>>
> >>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> >>>>>>>> Thanks Mike and Terry...
> >>>>>>>> You guys have given me plenty of time and advice -- I appreciate
> it
> >>>>>> very
> >>>>>>>> much.
> >>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
> >>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html)
> which
> >>>> may
> >>>>>>> work
> >>>>>>>> also, so I can try what you are suggesting. As far as marker
> signals
> >>>>>> go:
> >>>>>>> I
> >>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41 for
> a
> >>>>>>> peak,
> >>>>>>>> but at 14.175 mhz, the marker signal is only S7.
> >>>>>>>>
> >>>>>>>> What ever took out the L41 (remember I said the secondary winding
> was
> >>>>>>> open
> >>>>>>>> -- a inch of the wire was missing, but the windings were intact
> and
> >>>> not
> >>>>>>>> burnt), probably also took out something else, which is continuing
> to
> >>>>>> be
> >>>>>>> a
> >>>>>>>> problem. Before rewinding the L41, I had virtually no signal --

> after
> >>>>>>>> replacing L41, the signal came back and is now weak. Only when I
> put
> >>>>>> the
> >>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
> >>>>>> properly
> >>>>>>>> operating receiver.
> >>>>>>>>
> >>>>>>>> Wish me luck and thanks again.
> >>>>>>>>
> >>>>>>>> 73,
> >>>>>>>> WW8X
> >>>>>>>> Joe
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>
> >>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >>>>>>>>
> >>>>>>>>> One more thing. If the Marker signal is strong, S9 or better,
> then
> >>>> L3
> >>>>>>> and
> >>>>>>>>> L4 are more than likely not the source of weak receive signals.
> If
> >>>> L3
> >>>>>>> and/or
> >>>>>>>>> L4 were the source of the problem the Marker signal would be weak
> >>>> just
> >>>>>>> like
> >>>>>>>>> the incoming signals are.
> >>>>>>>>>
> >>>>>>>>> 73s
> >>>>>>>>> Mike
> >>>>>>>>> W5RKL
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> >>>>>>>>> problem
> >>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted
> my
> >>>>>>>>> knowledge/experience with his problem. He does not have the test
> >>>>>>> equipment
> >>>>>>>>> necessary to use Level diagrams so is using antenna coax to
> inject
> >>>>>>> signal.

> >>>>>>>>> He is
> >>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at
> VC-1.
> >>>>>> He
> >>>>>>> is
> >>>>>>>>> not
> >>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is
> >>>> good.
> >>>>>> I
> >>>>>>> am
> >>>>>>>>> not
> >>>>>>>>> sure what the components are after TP-1. They appear to make up
> a
> >>>>>>>>> band-pass
> >>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of these
> >>>>>>> failing
> >>>>>>>>> open or
> >>>>>>>>> shunting signal to ground. Appreciate it if you guys could add
> to
> >>>>>> what
> >>>>>>> I
> >>>>>>>>> have
> >>>>>>>>> suggested and/or take off and run with this one. 73s Terry
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> >>>>>>>>> problem
> >>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide
> open
> >>>> I
> >>>>>>> would
> >>>>>>>>> say
> >>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on
> 80,
> >>>>>> 40,
> >>>>>>> 20
> >>>>>>>>> with
> >>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher
> frequencies.
> >>>>>> In
> >>>>>>> all
> >>>>>>>>> cases
> >>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
> >>>>>> peaked.
> >>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
> >>>> Shorted

> >>>>>> or
> >>>>>>>>> Shunted
> >>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your
> symptoms)
> >>>>>>>>>>
> >>>>>>>>>> 2. We have determined that signal path from Marker to Speaker is
> >>>>>>>>> good/normal.
> >>>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
> >>>>>>> (including
> >>>>>>>>> AGC
> >>>>>>>>>> action?)
> >>>>>>>>>>
> >>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
> >>>>>>> significantly
> >>>>>>>>> weaker
> >>>>>>>>>> output. What components and what failure mode are in path from
> TP-1
> >>>>>>> to
> >>>>>>>>> VC-1?
> >>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker
> is
> >>>>>>> good
> >>>>>>>>>> therefore L4/L41 are good.
> >>>>>>>>>>
> >>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> >>>> weaker
> >>>>>>> than
> >>>>>>>>> when
> >>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
> >>>> believe
> >>>>>>> are
> >>>>>>>>>> band-pass components (probably broadcast band?) are the only
> >>>>>>> components
> >>>>>>> in
> >>>>>>>>> path
> >>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad.
> These
> >>>>>>>>> components
> >>>>>>>>>> are not in the circuit when you use the Marker.
> >>>>>>>>>>
> >>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
> >>>> signal
> >>>>>>> to
> >>>>>>>>> ground
> >>>>>>>>>> at TP-1?
> >>>>>>>>>>
> >>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> >>>> signal
> >>>>>>> to
> >>>>>>>>> TP-1?

> >>>>>>>>>> If signal comes up to near same as when touched at VC-1 then you
> >>>> know
> >>>>>>>>> coupling
> >>>>>>>>>> caps and band-pass filter components are all good. The fault
> then
> >>>> has
> >>>>>>> to
> >>>>>>>>> be
> >>>>>>>>>> something shunting the signal to ground upstream of TP-1. If
> signal
> >>>>>>> does
> >>>>>>>>> not
> >>>>>>>>>> come up, then coupling caps, bandpass filter components are
> >>>> shunting
> >>>>>>>>> signal to
> >>>>>>>>>> ground.
> >>>>>>>>>>
> >>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal failure
> >>>> here
> >>>>>>> is
> >>>>>>>>> bad
> >>>>>>>>>> contacts which could cause weak and/or intermittent signal with
> >>>> coax
> >>>>>>>>> connected
> >>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant
> Relay
> >>>>>> RL-1
> >>>>>>> to
> >>>>>>>>> shunt
> >>>>>>>>>> signal to ground and affect any signal applied at TP-1.
> >>>>>>>>>>
> >>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
> >>>>>> report
> >>>>>>>>> back.
> >>>>>>>>>> 73s Terry
> >>>>>>>>>>
> >>>>>>>>>> _____
> >>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> >>>>>>>>> problem
> >>>>>>>>>> Terry:
> >>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
> >>>> reading.
> >>>>>>> Quite
> >>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> >>>>>> speaker.
> >>>>>>>>> I'll

> >>>>>>>>>> try your other suggestions when I get a chance later on this
> >>>> evening.
> >>>>>> I
> >>>>>>>>>> probably should think about checking the relay as Dave
> suggested.
> >>>>>>>>>>
> >>>>>>>>>> One other thing that may be related, is that when I'm on a
> strong
> >>>>>>> signal
> >>>>>>>>> the
> >>>>>>>>>> S-meter fades. In other words, as it is now the strongest
> signals
> >>>> are
> >>>>>>>>> around
> >>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after a
> >>>> few
> >>>>>>>>> seconds
> >>>>>>>>>> the S meter drops off and comes back up and drops off. When I
> >>>> connect
> >>>>>>> the
> >>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it
> fade
> >>>> on
> >>>>>>> the
> >>>>>>>>>> calibrator signal.
> >>>>>>>>>> 73,
> >>>>>>>>>> WW8X
> >>>>>>>>>> Joe
> >>>>>>>>>>
> >>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<
> wagstw46@...>
> >>>>>>> wrote:
> >>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> >>>>>>>>> intermittent
> >>>>>>>>>> connection and not a short to ground. So if signal is weak
> applied
> >>>>>> at
> >>>>>>>>> TP-1
> >>>>>>>>>> it
> >>>>>>>>>> points downstream from there. Only place you worked was at L4
> and
> >>>>>> L41.
> >>>>>>>>>> What is confusing me is --Are you getting good marker signal?
> Have
> >>>>>> you
> >>>>>>>>>> tried it
> >>>>>>>>>> on bands other than 1.9?
> >>>>>>>>>>
> >>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
> >>>>>> rewind

> >>>>>>>>> and
> >>>>>>>>>> re-solder sounds good.
> >>>>>>>>>>
> >>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF
> gain
> >>>>>> down
> >>>>>>>>> as
> >>>>>>>>>> volume
> >>>>>>>>>> would be rattling the speaker. Same for any other band. If this
> is
> >>>>>>> true
> >>>>>>>>>> then you
> >>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175)
> meters.
> >>>>>> With
> >>>>>>>>> it
> >>>>>>>>>> on
> >>>>>>>>>> peak the drive for max s-meter reading. If you dont want to
> reach
> >>>>>> for
> >>>>>>> AF
> >>>>>>>>>> control
> >>>>>>>>>> to turn down the volume then adequate marker signal is not
> passing
> >>>>>>>>> L4/L41.
> >>>>>>>>>> Only other components in signal path between TP-1 and L4/L41
> are
> >>>>>>>>> coupling
> >>>>>>>>>> caps
> >>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be
> very
> >>>>>> rare
> >>>>>>>>> for
> >>>>>>>>>> any
> >>>>>>>>>> of these to fail.
> >>>>>>>>>>
> >>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> >>>> inject
> >>>>>>>>> your
> >>>>>>>>>> marker
> >>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
> >>>>>> increases
> >>>>>>>>>> significantly?
> >>>>>>>>>>
> >>>>>>>>>> Terry
> >>>>>>>>>>
> >>>>>>>>>> _____
> >>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>>>>
> >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com

> >>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
> >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >>>> receive
> >>>>>>>>> problem
> >>>>>>>>>>> Terry:
> >>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
> >>>> down.
> >>>>>>> So,
> >>>>>>>>> I
> >>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the L41
> to
> >>>>>>>>> Gordon's
> >>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal
> reading
> >>>> at
> >>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I did
> OK
> >>>>>>> with
> >>>>>>>>> the
> >>>>>>>>>>> rewinding. I don't think rewinding it again would make any
> >>>>>> difference?
> >>>>>>> I
> >>>>>>>>> am
> >>>>>>>>>>> certainly willing to do that if you think it would be helpful.
> The
> >>>>>> L4
> >>>>>>>>> was a
> >>>>>>>>>>> replacement Gordon sent me and have no reason to believe it's
> not
> >>>>>>>>> working.
> >>>>>>>>>>> I
> >>>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
> >>>>>> NTE222
> >>>>>>>>> and a
> >>>>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
> >>>> them
> >>>>>>>>> yet.
> >>>>>>>>>>> At
> >>>>>>>>>>> this point I think I'll just save them as spares, because as
> you
> >>>>>>> state,
> >>>>>>>>> Q1
> >>>>>>>>>>> and D2 are good.
> >>>>>>>>>>>
> >>>>>>>>>>> It was great to hear the receive come back alive when touching
> the
> >>>>>>>>> antenna
> >>>>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
> >>>> steps
> >>>>>>> :?)

> >>>>>>>>>>> Thanks,
> >>>>>>>>>>> 73
> >>>>>>>>>>> WW8X
> >>>>>>>>>>> Joe
> >>>>>>>>>>>
> >>>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<
> wagstw46@...
> >>>>>>>>> wrote:
> >>>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
> >>>>>>>>> stationary
> >>>>>>>>>>>> plate
> >>>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound
> L41
> >>>>>>>>>>>> transformer.
> >>>>>>>>>>>> You are down stream of them. You are coupling signals directly
> to
> >>>>>> the
> >>>>>>>>>>> gate
> >>>>>>>>>>>> of
> >>>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe
> you
> >>>>>>>>> replaced
> >>>>>>>>>>>> both?)
> >>>>>>>>>>>>
> >>>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF
> board.
> >>>> You
> >>>>>>>>> will
> >>>>>>>>>>> be
> >>>>>>>>>>>> on
> >>>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when
> touching
> >>>>>> TP-1
> >>>>>>>>> it
> >>>>>>>>>>>> means
> >>>>>>>>>>>> something wrong with either L4 and/or L41.
> >>>>>>>>>>>>
> >>>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT
> on
> >>>>>>>>>>> Connector
> >>>>>>>>>>>> 3 of
> >>>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> >>>> conductor
> >>>>>>>>> of
> >>>>>>>>>>>> antenna
> >>>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or
> bad
> >>>>>> foil
> >>>>>>>>> at
> >>>>>>>>>>>> that

> >>>>>>>>>>>> connector.
> >>>>>>>>>>>>
> >>>>>>>>>>>> Use your schematic and keep working your way back to your
> SO-239
> >>>>>>>>>>>> connector
> >>>>>>>>>>>> on
> >>>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
> >>>> Xverter
> >>>>>>>>>>>> connector
> >>>>>>>>>>>> switch , then antenna relay RL-1.
> >>>>>>>>>>>>
> >>>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
> >>>>>> believe
> >>>>>>>>> you
> >>>>>>>>>>>> said it
> >>>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4
> and
> >>>>>> L41
> >>>>>>>>> are
> >>>>>>>>>>>> OK.
> >>>>>>>>>>>> Terry-K9TW
> >>>>>>>>>>>>
> >>>>>>>>>>>> _____
> >>>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
> >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low
> receive
> >>>>>>>>> problem
> >>>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if
> you've
> >>>>>>> been
> >>>>>>>>>>>> reading
> >>>>>>>>>>>> the threads related to my adventures with my low receive
> problem,
> >>>> I
> >>>>>>>>>>>> discovered
> >>>>>>>>>>>> an important clue.
> >>>>>>>>>>>>
> >>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
> >>>> lugs
> >>>>>> on
> >>>>>>>>>>>> variable
> >>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the
> same
> >>>>>>> test
> >>>>>>>>>>>> lead
> >>>>>>>>>>>> to
> >>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
> >>>>>> signals

> >>>>>>>>>>> jump
> >>>>>>>>>>> up
> >>>>>>>>>>> very loud with normal noise and S meter readings at S9 and
> above
> >>>> --
> >>>>>>>>> just
> >>>>>>>>>>> as
> >>>>>>>>>>> the
> >>>>>>>>>>> set used to have before my problems started. Here's the
> curious
> >>>>>>> thing:
> >>>>>>>>>>> When
> >>>>>>>>>>> I
> >>>>>>>>>>> connect the same test lead that's connected to the antenna to
> the
> >>>>>>>>> center
> >>>>>>>>>>> of
> >>>>>>>>>>> the
> >>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop
> way
> >>>>>> off
> >>>>>>>>> as
> >>>>>>>>>>> if
> >>>>>>>>>>> there's hardly an antenna connected. So in addition to having
> to
> >>>>>>>>> rewind
> >>>>>>>>>>> the
> >>>>>>>>>>> L41
> >>>>>>>>>>> (which I've already done), there apparently is also something
> >>>> going
> >>>>>>> on
> >>>>>>>>>>> with
> >>>>>>>>>>> my
> >>>>>>>>>>> receive. I think I'm on to something. What do you think?
> >>>>>>>>>>> Thanks,
> >>>>>>>>>>> WW8X
> >>>>>>>>>>> Joe
> >>>>>>>>>>>
> >>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>
> >>>>>>>>>>> ------------------------------------
> >>>>>>>>>>>
> >>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>
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> >>>>>>>>>>> Yahoo! Groups Links
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> >>>>>>>>>
> >>>>>>>>> ------------------------------------
> >>>>>>>>>
> >>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>
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> >>>>>>>>>
> >>>>>>>>>
> >>>>>>> --
> >>>>>>> E-Mail Disclaimer This communication and any documents, files, or
> >>>>>> previous
> >>>>>>> e-mail messages attached to it constitute an electronic
> communication
> >>>>>> within
> >>>>>>> the scope of the Electronic Communication Privacy Act, 18 USCA
> >>>> 2510.This
> >>>>>>> communication may contain non-public, confidential, or legally
> >>>> privileged
> >>>>>>> information intended for the sole use of the intended recipient(s).
> >>>> The
> >>>>>>> unlawful interception, use or disclosure of such information is
> >>>> strictly
> >>>>>>> prohibited under 18 USCA 2511. Any review, reliance, or
> distribution
> >>>> by
> >>>>>>> others or forwarding without expressed permission is strictly

> >>>> prohibited.
> >>>>>> If
> >>>>>>> you are not the intended recipient, please contact the sender and
> >>>> delete
> >>>>>> all
> >>>>>>> copies.
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>> ------------------------------------
> >>>>>>>
> >>>>>>> Yahoo! Groups Links
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>>>
> >>>>>> [Non-text portions of this message have been removed]
> >>>>>>
> >>>>>> ----------------------------------
> >>>>>>
> >>>>>> Yahoo! Groups Links
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> >>>>>> [Non-text portions of this message have been removed]
> >>>>>>
> >>>>>>
> >>>>>>
> >>>>> [Non-text portions of this message have been removed]
> >>>>>
> >>>>>
> >>>>>
> >>>>> ----------------------------------
> >>>>>
> >>>>> Yahoo! Groups Links
> >>>>>
> >>>>>
> >>>>>
> >>>>>
> >>>> --
> >>>> E-Mail Disclaimer This communication and any documents, files, or
> previous
> >>>> e-mail messages attached to it constitute an electronic communication
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> >>>> the scope of the Electronic Communication Privacy Act, 18 USCA
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> >>>> copies.
> >>>>
> >>>>
> >>>>
> >>>> ------------------------------------
> >>>>
> >>>> Yahoo! Groups Links
> >>>>
> >>>>
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> >>>>
> >> [Non-text portions of this message have been removed]
> >>
> >>
> >>
> >> ------------------------------------
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> you are not the intended recipient, please contact the sender and delete all
> copies.
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

31771. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 02:47:36 UTC
From: Joe Loverti
Topic: 31735 Message: 31771

The results of the signal injection seem to vary somewhat... maybe it's that old generator? Anyway, I also took a reading with the signal injected at D1 as suggested by Terry. Here's my readings:
SO239 = S7
TP-1 = S7
VC-1 = 20+
TP-4 = 15+
TP-2 = S3
D1 = S0 to S3
Connecting an antenna to VC-1 makes the receiver come alive like it was new!

As to the L41: I wound the primary on the lower third and the secondary on the upper two thirds. There was some overlap of windings but not too much. I noticed when I was done with the windings the ends of the wires crisscrossed over each other. Like the beginning and end of the primary and the beginning and end of the secondary crossed before going to their respective pins... I wondered about that at the time. Improper technique?

I don't have a problem with redoing it. The second time should be easier since I know how to properly install the band switch shaft and now not intimidated by tearing out the RF board as I was the first time. I just want to get this baby cooking once again. It really is a beautiful rig!

Based on what you guys have said... looks like I need redo the L41.

Thanks for your time...
Regards,
WW8X
Joe

On Wed, Jun 8, 2011 at 10:04 PM, Terry Wagoner <wagstw46@...> wrote:

>
>
> Gordon--Good marker thru me off as well. Since L4/L41 are common path for
> marker and RF signals.
>
> How about injecting signal at Diode D1 by Marker pin. It is near TP2 and
> cathode end of diode is accessible. If signal is 20+ injecting here it cant
> be L4/L41--Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
> >
> > No problem Joe,
> > Been there and Done that LOL

> >
> > Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
> > even L3. look at the schematic and you can easily follow the circuit.
> > It could also be one of the caps in that associated circuit, such as C1,
> > C3 or C4 but I doubt that.
> > I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> > me is that the marker signal seems to be good.
> > Are all bands low? Maybe you need to do the Antenna and RFcoil
> > adjustments for all bands.
> >
> > Gordon
> >
> >
> > On 6/8/2011 5:53 PM, Joe Loverti wrote:
> > > I truly am sorry... still messed it up.
> > > TP-1 is less than S7
> > > *TP-2* moves to S3 then drops to S0
> > > TP-4 is 20+
> > > VC-1 is 20+
> > > SO239 is less than S7
> > > One of those nights :?(
> > > WW8X
> > > Joe
> > >
> > >
> > > On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
> > >
> > >> I got messed up... darn it.
> > >> TP-1 is less than S7
> > >> *TP-2* moves to S3 then drops to S0
> > >> TP-4 is 20+
> > >> VC-1 is 20+
> > >> SO239 is 20+
> > >>
> > >> Sorry about that...
> > >> WW8X
> > >> Joe
> > >>
> > >>
> > >> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
> > >>
> > >>> Ok, in that case, either there is a problem with L-41 or L4 needs to
> be
> > >>> adjusted
> > >>>
> > >>> Gordon
> > >>>
> > >>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> > >>>> Correct Terry...
> > >>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as

> close
> > >>> as I
> > >>>> can get it reading from a BK frequency counter) are:
> > >>>> SO239 is slightly less than S7
> > >>>> TP-1 is slightly less than S7
> > >>>> VC-1 is 20 over S9
> > >>>> TP-2 is 20 over S9
> > >>>> Thanks for the catch.
> > >>>>
> > >>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
>
> > >>> wrote:
> > >>>>> Joe-I think you meant VC-1? Terry
> > >>>>>
> > >>>>>
> > >>>>> _____
> > >>>>> From: Joe Loverti<ww8x.joe@...>
>
> > >>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>> Sent: Wed, June 8, 2011 8:22:16 PM
> > >>>>>
> > >>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
> > >>> problem
> > >>>>> Gordon,
> > >>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> close
> > >>> as I
> > >>>>> can get it reading from a BK frequency counter) are:
> > >>>>> SO239 is slightly less than S7
> > >>>>> TP-1 is slightly less than S7
> > >>>>> TC-1 is 20 over S9
> > >>>>> TP-2 is 20 over S9
> > >>>>>
> > >>>>> WW8X
> > >>>>>
> > >>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
> > >>>>>
> > >>>>>> Joe,
> > >>>>>> Insert a 14.175 signal at the center of the SO-239 and take a
> reading
> > >>> on
> > >>>>>> the S-meter. then insert the same signal at TP-1 on the RF board
> and
> > >>>>>> again look at the S-meter. tell me what readings you get.
> > >>>>>> they should be virtually identical.
> > >>>>>> Once we have that info, we can move on
> > >>>>>>
> > >>>>>> Gordon
> > >>>>>>
> > >>>>>>

> > >>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> > >>>>>>> Thanks Mike and Terry...
> > >>>>>>> You guys have given me plenty of time and advice -- I appreciate
> it
> > >>>>> very
> > >>>>>>> much.
> > >>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
> > >>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html)
> which
> > >>> may
> > >>>>>> work
> > >>>>>>> also, so I can try what you are suggesting. As far as marker
> signals
> > >>>>> go:
> > >>>>>> I
> > >>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41
> for a
> > >>>>>> peak,
> > >>>>>>> but at 14.175 mhz, the marker signal is only S7.
> > >>>>>>>
> > >>>>>>> What ever took out the L41 (remember I said the secondary winding
> was
> > >>>>>> open
> > >>>>>>> -- a inch of the wire was missing, but the windings were intact
> and
> > >>> not
> > >>>>>>> burnt), probably also took out something else, which is
> continuing to
> > >>>>> be
> > >>>>>> a
> > >>>>>>> problem. Before rewinding the L41, I had virtually no signal --
> after
> > >>>>>>> replacing L41, the signal came back and is now weak. Only when I
> put
> > >>>>> the
> > >>>>>>> antenna input at VC-1 does the signal come up to sounding like a
> > >>>>> properly
> > >>>>>>> operating receiver.
> > >>>>>>>
> > >>>>>>> Wish me luck and thanks again.
> > >>>>>>>
> > >>>>>>> 73,
> > >>>>>>> WW8X
> > >>>>>>> Joe
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> > >>>>>>>
> > >>>>>>>> One more thing. If the Marker signal is strong, S9 or better,

> then
> > >>> L3
> > >>>>>> and
> > >>>>>>>> L4 are more than likely not the source of weak receive signals.
> If
> > >>> L3
> > >>>>>> and/or
> > >>>>>>>> L4 were the source of the problem the Marker signal would be
> weak
> > >>> just
> > >>>>>> like
> > >>>>>>>> the incoming signals are.
> > >>>>>>>>
> > >>>>>>>> 73s
> > >>>>>>>> Mike
> > >>>>>>>> W5RKL
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> _____
> > >>>>>>>>> From: Terry Wagoner<wagstw46@...>
>
> > >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> > >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> > >>>>>>>> problem
> > >>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted
> my
> > >>>>>>>>> knowledge/experience with his problem. He does not have the
> test
> > >>>>>> equipment
> > >>>>>>>>> necessary to use Level diagrams so is using antenna coax to
> inject
> > >>>>>> signal.
> > >>>>>>>> He is
> > >>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at
> VC-1.
> > >>>>> He
> > >>>>>> is
> > >>>>>>>> not
> > >>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is
> > >>> good.
> > >>>>> I
> > >>>>>> am
> > >>>>>>>> not
> > >>>>>>>>> sure what the components are after TP-1. They appear to make up
> a
> > >>>>>>>> band-pass
> > >>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of
> these

> > >>>>>> failing
> > >>>>>>>> open or
> > >>>>>>>>> shunting signal to ground. Appreciate it if you guys could add
> to
> > >>>>> what
> > >>>>>> I
> > >>>>>>>> have
> > >>>>>>>>> suggested and/or take off and run with this one. 73s Terry
> > >>>>>>>>>
> > >>>>>>>>> _____
> > >>>>>>>>> From: Terry Wagoner<wagstw46@...>
>
> > >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> > >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> > >>>>>>>> problem
> > >>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide
> open
> > >>> I
> > >>>>>> would
> > >>>>>>>> say
> > >>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on
> 80,
> > >>>>> 40,
> > >>>>>> 20
> > >>>>>>>> with
> > >>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher
> frequencies.
> > >>>>> In
> > >>>>>> all
> > >>>>>>>> cases
> > >>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
> > >>>>> peaked.
> > >>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
> > >>> Shorted
> > >>>>> or
> > >>>>>>>> Shunted
> > >>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your
> symptoms)
> > >>>>>>>>>
> > >>>>>>>>> 2. We have determined that signal path from Marker to Speaker
> is
> > >>>>>>>> good/normal.
> > >>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
> > >>>>>> (including
> > >>>>>>>> AGC
> > >>>>>>>>> action?)
> > >>>>>>>>>
> > >>>>>>>>> 4. We have determined that signal injected at TP-1 produces

> > >>>>>> significantly
> > >>>>>>>> weaker
> > >>>>>>>>> output. What components and what failure mode are in path from
> TP-1
> > >>>>> to
> > >>>>>>>> VC-1?
> > >>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker
> is
> > >>>>> good
> > >>>>>>>>> therefore L4/L41 are good.
> > >>>>>>>>>
> > >>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> > >>> weaker
> > >>>>>>> than
> > >>>>>>>> when
> > >>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
> > >>> believe
> > >>>>>>> are
> > >>>>>>>>> band-pass components (probably broadcast band?) are the only
> > >>>>> components
> > >>>>>>> in
> > >>>>>>>> path
> > >>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad.
> These
> > >>>>>>>> components
> > >>>>>>>>> are not in the circuit when you use the Marker.
> > >>>>>>>>>
> > >>>>>>>>> 7. So, is it possible that something is shunting/shorting the
> > >>> signal
> > >>>>>>> to
> > >>>>>>>> ground
> > >>>>>>>>> at TP-1?
> > >>>>>>>>>
> > >>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> > >>> signal
> > >>>>>>> to
> > >>>>>>>> TP-1?
> > >>>>>>>>> If signal comes up to near same as when touched at VC-1 then
> you
> > >>> know
> > >>>>>>>> coupling
> > >>>>>>>>> caps and band-pass filter components are all good. The fault
> then
> > >>> has
> > >>>>>>> to
> > >>>>>>>> be
> > >>>>>>>>> something shunting the signal to ground upstream of TP-1. If
> signal
> > >>>>>>> does
> > >>>>>>>> not

> > >>>>>>>>> come up, then coupling caps, bandpass filter components are
> > >>> shunting
> > >>>>>>>> signal to
> > >>>>>>>>> ground.
> > >>>>>>>>>
> > >>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal
> failure
> > >>> here
> > >>>>>> is
> > >>>>>>>> bad
> > >>>>>>>>> contacts which could cause weak and/or intermittent signal with
> > >>> coax
> > >>>>>>>> connected
> > >>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant
> Relay
> > >>>>> RL-1
> > >>>>>> to
> > >>>>>>>> shunt
> > >>>>>>>>> signal to ground and affect any signal applied at TP-1.
> > >>>>>>>>>
> > >>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
> > >>>>> report
> > >>>>>>>> back.
> > >>>>>>>>> 73s Terry
> > >>>>>>>>>
> > >>>>>>>>> _____
> > >>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>
> > >>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> > >>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> > >>>>>>>> problem
> > >>>>>>>>> Terry:
> > >>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
> > >>> reading.
> > >>>>>> Quite
> > >>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> > >>>>> speaker.
> > >>>>>>>> I'll
> > >>>>>>>>> try your other suggestions when I get a chance later on this
> > >>> evening.
> > >>>>> I
> > >>>>>>>>> probably should think about checking the relay as Dave
> suggested.
> > >>>>>>>>>
> > >>>>>>>>> One other thing that may be related, is that when I'm on a
> strong
> > >>>>>> signal
> > >>>>>>>> the

> > >>>>>>>>> S-meter fades. In other words, as it is now the strongest
> signals
> > >>> are
> > >>>>>>>> around
> > >>>>>>>>> S7 or so... when I tune on them by watching the S meter, after
> a
> > >>> few
> > >>>>>>>> seconds
> > >>>>>>>>> the S meter drops off and comes back up and drops off. When I
> > >>> connect
> > >>>>>> the
> > >>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it
> fade
> > >>> on
> > >>>>>> the
> > >>>>>>>>> calibrator signal.
> > >>>>>>>>> 73,
> > >>>>>>>>> WW8X
> > >>>>>>>>> Joe
> > >>>>>>>>>
> > >>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>
> > >>>>>> wrote:
> > >>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> > >>>>>>>> intermittent
> > >>>>>>>>>> connection and not a short to ground. So if signal is weak
> applied
> > >>>>> at
> > >>>>>>>>> TP-1
> > >>>>>>>>>> it
> > >>>>>>>>>> points downstream from there. Only place you worked was at L4
> and
> > >>>>> L41.
> > >>>>>>>>>> What is confusing me is --Are you getting good marker signal?
> Have
> > >>>>> you
> > >>>>>>>>>> tried it
> > >>>>>>>>>> on bands other than 1.9?
> > >>>>>>>>>>
> > >>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
> > >>>>> rewind
> > >>>>>>>>> and
> > >>>>>>>>>> re-solder sounds good.
> > >>>>>>>>>>
> > >>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF
> gain
> > >>>>> down
> > >>>>>>>>> as
> > >>>>>>>>>> volume
> > >>>>>>>>>> would be rattling the speaker. Same for any other band. If

> this is
> > >>>>>> true
> > >>>>>>>>>> then you
> > >>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175)
> meters.
> > >>>>> With
> > >>>>>>>> it
> > >>>>>>>>>> on
> > >>>>>>>>>> peak the drive for max s-meter reading. If you dont want to
> reach
> > >>>>> for
> > >>>>>> AF
> > >>>>>>>>>> control
> > >>>>>>>>>> to turn down the volume then adequate marker signal is not
> passing
> > >>>>>>> L4/L41.
> > >>>>>>>>>> Only other components in signal path between TP-1 and L4/L41
> are
> > >>>>>>> coupling
> > >>>>>>>>>> caps
> > >>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be
> very
> > >>>>> rare
> > >>>>>>> for
> > >>>>>>>>>> any
> > >>>>>>>>>> of these to fail.
> > >>>>>>>>>>
> > >>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> > >>> inject
> > >>>>>>> your
> > >>>>>>>>>> marker
> > >>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
> > >>>>> increases
> > >>>>>>>>>> significantly?
> > >>>>>>>>>>
> > >>>>>>>>>> Terry
> > >>>>>>>>>>
> > >>>>>>>>>> _____
> > >>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>
> > >>>>>>>>>>
> > >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
> > >>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > >>> receive
> > >>>>>>> problem
> > >>>>>>>>>> Terry:
> > >>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way
> > >>> down.
> > >>>>>>> So,

> > >>>>>>>> I
> > >>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the
> L41 to
> > >>>>>>>> Gordon's
> > >>>>>>>>> suggestion and was able to get a 20+ db calibrator signal
> reading
> > >>> at
> > >>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I
> did OK
> > >>>>>> with
> > >>>>>>>> the
> > >>>>>>>>> rewinding. I don't think rewinding it again would make any
> > >>>>> difference?
> > >>>>>> I
> > >>>>>>>> am
> > >>>>>>>>> certainly willing to do that if you think it would be helpful.
> The
> > >>>>> L4
> > >>>>>>>> was a
> > >>>>>>>>> replacement Gordon sent me and have no reason to believe it's
> not
> > >>>>>>>> working.
> > >>>>>>>>> I
> > >>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
> > >>>>> NTE222
> > >>>>>>>> and a
> > >>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
> > >>> them
> > >>>>>> yet.
> > >>>>>>>> At
> > >>>>>>>>> this point I think I'll just save them as spares, because as
> you
> > >>>>>> state,
> > >>>>>>>> Q1
> > >>>>>>>>> and D2 are good.
> > >>>>>>>>>
> > >>>>>>>>> It was great to hear the receive come back alive when touching
> the
> > >>>>>>>> antenna
> > >>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
> > >>> steps
> > >>>>>> :?)
> > >>>>>>>>> Thanks,
> > >>>>>>>>> 73
> > >>>>>>>>> WW8X
> > >>>>>>>>> Joe
> > >>>>>>>>>
> > >>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...
>
> > >>>>>>>> wrote:

> > >>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
> > >>>>>>>> stationary
> > >>>>>>>>>>> plate
> > >>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound
> L41
> > >>>>>>>>>>> transformer.
> > >>>>>>>>>>> You are down stream of them. You are coupling signals
> directly to
> > >>>>> the
> > >>>>>>>>>> gate
> > >>>>>>>>>>> of
> > >>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe
> you
> > >>>>>>>> replaced
> > >>>>>>>>>>> both?)
> > >>>>>>>>>>>
> > >>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF
> board.
> > >>> You
> > >>>>>>>> will
> > >>>>>>>>>> be
> > >>>>>>>>>>> on
> > >>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when
> touching
> > >>>>> TP-1
> > >>>>>>>> it
> > >>>>>>>>>>> means
> > >>>>>>>>>>> something wrong with either L4 and/or L41.
> > >>>>>>>>>>>
> > >>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT
> on
> > >>>>>>>>>> Connector
> > >>>>>>>>>>> 3 of
> > >>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> > >>> conductor
> > >>>>>>> of
> > >>>>>>>>>>> antenna
> > >>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or
> bad
> > >>>>> foil
> > >>>>>>>> at
> > >>>>>>>>>>> that
> > >>>>>>>>>>> connector.
> > >>>>>>>>>>>
> > >>>>>>>>>>> Use your schematic and keep working your way back to your
> SO-239
> > >>>>>>>>>> connector
> > >>>>>>>>>>> on
> > >>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
> > >>> Xverter

> > >>>>>>>>>>> connector
> > >>>>>>>>>>> switch , then antenna relay RL-1.
> > >>>>>>>>>>>
> > >>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
> > >>>>> believe
> > >>>>>>>> you
> > >>>>>>>>>>> said it
> > >>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4
> and
> > >>>>> L41
> > >>>>>>>> are
> > >>>>>>>>>>> OK.
> > >>>>>>>>>>> Terry-K9TW
> > >>>>>>>>>>>
> > >>>>>>>>>>> _____
> > >>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
>
> > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> > >>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low
> receive
> > >>>>>>>> problem
> > >>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if
> you've
> > >>>>>> been
> > >>>>>>>>>>> reading
> > >>>>>>>>>>> the threads related to my adventures with my low receive
> problem,
> > >>> I
> > >>>>>>>>>>> discovered
> > >>>>>>>>>>> an important clue.
> > >>>>>>>>>>>
> > >>>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
> > >>> lugs
> > >>>>> on
> > >>>>>>>>>>> variable
> > >>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the
> same
> > >>>>>> test
> > >>>>>>>>>>> lead
> > >>>>>>>>>>> to
> > >>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
> > >>>>> signals
> > >>>>>>>>>>> jump
> > >>>>>>>>>>> up
> > >>>>>>>>>>> very loud with normal noise and S meter readings at S9 and
> above
> > >>> --
> > >>>>>>>> just
> > >>>>>>>>>>> as

> > >>>>>>>>>>> the
> > >>>>>>>>>>> set used to have before my problems started. Here's the
> curious
> > >>>>>> thing:
> > >>>>>>>>>> When
> > >>>>>>>>>>> I
> > >>>>>>>>>>> connect the same test lead that's connected to the antenna to
> the
> > >>>>>>>> center
> > >>>>>>>>>> of
> > >>>>>>>>>>> the
> > >>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop
> way
> > >>>>> off
> > >>>>>>>> as
> > >>>>>>>>>> if
> > >>>>>>>>>>> there's hardly an antenna connected. So in addition to having
> to
> > >>>>>>>> rewind
> > >>>>>>>>>> the
> > >>>>>>>>>>> L41
> > >>>>>>>>>>> (which I've already done), there apparently is also something
> > >>> going
> > >>>>>> on
> > >>>>>>>>>> with
> > >>>>>>>>>>> my
> > >>>>>>>>>>> receive. I think I'm on to something. What do you think?
> > >>>>>>>>>>> Thanks,
> > >>>>>>>>>>> WW8X
> > >>>>>>>>>>> Joe
> > >>>>>>>>>>>
> > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>
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> > >>>>>>>>>>>
> > >>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>
> > >>>>>>>>>> ------------------------------------
> > >>>>>>>>>>
> > >>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>
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> > >>>>>>>>>> [Non-text portions of this message have been removed]
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> > >>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>
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> > >>>>>>>>>
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> > >>>>>>> all
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> > >>>>>>
> > >>>>>> Yahoo! Groups Links
> > >>>>>>
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> > >>>> [Non-text portions of this message have been removed]
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> > >>> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31772. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 02:54:42 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31772

Joe, The beginning and ending of the windings do overlap each other (crisscross). that is normal
I have NOT finished my video, but perhaps I should forward what I have to you to see if it gives you any clues. the problem is, I wound one backwards in the video and have not had time to redo that part. However, it clearly shows which pins are for primary and secondary
IO wonder, what part of VC-1 are you touching?

Gordon

On 6/8/2011 7:47 PM, Joe Loverti wrote:
> The results of the signal injection seem to vary somewhat... maybe it's that
> old generator? Anyway, I also took a reading with the signal injected at D1
> as suggested by Terry. Here's my readings:
> SO239 = S7
> TP-1 = S7
> VC-1 = 20+
> TP-4 = 15+
> TP-2 = S3
> D1 = S0 to S3
> Connecting an antenna to VC-1 makes the receiver come alive like it was new!
>
> As to the L41: I wound the primary on the lower third and the secondary on
> the upper two thirds. There was some overlap of windings but not too much. I
> noticed when I was done with the windings the ends of the wires crisscrossed
> over each other. Like the beginning and end of the primary and the beginning
> and end of the secondary crossed before going to their respective pins... I
> wondered about that at the time. Improper technique?
>
> I don't have a problem with redoing it. The second time should be easier
> since I know how to properly install the band switch shaft and now not
> intimidated by tearing out the RF board as I was the first time. I just want
> to get this baby cooking once again. It really is a beautiful rig!
>
> Based on what you guys have said... looks like I need redo the L41.
>
> Thanks for your time...
> Regards,
> WW8X
> Joe
>
>
>
> On Wed, Jun 8, 2011 at 10:04 PM, Terry Wagoner<wagstw46@...> wrote:

>
>>
>> Gordon--Good marker thru me off as well. Since L4/L41 are common path for
>> marker and RF signals.
>>
>> How about injecting signal at Diode D1 by Marker pin. It is near TP2 and
>> cathode end of diode is accessible. If signal is 20+ injecting here it cant
>> be L4/L41--Terry
>>
>> --- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>>> No problem Joe,
>>> Been there and Done that LOL
>>>
>>> Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
>>> even L3. look at the schematic and you can easily follow the circuit.
>>> It could also be one of the caps in that associated circuit, such as C1,
>>> C3 or C4 but I doubt that.
>>> I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
>>> me is that the marker signal seems to be good.
>>> Are all bands low? Maybe you need to do the Antenna and RFcoil
>>> adjustments for all bands.
>>>
>>> Gordon
>>>
>>>
>>> On 6/8/2011 5:53 PM, Joe Loverti wrote:
>>>> I truly am sorry... still messed it up.
>>>> TP-1 is less than S7
>>>> *TP-2* moves to S3 then drops to S0
>>>> TP-4 is 20+
>>>> VC-1 is 20+
>>>> SO239 is less than S7
>>>> One of those nights :?(
>>>> WW8X
>>>> Joe
>>>>
>>>>
>>>> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
>>>>
>>>>> I got messed up... darn it.
>>>>> TP-1 is less than S7
>>>>> *TP-2* moves to S3 then drops to S0
>>>>> TP-4 is 20+
>>>>> VC-1 is 20+
>>>>> SO239 is 20+
>>>>>
>>>>> Sorry about that...
>>>>> WW8X
>>>>> Joe
>>>>>

>>>>>
>>>>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
>>>>>
>>>>>> Ok, in that case, either there is a problem with L-41 or L4 needs to
>> be
>>>>>> adjusted
>>>>>>
>>>>>> Gordon
>>>>>>
>>>>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
>>>>>>> Correct Terry...
>>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
>> close
>>>>>> as I
>>>>>>> can get it reading from a BK frequency counter) are:
>>>>>>> SO239 is slightly less than S7
>>>>>>> TP-1 is slightly less than S7
>>>>>>> VC-1 is 20 over S9
>>>>>>> TP-2 is 20 over S9
>>>>>>> Thanks for the catch.
>>>>>>>
>>>>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
>>>>>> wrote:
>>>>>>>> Joe-I think you meant VC-1? Terry
>>>>>>>>
>>>>>>>>
>>>>>>>> _____
>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
>>>>>>>>
>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low receive
>>>>>> problem
>>>>>>>> Gordon,
>>>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
>> close
>>>>>> as I
>>>>>>>> can get it reading from a BK frequency counter) are:
>>>>>>>> SO239 is slightly less than S7
>>>>>>>> TP-1 is slightly less than S7
>>>>>>>> TC-1 is 20 over S9
>>>>>>>> TP-2 is 20 over S9
>>>>>>>>
>>>>>>>> WW8X
>>>>>>>>
>>>>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
>>>>>>>>
>>>>>>>>> Joe,
>>>>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a
>> reading

>>>>>> on
>>>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board
>> and
>>>>>>>> again look at the S-meter. tell me what readings you get.
>>>>>>>> they should be virtually identical.
>>>>>>>> Once we have that info, we can move on
>>>>>>>>
>>>>>>>> Gordon
>>>>>>>>
>>>>>>>>
>>>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
>>>>>>>>> Thanks Mike and Terry...
>>>>>>>>> You guys have given me plenty of time and advice -- I appreciate
>> it
>>>>>>>> very
>>>>>>>>> much.
>>>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits signal
>>>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html)
>> which
>>>>>> may
>>>>>>>> work
>>>>>>>>> also, so I can try what you are suggesting. As far as marker
>> signals
>>>>>>>> go:
>>>>>>>> I
>>>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41
>> for a
>>>>>>>> peak,
>>>>>>>>> but at 14.175 mhz, the marker signal is only S7.
>>>>>>>>>
>>>>>>>>> What ever took out the L41 (remember I said the secondary winding
>> was
>>>>>>>> open
>>>>>>>>> -- a inch of the wire was missing, but the windings were intact
>> and
>>>>>> not
>>>>>>>>> burnt), probably also took out something else, which is
>> continuing to
>>>>>>>> be
>>>>>>>> a
>>>>>>>>> problem. Before rewinding the L41, I had virtually no signal --
>> after
>>>>>>>>> replacing L41, the signal came back and is now weak. Only when I
>> put
>>>>>>>> the
>>>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
>>>>>>>> properly
>>>>>>>>> operating receiver.
>>>>>>>>>
>>>>>>>>> Wish me luck and thanks again.

>>>>>>>>>>
>>>>>>>>>> 73,
>>>>>>>>>> WW8X
>>>>>>>>>> Joe
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
>>>>>>>>>>
>>>>>>>>>> One more thing. If the Marker signal is strong, S9 or better,
>> then
>>>>>> L3
>>>>>>>>> and
>>>>>>>>>> L4 are more than likely not the source of weak receive signals.
>> If
>>>>>> L3
>>>>>>>>> and/or
>>>>>>>>>> L4 were the source of the problem the Marker signal would be
>> weak
>>>>>> just
>>>>>>>>> like
>>>>>>>>>> the incoming signals are.
>>>>>>>>>>
>>>>>>>>>> 73s
>>>>>>>>>> Mike
>>>>>>>>>> W5RKL
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> _____
>>>>>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>> receive
>>>>>>>>> problem
>>>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have exhausted
>> my
>>>>>>>>>> knowledge/experience with his problem. He does not have the
>> test
>>>>>>>>> equipment
>>>>>>>>>> necessary to use Level diagrams so is using antenna coax to
>> inject
>>>>>>>>> signal.
>>>>>>>>>> He is
>>>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at
>> VC-1.
>>>>>>>>> He
>>>>>>>>> is
>>>>>>>>>> not
>>>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal is

>>>>>> good.
>>>>>>>> I
>>>>>>>>> am
>>>>>>>>>> not
>>>>>>>>>>> sure what the components are after TP-1. They appear to make up
>> a
>>>>>>>>>> band-pass
>>>>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of
>> these
>>>>>>>>> failing
>>>>>>>>>> open or
>>>>>>>>>>> shunting signal to ground. Appreciate it if you guys could add
>> to
>>>>>>>>> what
>>>>>>>>>> I
>>>>>>>>>> have
>>>>>>>>>>> suggested and/or take off and run with this one. 73s Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Terry Wagoner<wagstw46@...>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>> receive
>>>>>>>>>> problem
>>>>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide
>> open
>>>>>> I
>>>>>>>>>> would
>>>>>>>>>> say
>>>>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9 on
>> 80,
>>>>>>>>> 40,
>>>>>>>>>> 20
>>>>>>>>>> with
>>>>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher
>> frequencies.
>>>>>>>>> In
>>>>>>>>>> all
>>>>>>>>>> cases
>>>>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
>>>>>>>>> peaked.
>>>>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
>>>>>> Shorted
>>>>>>>>> or
>>>>>>>>>> Shunted
>>>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your
>> symptoms)
>>>>>>>>>>> 2. We have determined that signal path from Marker to Speaker
>> is

>>>>>>>>>>> good/normal.
>>>>>>>>>>> 3. We have determined that signal path from VC-1 is good/normal
>>>>>>>>> (including
>>>>>>>>>>> AGC
>>>>>>>>>>> action?)
>>>>>>>>>>>
>>>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
>>>>>>>>> significantly
>>>>>>>>>>> weaker
>>>>>>>>>>> output. What components and what failure mode are in path from
>> TP-1
>>>>>>>> to
>>>>>>>>>>> VC-1?
>>>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker
>> is
>>>>>>>> good
>>>>>>>>>>> therefore L4/L41 are good.
>>>>>>>>>>>
>>>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
>>>>>> weaker
>>>>>>>>> than
>>>>>>>>>>> when
>>>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
>>>>>> believe
>>>>>>>>> are
>>>>>>>>>>> band-pass components (probably broadcast band?) are the only
>>>>>>>> components
>>>>>>>>> in
>>>>>>>>>>> path
>>>>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad.
>> These
>>>>>>>>>>> components
>>>>>>>>>>> are not in the circuit when you use the Marker.
>>>>>>>>>>>
>>>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
>>>>>> signal
>>>>>>>> to
>>>>>>>>>>> ground
>>>>>>>>>>> at TP-1?
>>>>>>>>>>>
>>>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
>>>>>> signal
>>>>>>>>> to
>>>>>>>>>>> TP-1?
>>>>>>>>>>> If signal comes up to near same as when touched at VC-1 then
>> you
>>>>>> know
>>>>>>>>>>> coupling
>>>>>>>>>>> caps and band-pass filter components are all good. The fault
>> then

>>>>>> has
>>>>>>>> to
>>>>>>>>>> be
>>>>>>>>>>> something shunting the signal to ground upstream of TP-1. If
>> signal
>>>>>>>> does
>>>>>>>>>> not
>>>>>>>>>>> come up, then coupling caps, bandpass filter components are
>>>>>> shunting
>>>>>>>>>> signal to
>>>>>>>>>>> ground.
>>>>>>>>>>>
>>>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal
>> failure
>>>>>> here
>>>>>>>> is
>>>>>>>>>> bad
>>>>>>>>>>> contacts which could cause weak and/or intermittent signal with
>>>>>> coax
>>>>>>>>>> connected
>>>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant
>> Relay
>>>>>>> RL-1
>>>>>>>> to
>>>>>>>>>> shunt
>>>>>>>>>>> signal to ground and affect any signal applied at TP-1.
>>>>>>>>>>>
>>>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1 and
>>>>>>> report
>>>>>>>>>> back.
>>>>>>>>>>> 73s Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>> receive
>>>>>>>>>> problem
>>>>>>>>>>> Terry:
>>>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
>>>>>> reading.
>>>>>>>>>> Quite
>>>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
>>>>>>>> speaker.
>>>>>>>>>> I'll
>>>>>>>>>>> try your other suggestions when I get a chance later on this
>>>>>> evening.
>>>>>>>> I
>>>>>>>>>>> probably should think about checking the relay as Dave

>> suggested.
>>>>>>>>>>>> One other thing that may be related, is that when I'm on a
>> strong
>>>>>>>>> signal
>>>>>>>>>>> the
>>>>>>>>>>>> S-meter fades. In other words, as it is now the strongest
>> signals
>>>>>> are
>>>>>>>>>>> around
>>>>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after
>> a
>>>>>> few
>>>>>>>>>>> seconds
>>>>>>>>>>>> the S meter drops off and comes back up and drops off. When I
>>>>>> connect
>>>>>>>>> the
>>>>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it
>> fade
>>>>>> on
>>>>>>>>> the
>>>>>>>>>>>> calibrator signal.
>>>>>>>>>>>> 73,
>>>>>>>>>>>> WW8X
>>>>>>>>>>>> Joe
>>>>>>>>>>>>
>>>>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
>>>>>>>>> wrote:
>>>>>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
>>>>>>>>>>> intermittent
>>>>>>>>>>>>> connection and not a short to ground. So if signal is weak
>> applied
>>>>>>>>> at
>>>>>>>>>>> TP-1
>>>>>>>>>>>>> it
>>>>>>>>>>>>> points downstream from there. Only place you worked was at L4
>> and
>>>>>>>>> L41.
>>>>>>>>>>>>> What is confusing me is --Are you getting good marker signal?
>> Have
>>>>>>>>> you
>>>>>>>>>>>>> tried it
>>>>>>>>>>>>> on bands other than 1.9?
>>>>>>>>>>>>>
>>>>>>>>>>>>> If you are getting 20 over marker signal and can peak L41 your
>>>>>>>>> rewind
>>>>>>>>>>> and
>>>>>>>>>>>>> re-solder sounds good.
>>>>>>>>>>>>>
>>>>>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF
>> gain

>>>>>>>> down
>>>>>>>>>> as
>>>>>>>>>>>> volume
>>>>>>>>>>>> would be rattling the speaker. Same for any other band. If
>> this is
>>>>>>>>> true
>>>>>>>>>>>> then you
>>>>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175)
>> meters.
>>>>>>>> With
>>>>>>>>>> it
>>>>>>>>>>>> on
>>>>>>>>>>>> peak the drive for max s-meter reading. If you dont want to
>> reach
>>>>>>>> for
>>>>>>>>> AF
>>>>>>>>>>>> control
>>>>>>>>>>>> to turn down the volume then adequate marker signal is not
>> passing
>>>>>>>>>> L4/L41.
>>>>>>>>>>>> Only other components in signal path between TP-1 and L4/L41
>> are
>>>>>>>>>> coupling
>>>>>>>>>>>> caps
>>>>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be
>> very
>>>>>>>> rare
>>>>>>>>>> for
>>>>>>>>>>>> any
>>>>>>>>>>>> of these to fail.
>>>>>>>>>>>>
>>>>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
>>>>>> inject
>>>>>>>>>> your
>>>>>>>>>>>> marker
>>>>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
>>>>>>>> increases
>>>>>>>>>>>> significantly?
>>>>>>>>>>>>
>>>>>>>>>>>> Terry
>>>>>>>>>>>>
>>>>>>>>>>>> _____
>>>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
>>>>>> receive
>>>>>>>>>> problem
>>>>>>>>>>>> Terry:
>>>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal way

>>>>>> down.
>>>>>>>> So,
>>>>>>>>>> I
>>>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the
>> L41 to
>>>>>>>>>> Gordon's
>>>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal
>> reading
>>>>>> at
>>>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I
>> did OK
>>>>>>>>> with
>>>>>>>>>> the
>>>>>>>>>>>> rewinding. I don't think rewinding it again would make any
>>>>>>>> difference?
>>>>>>>>> I
>>>>>>>>>> am
>>>>>>>>>>>> certainly willing to do that if you think it would be helpful.
>> The
>>>>>>>> L4
>>>>>>>>>> was a
>>>>>>>>>>>> replacement Gordon sent me and have no reason to believe it's
>> not
>>>>>>>>>> working.
>>>>>>>>>>>> I
>>>>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered a
>>>>>>>> NTE222
>>>>>>>>>> and a
>>>>>>>>>>>> replacement for D1and D2 on the RF board, but haven't received
>>>>>> them
>>>>>>>>>>> yet.
>>>>>>>>>> At
>>>>>>>>>>>> this point I think I'll just save them as spares, because as
>> you
>>>>>>>>> state,
>>>>>>>>>> Q1
>>>>>>>>>>>> and D2 are good.
>>>>>>>>>>>>
>>>>>>>>>>>> It was great to hear the receive come back alive when touching
>> the
>>>>>>>>>> antenna
>>>>>>>>>>>> to VC-1, now I just have to come up with a permanent fix. Baby
>>>>>> steps
>>>>>>>>>>> :?)
>>>>>>>>>>>> Thanks,
>>>>>>>>>>>> 73
>>>>>>>>>>>> WW8X
>>>>>>>>>>>> Joe
>>>>>>>>>>>>
>>>>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...

>>>>>>>>>>> wrote:
>>>>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
>>>>>>>>>>> stationary
>>>>>>>>>>>>> plate
>>>>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and rewound
>> L41
>>>>>>>>>>>>> transformer.
>>>>>>>>>>>>> You are down stream of them. You are coupling signals
>> directly to
>>>>>>>> the
>>>>>>>>>>>>> gate
>>>>>>>>>>>>> of
>>>>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe
>> you
>>>>>>>>>>> replaced
>>>>>>>>>>>>> both?)
>>>>>>>>>>>>>
>>>>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF
>> board.
>>>>>>> You
>>>>>>>>>>> will
>>>>>>>>>>>>> be
>>>>>>>>>>>>> on
>>>>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when
>> touching
>>>>>>>> TP-1
>>>>>>>>>>> it
>>>>>>>>>>>>> means
>>>>>>>>>>>>> something wrong with either L4 and/or L41.
>>>>>>>>>>>>>
>>>>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled ANT
>> on
>>>>>>>>>>>> Connector
>>>>>>>>>>>>> 3 of
>>>>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
>>>>>>> conductor
>>>>>>>>>> of
>>>>>>>>>>>>> antenna
>>>>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or
>> bad
>>>>>>>> foil
>>>>>>>>>>> at
>>>>>>>>>>>>> that
>>>>>>>>>>>>> connector.
>>>>>>>>>>>>>
>>>>>>>>>>>>> Use your schematic and keep working your way back to your
>> SO-239
>>>>>>>>>>>> connector
>>>>>>>>>>>>> on
>>>>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then

>>>>>> Xverter
>>>>>>>>>>>>>> connector
>>>>>>>>>>>>>> switch , then antenna relay RL-1.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
>>>>>>>> believe
>>>>>>>>>>> you
>>>>>>>>>>>>>> said it
>>>>>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then L4
>> and
>>>>>>>> L41
>>>>>>>>>>> are
>>>>>>>>>>>>>> OK.
>>>>>>>>>>>>>> Terry-K9TW
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
>>>>>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low
>> receive
>>>>>>>>>>> problem
>>>>>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if
>> you've
>>>>>>>>> been
>>>>>>>>>>>>>> reading
>>>>>>>>>>>>>> the threads related to my adventures with my low receive
>> problem,
>>>>>> I
>>>>>>>>>>>>>> discovered
>>>>>>>>>>>>>> an important clue.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of the
>>>>>>> lugs
>>>>>>>>>> on
>>>>>>>>>>>>>> variable
>>>>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the
>> same
>>>>>>>>> test
>>>>>>>>>>>>>> lead
>>>>>>>>>>>>>> to
>>>>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1 the
>>>>>>>> signals
>>>>>>>>>>>>>> jump
>>>>>>>>>>>>>> up
>>>>>>>>>>>>>> very loud with normal noise and S meter readings at S9 and
>> above
>>>>>>> --
>>>>>>>>>>> just
>>>>>>>>>>>>>> as

>>>>>>>>>>>>>> the
>>>>>>>>>>>>>> set used to have before my problems started. Here's the
>> curious
>>>>>>>>> thing:
>>>>>>>>>>>>>> When
>>>>>>>>>>>>>> I
>>>>>>>>>>>>>> connect the same test lead that's connected to the antenna to
>> the
>>>>>>>>>>> center
>>>>>>>>>>>>>> of
>>>>>>>>>>>>>> the
>>>>>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals drop
>> way
>>>>>>>>> off
>>>>>>>>>>> as
>>>>>>>>>>>>>> if
>>>>>>>>>>>>>> there's hardly an antenna connected. So in addition to having
>> to
>>>>>>>>>>> rewind
>>>>>>>>>>>>>> the
>>>>>>>>>>>>>> L41
>>>>>>>>>>>>>> (which I've already done), there apparently is also something
>>>>>> going
>>>>>>>>> on
>>>>>>>>>>>>>> with
>>>>>>>>>>>>>> my
>>>>>>>>>>>>>> receive. I think I'm on to something. What do you think?
>>>>>>>>>>>>>> Thanks,
>>>>>>>>>>>>>> WW8X
>>>>>>>>>>>>>> Joe
>>>>>>>>>>>>>>
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31773. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 04:47:02 UTC
From: Joe Loverti
Topic: 31735 Message: 31773

Gordon: I'm touching one of the lugs at the top of VC-1 -- there are two, each produces the same results. I didn't realize there could a backward winding.... I never paid any attention to that... I just wrapped and counted them as I went along. I've done enough damage for one day... :-)
73,
WW8X
Joe

On Wed, Jun 8, 2011 at 10:54 PM, <n6wk@...> wrote:

> Joe, The beginning and ending of the windings do overlap each other (
> crisscross). that is normal
> I have NOT finished my video, but perhaps I should forward what I have
> to you to see if it gives you any clues. the problem is, I wound one
> backwards in the video and have not had time to redo that part. However,
> it clearly shows which pins are for primary and secondary
> IO wonder, what part of VC-1 are you touching?
>
> Gordon
>
>
> On 6/8/2011 7:47 PM, Joe Loverti wrote:
> > The results of the signal injection seem to vary somewhat... maybe it's
> that
> > old generator? Anyway, I also took a reading with the signal injected at
> D1
> > as suggested by Terry. Here's my readings:
> > SO239 = S7
> > TP-1 = S7
> > VC-1 = 20+
> > TP-4 = 15+
> > TP-2 = S3
> > D1 = S0 to S3
> > Connecting an antenna to VC-1 makes the receiver come alive like it was
> new!
> >
> > As to the L41: I wound the primary on the lower third and the secondary
> on
> > the upper two thirds. There was some overlap of windings but not too
> much. I
> > noticed when I was done with the windings the ends of the wires
> crisscrossed
> > over each other. Like the beginning and end of the primary and the
> beginning

> > and end of the secondary crossed before going to their respective pins...
> I
> > wondered about that at the time. Improper technique?
> >
> > I don't have a problem with redoing it. The second time should be easier
> > since I know how to properly install the band switch shaft and now not
> > intimidated by tearing out the RF board as I was the first time. I just
> want
> > to get this baby cooking once again. It really is a beautiful rig!
> >
> > Based on what you guys have said... looks like I need redo the L41.
> >
> > Thanks for your time...
> > Regards,
> > WW8X
> > Joe
> >
> >
> >
> > On Wed, Jun 8, 2011 at 10:04 PM, Terry Wagoner<wagstw46@...>
> wrote:
> >
> >>
> >> Gordon--Good marker thru me off as well. Since L4/L41 are common path
> for
> >> marker and RF signals.
> >>
> >> How about injecting signal at Diode D1 by Marker pin. It is near TP2 and
> >> cathode end of diode is accessible. If signal is 20+ injecting here it
> cant
> >> be L4/L41--Terry
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
> >>> No problem Joe,
> >>> Been there and Done that LOL
> >>>
> >>> Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe
> >>> even L3. look at the schematic and you can easily follow the circuit.
> >>> It could also be one of the caps in that associated circuit, such as
> C1,
> >>> C3 or C4 but I doubt that.
> >>> I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> >>> me is that the marker signal seems to be good.
> >>> Are all bands low? Maybe you need to do the Antenna and RFcoil
> >>> adjustments for all bands.
> >>>
> >>> Gordon
> >>>
> >>>
> >>> On 6/8/2011 5:53 PM, Joe Loverti wrote:

> >>>> I truly am sorry... still messed it up.
> >>>> TP-1 is less than S7
> >>>> *TP-2* moves to S3 then drops to S0
> >>>> TP-4 is 20+
> >>>> VC-1 is 20+
> >>>> SO239 is less than S7
> >>>> One of those nights :?(
> >>>> WW8X
> >>>> Joe
> >>>>
> >>>>
> >>>> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@...> wrote:
> >>>>
> >>>>> I got messed up... darn it.
> >>>>> TP-1 is less than S7
> >>>>> *TP-2* moves to S3 then drops to S0
> >>>>> TP-4 is 20+
> >>>>> VC-1 is 20+
> >>>>> SO239 is 20+
> >>>>>
> >>>>> Sorry about that...
> >>>>> WW8X
> >>>>> Joe
> >>>>>
> >>>>>
> >>>>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@...> wrote:
> >>>>>
> >>>>>> Ok, in that case, either there is a problem with L-41 or L4 needs to
> >> be
> >>>>>> adjusted
> >>>>>>
> >>>>>> Gordon
> >>>>>>
> >>>>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> >>>>>>> Correct Terry...
> >>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> >> close
> >>>>>> as I
> >>>>>>> can get it reading from a BK frequency counter) are:
> >>>>>>> SO239 is slightly less than S7
> >>>>>>> TP-1 is slightly less than S7
> >>>>>>> VC-1 is 20 over S9
> >>>>>>> TP-2 is 20 over S9
> >>>>>>> Thanks for the catch.
> >>>>>>>
> >>>>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@...>
> >>>>>> wrote:
> >>>>>>>> Joe-I think you meant VC-1? Terry
> >>>>>>>>
> >>>>>>>>

> >>>>>>>> _____
> >>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
> >>>>>>>>
> >>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> receive
> >>>>>> problem
> >>>>>>>> Gordon,
> >>>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> >> close
> >>>>>> as I
> >>>>>>>> can get it reading from a BK frequency counter) are:
> >>>>>>>> SO239 is slightly less than S7
> >>>>>>>> TP-1 is slightly less than S7
> >>>>>>>> TC-1 is 20 over S9
> >>>>>>>> TP-2 is 20 over S9
> >>>>>>>>
> >>>>>>>> WW8X
> >>>>>>>>
> >>>>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@...> wrote:
> >>>>>>>>
> >>>>>>>>> Joe,
> >>>>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a
> >> reading
> >>>>>> on
> >>>>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board
> >> and
> >>>>>>>>> again look at the S-meter. tell me what readings you get.
> >>>>>>>>> they should be virtually identical.
> >>>>>>>>> Once we have that info, we can move on
> >>>>>>>>>
> >>>>>>>>> Gordon
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> >>>>>>>>>> Thanks Mike and Terry...
> >>>>>>>>>> You guys have given me plenty of time and advice -- I appreciate
> >> it
> >>>>>>>> very
> >>>>>>>>>> much.
> >>>>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits
> signal
> >>>>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html)
> >> which
> >>>>>> may
> >>>>>>>>> work
> >>>>>>>>>> also, so I can try what you are suggesting. As far as marker
> >> signals
> >>>>>>>> go:

> >>>>>>>>> I
> >>>>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41
> >> for a
> >>>>>>>>> peak,
> >>>>>>>>>> but at 14.175 mhz, the marker signal is only S7.
> >>>>>>>>>>
> >>>>>>>>>> What ever took out the L41 (remember I said the secondary
> winding
> >> was
> >>>>>>>>> open
> >>>>>>>>>> -- a inch of the wire was missing, but the windings were intact
> >> and
> >>>>>> not
> >>>>>>>>>> burnt), probably also took out something else, which is
> >> continuing to
> >>>>>>>> be
> >>>>>>>>> a
> >>>>>>>>>> problem. Before rewinding the L41, I had virtually no signal --
> >> after
> >>>>>>>>>> replacing L41, the signal came back and is now weak. Only when I
> >> put
> >>>>>>>> the
> >>>>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
> >>>>>>>> properly
> >>>>>>>>>> operating receiver.
> >>>>>>>>>>
> >>>>>>>>>> Wish me luck and thanks again.
> >>>>>>>>>>
> >>>>>>>>>> 73,
> >>>>>>>>>> WW8X
> >>>>>>>>>> Joe
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@...> wrote:
> >>>>>>>>>>
> >>>>>>>>>> One more thing. If the Marker signal is strong, S9 or better,
> >> then
> >>>>>> L3
> >>>>>>>>> and
> >>>>>>>>>> L4 are more than likely not the source of weak receive signals.
> >> If
> >>>>>> L3
> >>>>>>>>> and/or
> >>>>>>>>>> L4 were the source of the problem the Marker signal would be
> >> weak
> >>>>>> just
> >>>>>>>>> like
> >>>>>>>>>> the incoming signals are.
> >>>>>>>>>>

> >>>>>>>>>>> 73s
> >>>>>>>>>>> Mike
> >>>>>>>>>>> W5RKL
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>> _____
> >>>>>>>>>>>> From: Terry Wagoner<wagstw46@...>
> >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >> receive
> >>>>>>>>>>> problem
> >>>>>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have
> exhausted
> >> my
> >>>>>>>>>>>> knowledge/experience with his problem. He does not have the
> >> test
> >>>>>>>>> equipment
> >>>>>>>>>>>> necessary to use Level diagrams so is using antenna coax to
> >> inject
> >>>>>>>>> signal.
> >>>>>>>>>>> He is
> >>>>>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at
> >> VC-1.
> >>>>>>>> He
> >>>>>>>>> is
> >>>>>>>>>>> not
> >>>>>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal
> is
> >>>>>> good.
> >>>>>>>> I
> >>>>>>>>> am
> >>>>>>>>>>> not
> >>>>>>>>>>>> sure what the components are after TP-1. They appear to make
> up
> >> a
> >>>>>>>>>>> band-pass
> >>>>>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of
> >> these
> >>>>>>>>> failing
> >>>>>>>>>>> open or
> >>>>>>>>>>>> shunting signal to ground. Appreciate it if you guys could add
> >> to
> >>>>>>>> what
> >>>>>>>>> I
> >>>>>>>>>>> have
> >>>>>>>>>>>> suggested and/or take off and run with this one. 73s Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>> _____
> >>>>>>>>>>>> From: Terry Wagoner<wagstw46@...>

> >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >> receive
> >>>>>>>>>>>> problem
> >>>>>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide
> >> open
> >>>>>> I
> >>>>>>>>> would
> >>>>>>>>>>>> say
> >>>>>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9
> on
> >> 80,
> >>>>>>>> 40,
> >>>>>>>>> 20
> >>>>>>>>>>>> with
> >>>>>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher
> >> frequencies.
> >>>>>>>> In
> >>>>>>>>> all
> >>>>>>>>>>>> cases
> >>>>>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
> >>>>>>>> peaked.
> >>>>>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
> >>>>>> Shorted
> >>>>>>>> or
> >>>>>>>>>>>> Shunted
> >>>>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your
> >> symptoms)
> >>>>>>>>>>>> 2. We have determined that signal path from Marker to Speaker
> >> is
> >>>>>>>>>>>> good/normal.
> >>>>>>>>>>>> 3. We have determined that signal path from VC-1 is
> good/normal
> >>>>>>>>> (including
> >>>>>>>>>>>> AGC
> >>>>>>>>>>>> action?)
> >>>>>>>>>>>>
> >>>>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
> >>>>>>>>> significantly
> >>>>>>>>>>>> weaker
> >>>>>>>>>>>> output. What components and what failure mode are in path from
> >> TP-1
> >>>>>>>> to
> >>>>>>>>>>>> VC-1?
> >>>>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker
> >> is
> >>>>>>>> good
> >>>>>>>>>>>> therefore L4/L41 are good.
> >>>>>>>>>>>>

> >>>>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> >>>>>> weaker
> >>>>>>>>> than
> >>>>>>>>>>> when
> >>>>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
> >>>>>> believe
> >>>>>>>>> are
> >>>>>>>>>>>> band-pass components (probably broadcast band?) are the only
> >>>>>>>>> components
> >>>>>>>>> in
> >>>>>>>>>>> path
> >>>>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad.
> >> These
> >>>>>>>>>>> components
> >>>>>>>>>>>> are not in the circuit when you use the Marker.
> >>>>>>>>>>>>
> >>>>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
> >>>>>> signal
> >>>>>>>>> to
> >>>>>>>>>>> ground
> >>>>>>>>>>>> at TP-1?
> >>>>>>>>>>>>
> >>>>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> >>>>>> signal
> >>>>>>>>> to
> >>>>>>>>>>> TP-1?
> >>>>>>>>>>>> If signal comes up to near same as when touched at VC-1 then
> >> you
> >>>>>> know
> >>>>>>>>>>> coupling
> >>>>>>>>>>>> caps and band-pass filter components are all good. The fault
> >> then
> >>>>>> has
> >>>>>>>>> to
> >>>>>>>>>>> be
> >>>>>>>>>>>> something shunting the signal to ground upstream of TP-1. If
> >> signal
> >>>>>>>>> does
> >>>>>>>>>>> not
> >>>>>>>>>>>> come up, then coupling caps, bandpass filter components are
> >>>>>> shunting
> >>>>>>>>>>> signal to
> >>>>>>>>>>>> ground.
> >>>>>>>>>>>>
> >>>>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal
> >> failure
> >>>>>> here
> >>>>>>>>> is
> >>>>>>>>>>> bad
> >>>>>>>>>>>> contacts which could cause weak and/or intermittent signal

> with
> >>>>>> coax
> >>>>>>>>>>> connected
> >>>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant
> >> Relay
> >>>>>>>> RL-1
> >>>>>>>> to
> >>>>>>>>>>> shunt
> >>>>>>>>>>> signal to ground and affect any signal applied at TP-1.
> >>>>>>>>>>>
> >>>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1
> and
> >>>>>>>> report
> >>>>>>>>>>> back.
> >>>>>>>>>>> 73s Terry
> >>>>>>>>>>>
> >>>>>>>>>>> _____
> >>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >> receive
> >>>>>>>>>>> problem
> >>>>>>>>>>> Terry:
> >>>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
> >>>>>> reading.
> >>>>>>>>> Quite
> >>>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> >>>>>>>> speaker.
> >>>>>>>>>>> I'll
> >>>>>>>>>>> try your other suggestions when I get a chance later on this
> >>>>>> evening.
> >>>>>>>> I
> >>>>>>>>>>> probably should think about checking the relay as Dave
> >> suggested.
> >>>>>>>>>>> One other thing that may be related, is that when I'm on a
> >> strong
> >>>>>>>>> signal
> >>>>>>>>>>> the
> >>>>>>>>>>> S-meter fades. In other words, as it is now the strongest
> >> signals
> >>>>>> are
> >>>>>>>>>>> around
> >>>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after
> >> a
> >>>>>> few
> >>>>>>>>>>> seconds
> >>>>>>>>>>> the S meter drops off and comes back up and drops off. When I
> >>>>>> connect
> >>>>>>>>> the

> >>>>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it
> >> fade
> >>>>>> on
> >>>>>>>>> the
> >>>>>>>>>>>> calibrator signal.
> >>>>>>>>>>>> 73,
> >>>>>>>>>>>> WW8X
> >>>>>>>>>>>> Joe
> >>>>>>>>>>>>
> >>>>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@...>
> >>>>>>>>> wrote:
> >>>>>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> >>>>>>>>>>> intermittent
> >>>>>>>>>>>>> connection and not a short to ground. So if signal is weak
> >> applied
> >>>>>>>>> at
> >>>>>>>>>>> TP-1
> >>>>>>>>>>>>> it
> >>>>>>>>>>>>> points downstream from there. Only place you worked was at L4
> >> and
> >>>>>>>>> L41.
> >>>>>>>>>>>>> What is confusing me is --Are you getting good marker signal?
> >> Have
> >>>>>>>>> you
> >>>>>>>>>>>>> tried it
> >>>>>>>>>>>>> on bands other than 1.9?
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> If you are getting 20 over marker signal and can peak L41
> your
> >>>>>>>>> rewind
> >>>>>>>>>>> and
> >>>>>>>>>>>>> re-solder sounds good.
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF
> >> gain
> >>>>>>>>> down
> >>>>>>>>>>> as
> >>>>>>>>>>>>> volume
> >>>>>>>>>>>>> would be rattling the speaker. Same for any other band. If
> >> this is
> >>>>>>>>> true
> >>>>>>>>>>>>> then you
> >>>>>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175)
> >> meters.
> >>>>>>>>> With
> >>>>>>>>>>> it
> >>>>>>>>>>>>> on
> >>>>>>>>>>>>> peak the drive for max s-meter reading. If you dont want to
> >> reach
> >>>>>>>>> for

> >>>>>>>>> AF
> >>>>>>>>>>>> control
> >>>>>>>>>>>> to turn down the volume then adequate marker signal is not
> >> passing
> >>>>>>>>>>> L4/L41.
> >>>>>>>>>>>> Only other components in signal path between TP-1 and L4/L41
> >> are
> >>>>>>>>>>> coupling
> >>>>>>>>>>>> caps
> >>>>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be
> >> very
> >>>>>>>> rare
> >>>>>>>>>>> for
> >>>>>>>>>>>> any
> >>>>>>>>>>>> of these to fail.
> >>>>>>>>>>>>
> >>>>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> >>>>>> inject
> >>>>>>>>>>> your
> >>>>>>>>>>>> marker
> >>>>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
> >>>>>>>> increases
> >>>>>>>>>>>> significantly?
> >>>>>>>>>>>>
> >>>>>>>>>>>> Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>> _____
> >>>>>>>>>>>> From: Joe Loverti<ww8x.joe@...>
> >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
> >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> >>>>>> receive
> >>>>>>>>>>> problem
> >>>>>>>>>>>> Terry:
> >>>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal
> way
> >>>>>> down.
> >>>>>>>>>>> So,
> >>>>>>>>>>> I
> >>>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the
> >> L41 to
> >>>>>>>>>>> Gordon's
> >>>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal
> >> reading
> >>>>>> at
> >>>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I
> >> did OK
> >>>>>>>>>>> with
> >>>>>>>>>>> the
> >>>>>>>>>>>> rewinding. I don't think rewinding it again would make any

> >>>>>>>> difference?
> >>>>>>>> I
> >>>>>>>> am
> >>>>>>>> certainly willing to do that if you think it would be
> helpful.
> >> The
> >>>>>>>> L4
> >>>>>>>> was a
> >>>>>>>> replacement Gordon sent me and have no reason to believe it's
> >> not
> >>>>>>>> working.
> >>>>>>>> I
> >>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered
> a
> >>>>>>>> NTE222
> >>>>>>>> and a
> >>>>>>>> replacement for D1and D2 on the RF board, but haven't
> received
> >>>>>> them
> >>>>>>>> yet.
> >>>>>>>> At
> >>>>>>>> this point I think I'll just save them as spares, because as
> >> you
> >>>>>>>> state,
> >>>>>>>> Q1
> >>>>>>>> and D2 are good.
> >>>>>>>>
> >>>>>>>> It was great to hear the receive come back alive when
> touching
> >> the
> >>>>>>>> antenna
> >>>>>>>> to VC-1, now I just have to come up with a permanent fix.
> Baby
> >>>>>> steps
> >>>>>>>> :?)
> >>>>>>>> Thanks,
> >>>>>>>> 73
> >>>>>>>> WW8X
> >>>>>>>> Joe
> >>>>>>>>
> >>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@...
> >>>>>>>> wrote:
> >>>>>>>> Joe--When you touch center conductor of your antenna coax to
> >>>>>>>> stationary
> >>>>>>>> plate
> >>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and
> rewound
> >> L41
> >>>>>>>> transformer.
> >>>>>>>> You are down stream of them. You are coupling signals

> >> directly to
> >>>>>>>> the
> >>>>>>>>>>>>> gate
> >>>>>>>>>>>>>> of
> >>>>>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe
> >> you
> >>>>>>>>>>> replaced
> >>>>>>>>>>>>>> both?)
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF
> >> board.
> >>>>>> You
> >>>>>>>>>>> will
> >>>>>>>>>>>>> be
> >>>>>>>>>>>>>> on
> >>>>>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when
> >> touching
> >>>>>>>> TP-1
> >>>>>>>>>>> it
> >>>>>>>>>>>>>> means
> >>>>>>>>>>>>>> something wrong with either L4 and/or L41.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled
> ANT
> >> on
> >>>>>>>>>>>>> Connector
> >>>>>>>>>>>>>> 3 of
> >>>>>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> >>>>>> conductor
> >>>>>>>>> of
> >>>>>>>>>>>>>> antenna
> >>>>>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or
> >> bad
> >>>>>>>> foil
> >>>>>>>>>>> at
> >>>>>>>>>>>>>> that
> >>>>>>>>>>>>>> connector.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> Use your schematic and keep working your way back to your
> >> SO-239
> >>>>>>>>>>>>> connector
> >>>>>>>>>>>>>> on
> >>>>>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
> >>>>>> Xverter
> >>>>>>>>>>>>>> connector
> >>>>>>>>>>>>>> switch , then antenna relay RL-1.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
> >>>>>>>> believe
> >>>>>>>>>>> you

> >>>>>>>>>>>>>> said it
> >>>>>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then
> L4
> >> and
> >>>>>>>> L41
> >>>>>>>>>>> are
> >>>>>>>>>>>>>> OK.
> >>>>>>>>>>>>>> Terry-K9TW
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> _____
> >>>>>>>>>>>>>> From: ww8x_joe<ww8x.joe@...>
> >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> >>>>>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low
> >> receive
> >>>>>>>>>>> problem
> >>>>>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if
> >> you've
> >>>>>>>>> been
> >>>>>>>>>>>>>> reading
> >>>>>>>>>>>>>> the threads related to my adventures with my low receive
> >> problem,
> >>>>>> I
> >>>>>>>>>>>>>> discovered
> >>>>>>>>>>>>>> an important clue.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of
> the
> >>>>>> lugs
> >>>>>>>>> on
> >>>>>>>>>>>>>> variable
> >>>>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the
> >> same
> >>>>>>>>> test
> >>>>>>>>>>>>> lead
> >>>>>>>>>>>>>> to
> >>>>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1
> the
> >>>>>>>>> signals
> >>>>>>>>>>>>> jump
> >>>>>>>>>>>>>> up
> >>>>>>>>>>>>>> very loud with normal noise and S meter readings at S9 and
> >> above
> >>>>>> --
> >>>>>>>>>>> just
> >>>>>>>>>>>>> as
> >>>>>>>>>>>>>> the
> >>>>>>>>>>>>>> set used to have before my problems started. Here's the
> >> curious
> >>>>>>>>> thing:

> >>>>>>>>>>>>> When
> >>>>>>>>>>>>> I
> >>>>>>>>>>>>> connect the same test lead that's connected to the antenna
> to
> >> the
> >>>>>>>>>>> center
> >>>>>>>>>>>>> of
> >>>>>>>>>>>>> the
> >>>>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals
> drop
> >> way
> >>>>>>>> off
> >>>>>>>>>>> as
> >>>>>>>>>>>>> if
> >>>>>>>>>>>>> there's hardly an antenna connected. So in addition to
> having
> >> to
> >>>>>>>>>>> rewind
> >>>>>>>>>>>>> the
> >>>>>>>>>>>>> L41
> >>>>>>>>>>>>> (which I've already done), there apparently is also
> something
> >>>>>> going
> >>>>>>>>> on
> >>>>>>>>>>>>> with
> >>>>>>>>>>>>> my
> >>>>>>>>>>>>> receive. I think I'm on to something. What do you think?
> >>>>>>>>>>>>> Thanks,
> >>>>>>>>>>>>> WW8X
> >>>>>>>>>>>>> Joe
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> ------------------------------------
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>>
> >>>>>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> ------------------------------------
> >>>>>>>>>>>>
> >>>>>>>>>>>> Yahoo! Groups Links
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> >>>>>>>>>>>>
> >>>>>>>>>>>>
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> >>>>>>>>>> others or forwarding without expressed permission is strictly
> >>>>>> prohibited.
> >>>>>>>> If
> >>>>>>>>>> you are not the intended recipient, please contact the sender and
> >>>>>> delete
> >>>>>>>> all
> >>>>>>>>>> copies.

> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>
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> >>>>>>>>>
> >>>>>>>>> Yahoo! Groups Links
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> >>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>> copies.
> >>>>>>
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> >>>>>> ------------------------------------
> >>>>>>
> >>>>>> Yahoo! Groups Links
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> >>>> [Non-text portions of this message have been removed]
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> >> the sender and delete all copies.
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> > [Non-text portions of this message have been removed]
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> copies.
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> Yahoo! Groups Links
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31774. Re: [TS-520_820_530_830] Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 09:56:14 UTC
From: Dave
Topic: 31719 Message: 31774

Thanks Mike and Bill. Agreed.
My original question should have been more specific.

SSB vocal QRP
Earlier posts from K0ZL's time onwards, advised to use the 9V circuit rather than mic gain but recent posts advise mic gain.
Has opinion has changed? and if so, the reason.

Thanks
Dave f4eyk

31775. Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 10:32:27 UTC
From: Terry Wagoner
Topic: 31735 Message: 31775

Joe/Gordon--Touching the fixed plate connection point on VC-1 is an old trick I learned 40+ years ago working on old 5 tube am radios. When you removed the back you lost the loop antenna so you could use your body as an antenna and touch the 365 uuf variable tuning cap to check front end of receiver--a poor mans signal generator!

With weak results with signal injected at TP-1 and Marker input looks like L41 is the culprit. I just wanted to make sure there wasnt something shunting signal to ground. I would take a hard look at soldering at L4 and L41 before removing them to ensure no bridged foils or shorts to ground. 73s Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Gordon: I'm touching one of the lugs at the top of VC-1 -- there are two,
> each produces the same results. I didn't realize there could a backward
> winding.... I never paid any attention to that... I just wrapped and counted
> them as I went along. I've done enough damage for one day... :-)
> 73,
> WW8X
> Joe
>
>
> On Wed, Jun 8, 2011 at 10:54 PM, <n6wk@...> wrote:
>
> > Joe, The beginning and ending of the windings do overlap each other (
> > crisscross). that is normal
> > I have NOT finished my video, but perhaps I should forward what I have
> > to you to see if it gives you any clues. the problem is, I wound one
> > backwards in the video and have not had time to redo that part. However,
> > it clearly shows which pins are for primary and secondary
> > IO wonder, what part of VC-1 are you touching?
> >
> > Gordon
> >
> >
> > On 6/8/2011 7:47 PM, Joe Loverti wrote:
> > > The results of the signal injection seem to vary somewhat... maybe it's
> > that
> > > old generator? Anyway, I also took a reading with the signal injected at
> > D1
> > > as suggested by Terry. Here's my readings:
> > > SO239 = S7
> > > TP-1 = S7
> > > VC-1 = 20+
> > > TP-4 = 15+
> > > TP-2 = S3

> > > D1 = S0 to S3
> > > Connecting an antenna to VC-1 makes the receiver come alive like it was
> > new!
> > >
> > > As to the L41: I wound the primary on the lower third and the secondary
> > on
> > > the upper two thirds. There was some overlap of windings but not too
> > much. I
> > > noticed when I was done with the windings the ends of the wires
> > crisscrossed
> > > over each other. Like the beginning and end of the primary and the
> > beginning
> > > and end of the secondary crossed before going to their respective pins...
> > I
> > > wondered about that at the time. Improper technique?
> > >
> > > I don't have a problem with redoing it. The second time should be easier
> > > since I know how to properly install the band switch shaft and now not
> > > intimidated by tearing out the RF board as I was the first time. I just
> > want
> > > to get this baby cooking once again. It really is a beautiful rig!
> > >
> > > Based on what you guys have said... looks like I need redo the L41.
> > >
> > > Thanks for your time...
> > > Regards,
> > > WW8X
> > > Joe
> > >
> > >
> > >
> > > On Wed, Jun 8, 2011 at 10:04 PM, Terry Wagoner<wagstw46@...>
> > wrote:
> > >
> > >>
> > >> Gordon--Good marker thru me off as well. Since L4/L41 are common path
> > for
> > >> marker and RF signals.
> > >>
> > >> How about injecting signal at Diode D1 by Marker pin. It is near TP2 and
> > >> cathode end of diode is accessible. If signal is 20+ injecting here it
> > cant
> > >> be L4/L41--Terry
> > >>
> > >> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> > >>> No problem Joe,
> > >>> Been there and Done that LOL
> > >>>
> > >>> Ok, if TP1 is S7 yet VC1 is 20 over, the loss is in L41, L4 or maybe

> > >>> even L3. look at the schematic and you can easily follow the circuit.
> > >>> It could also be one of the caps in that associated circuit, such as
> > C1,
> > >>> C3 or C4 but I doubt that.
> > >>> I am thinking it is L4 , L3 or L41 has the issue. The part that puzzles
> > >>> me is that the marker signal seems to be good.
> > >>> Are all bands low? Maybe you need to do the Antenna and RFcoil
> > >>> adjustments for all bands.
> > >>>
> > >>> Gordon
> > >>>
> > >>>
> > >>> On 6/8/2011 5:53 PM, Joe Loverti wrote:
> > >>>> I truly am sorry... still messed it up.
> > >>>> TP-1 is less than S7
> > >>>> *TP-2* moves to S3 then drops to S0
> > >>>> TP-4 is 20+
> > >>>> VC-1 is 20+
> > >>>> SO239 is less than S7
> > >>>> One of those nights :□(
> > >>>> WW8X
> > >>>> Joe
> > >>>>
> > >>>>
> > >>>> On Wed, Jun 8, 2011 at 8:51 PM, Joe Loverti<ww8x.joe@> wrote:
> > >>>>
> > >>>>> I got messed up... darn it.
> > >>>>> TP-1 is less than S7
> > >>>>> *TP-2* moves to S3 then drops to S0
> > >>>>> TP-4 is 20+
> > >>>>> VC-1 is 20+
> > >>>>> SO239 is 20+
> > >>>>>
> > >>>>> Sorry about that...
> > >>>>> WW8X
> > >>>>> Joe
> > >>>>>
> > >>>>>
> > >>>>> On Wed, Jun 8, 2011 at 8:39 PM,<n6wk@> wrote:
> > >>>>>
> > >>>>>> Ok, in that case, either there is a problem with L-41 or L4 needs to
> > >> be
> > >>>>>> adjusted
> > >>>>>>
> > >>>>>> Gordon
> > >>>>>>
> > >>>>>> On 6/8/2011 5:31 PM, Joe Loverti wrote:
> > >>>>>>> Correct Terry...
> > >>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as

> > >> close
> > >>>>>> as I
> > >>>>>>> can get it reading from a BK frequency counter) are:
> > >>>>>>> SO239 is slightly less than S7
> > >>>>>>> TP-1 is slightly less than S7
> > >>>>>>> VC-1 is 20 over S9
> > >>>>>>> TP-2 is 20 over S9
> > >>>>>>> Thanks for the catch.
> > >>>>>>>
> > >>>>>>> On Wed, Jun 8, 2011 at 8:29 PM, Terry Wagoner<wagstw46@>
> > >>>>>> wrote:
> > >>>>>>>> Joe-I think you meant VC-1? Terry
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Joe Loverti<ww8x.joe@>
> > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>> Sent: Wed, June 8, 2011 8:22:16 PM
> > >>>>>>>>
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > receive
> > >>>>>> problem
> > >>>>>>>> Gordon,
> > >>>>>>>> The signal from the generator (Eico 324 at 14.173 mhz (that's as
> > >> close
> > >>>>>> as I
> > >>>>>>>> can get it reading from a BK frequency counter) are:
> > >>>>>>>> SO239 is slightly less than S7
> > >>>>>>>> TP-1 is slightly less than S7
> > >>>>>>>> TC-1 is 20 over S9
> > >>>>>>>> TP-2 is 20 over S9
> > >>>>>>>>
> > >>>>>>>> WW8X
> > >>>>>>>>
> > >>>>>>>> On Wed, Jun 8, 2011 at 5:51 PM,<n6wk@> wrote:
> > >>>>>>>>
> > >>>>>>>>> Joe,
> > >>>>>>>>> Insert a 14.175 signal at the center of the SO-239 and take a
> > >> reading
> > >>>>>> on
> > >>>>>>>>> the S-meter. then insert the same signal at TP-1 on the RF board
> > >> and
> > >>>>>>>>> again look at the S-meter. tell me what readings you get.
> > >>>>>>>>> they should be virtually identical.
> > >>>>>>>>> Once we have that info, we can move on
> > >>>>>>>>>
> > >>>>>>>>> Gordon
> > >>>>>>>>>
> > >>>>>>>>>
```
```

> > >>>>>>>>> On 6/8/2011 2:37 PM, Joe Loverti wrote:
> > >>>>>>>>> Thanks Mike and Terry...
> > >>>>>>>>> You guys have given me plenty of time and advice -- I appreciate
> > >> it
> > >>>>>>>>> very
> > >>>>>>>>> much.
> > >>>>>>>>> I have a signal generator... an old Eico 324 and a qrpkits
> > signal
> > >>>>>>>>> injector/tracer (http://www.qrpkits.com/tracerinjector.html)
> > >> which
> > >>>>>>> may
> > >>>>>>>>> work
> > >>>>>>>>> also, so I can try what you are suggesting. As far as marker
> > >> signals
> > >>>>>>>>> go:
> > >>>>>>>>> I
> > >>>>>>>>> get a 20+ db marker signal at 1.900 mhz when adjusting the L41
> > >> for a
> > >>>>>>>>> peak,
> > >>>>>>>>> but at 14.175 mhz, the marker signal is only S7.
> > >>>>>>>>>
> > >>>>>>>>> What ever took out the L41 (remember I said the secondary
> > winding
> > >> was
> > >>>>>>>>> open
> > >>>>>>>>> -- a inch of the wire was missing, but the windings were intact
> > >> and
> > >>>>>>> not
> > >>>>>>>>> burnt), probably also took out something else, which is
> > >> continuing to
> > >>>>>>>>> be
> > >>>>>>>>> a
> > >>>>>>>>> problem. Before rewinding the L41, I had virtually no signal --
> > >> after
> > >>>>>>>>> replacing L41, the signal came back and is now weak. Only when I
> > >> put
> > >>>>>>>>> the
> > >>>>>>>>> antenna input at VC-1 does the signal come up to sounding like a
> > >>>>>>>>> properly
> > >>>>>>>>> operating receiver.
> > >>>>>>>>>
> > >>>>>>>>> Wish me luck and thanks again.
> > >>>>>>>>>
> > >>>>>>>>> 73,
> > >>>>>>>>> WW8X
> > >>>>>>>>> Joe
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>

> > >>>>>>>>>> On Wed, Jun 8, 2011 at 1:02 PM, W5RKL<w5rkl@> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>>> One more thing. If the Marker signal is strong, S9 or better,
> > >> then
> > >>>>>> L3
> > >>>>>>>>> and
> > >>>>>>>>>>> L4 are more than likely not the source of weak receive signals.
> > >> If
> > >>>>>> L3
> > >>>>>>>>> and/or
> > >>>>>>>>>>> L4 were the source of the problem the Marker signal would be
> > >> weak
> > >>>>>> just
> > >>>>>>>>> like
> > >>>>>>>>>>> the incoming signals are.
> > >>>>>>>>>>>
> > >>>>>>>>>>> 73s
> > >>>>>>>>>>> Mike
> > >>>>>>>>>>> W5RKL
> > >>>>>>>>>>>
> > >>>>>>>>>>>
> > >>>>>>>>>>> _____
> > >>>>>>>>>>> From: Terry Wagoner<wagstw46@>
> > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>> Sent: Wednesday, June 8, 2011 11:03 AM
> > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > >> receive
> > >>>>>>>>>>> problem
> > >>>>>>>>>>> Mike/Gordon--I do not want to abandon Joe, but I have
> > exhausted
> > >> my
> > >>>>>>>>>>> knowledge/experience with his problem. He does not have the
> > >> test
> > >>>>>>>>> equipment
> > >>>>>>>>>>> necessary to use Level diagrams so is using antenna coax to
> > >> inject
> > >>>>>>>>> signal.
> > >>>>>>>>>>> He is
> > >>>>>>>>>>> good downstream of L4/L41 with antenna coax signal applied at
> > >> VC-1.
> > >>>>>>>>>> He
> > >>>>>>>>> is
> > >>>>>>>>>>> not
> > >>>>>>>>>>> good with antenna coax signal applied at TP-1. Marker signal
> > is
> > >>>>>>>> good.
> > >>>>>>>>>> I
> > >>>>>>>>> am
> > >>>>>>>>>>> not

> > >>>>>>>>>>>> sure what the components are after TP-1. They appear to make
> > up
> > >> a
> > >>>>>>>>>>> band-pass
> > >>>>>>>>>>>> filter (perhaps broadcast band?) and I cant imagine any of
> > >> these
> > >>>>>>>>> failing
> > >>>>>>>>>>> open or
> > >>>>>>>>>>>> shunting signal to ground. Appreciate it if you guys could add
> > >> to
> > >>>>>>>>> what
> > >>>>>>>>> I
> > >>>>>>>>>>> have
> > >>>>>>>>>>>> suggested and/or take off and run with this one. 73s Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>>> _____
> > >>>>>>>>>>>> From: Terry Wagoner<wagstw46@>
> > >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>> Sent: Wed, June 8, 2011 11:53:51 AM
> > >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > >> receive
> > >>>>>>>>>>> problem
> > >>>>>>>>>>>> Joe--If the Marker is "buzzing" the speaker with AF gain wide
> > >> open
> > >>>>>>> I
> > >>>>>>>>> would
> > >>>>>>>>>>> say
> > >>>>>>>>>>>> that L4 and L41 are ok. On my TS-830 I get about 10 over S-9
> > on
> > >> 80,
> > >>>>>>>>> 40,
> > >>>>>>>>> 20
> > >>>>>>>>>>> with
> > >>>>>>>>>>>> driver peaked. Maybe around S9 to 5 over on the higher
> > >> frequencies.
> > >>>>>>>>> In
> > >>>>>>>>> all
> > >>>>>>>>>>> cases
> > >>>>>>>>>>>> I need to turn down the AF gain when Marker is on and Drive is
> > >>>>>>>>> peaked.
> > >>>>>>>>>>>> 1. There are 3 possible failure modes 1. Open signal path 2.
> > >>>>>>> Shorted
> > >>>>>>>>> or
> > >>>>>>>>>>> Shunted
> > >>>>>>>>>>>> signal path 3. Intermittent signal path (doesnt fit your
> > >> symptoms)
> > >>>>>>>>>>>> 2. We have determined that signal path from Marker to Speaker
> > >> is
> > >>>>>>>>>>> good/normal.

> > >>>>>>>>>>>> 3. We have determined that signal path from VC-1 is
> > good/normal
> > >>>>>>>>> (including
> > >>>>>>>>>>> AGC
> > >>>>>>>>>>>> action?)
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> 4. We have determined that signal injected at TP-1 produces
> > >>>>>>>>> significantly
> > >>>>>>>>>>> weaker
> > >>>>>>>>>>>> output. What components and what failure mode are in path from
> > >> TP-1
> > >>>>>>>> to
> > >>>>>>>>>>> VC-1?
> > >>>>>>>>>>>> 5. L4/L41 share path with Marker and antenna signal and Marker
> > >> is
> > >>>>>>>> good
> > >>>>>>>>>>>> therefore L4/L41 are good.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> 6. When you apply coax signal to TP-1 you say signals are much
> > >>>>>> weaker
> > >>>>>>>>> than
> > >>>>>>>>>>> when
> > >>>>>>>>>>>> touched to VC-1. As I mentioned the coupling caps and what I
> > >>>>>> believe
> > >>>>>>>>> are
> > >>>>>>>>>>>> band-pass components (probably broadcast band?) are the only
> > >>>>>>> components
> > >>>>>>>>> in
> > >>>>>>>>>>> path
> > >>>>>>>>>>> >from TP-1 to L4/L41. These components typically dont go bad.
> > >> These
> > >>>>>>>>>>> components
> > >>>>>>>>>>>> are not in the circuit when you use the Marker.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> 7. So, is it possible that something is shunting/shorting the
> > >>>>>> signal
> > >>>>>>>>> to
> > >>>>>>>>>>> ground
> > >>>>>>>>>>>> at TP-1?
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> 8. Can you unplug Connector 3 carefully and then re-apply coax
> > >>>>>> signal
> > >>>>>>>>> to
> > >>>>>>>>>>> TP-1?
> > >>>>>>>>>>>> If signal comes up to near same as when touched at VC-1 then
> > >> you
> > >>>>>> know
> > >>>>>>>>>>> coupling
> > >>>>>>>>>>>> caps and band-pass filter components are all good. The fault

> > >> then
> > >>>>>> has
> > >>>>>>>>> to
> > >>>>>>>>>> be
> > >>>>>>>>>>>> something shunting the signal to ground upstream of TP-1. If
> > >> signal
> > >>>>>>>>> does
> > >>>>>>>>>> not
> > >>>>>>>>>>>> come up, then coupling caps, bandpass filter components are
> > >>>>>> shunting
> > >>>>>>>>>> signal to
> > >>>>>>>>>>>> ground.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> 9. You could unplug and clean Ant Relay contacts. Normal
> > >> failure
> > >>>>>> here
> > >>>>>>>>> is
> > >>>>>>>>>> bad
> > >>>>>>>>>>>> contacts which could cause weak and/or intermittent signal
> > with
> > >>>>>> coax
> > >>>>>>>>>> connected
> > >>>>>>>>>>>> to rear chassis so-239. Would not expect bad contacts at Ant
> > >> Relay
> > >>>>>>>> RL-1
> > >>>>>>>>> to
> > >>>>>>>>>> shunt
> > >>>>>>>>>>>> signal to ground and affect any signal applied at TP-1.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> ACTION: Unplug Connector 3 and re-apply coax signal to TP-1
> > and
> > >>>>>>>> report
> > >>>>>>>>>> back.
> > >>>>>>>>>>>> 73s Terry
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> _____
> > >>>>>>>>>>>> From: Joe Loverti<ww8x.joe@>
> > >>>>>>>>>>>> To: TS-520_820_530_830@...m
> > >>>>>>>>>>>> Sent: Wed, June 8, 2011 10:53:26 AM
> > >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > >> receive
> > >>>>>>>>>> problem
> > >>>>>>>>>>>> Terry:
> > >>>>>>>>>>>> At 14.175 mhz with the drive peaked, I get an S7 calibrator
> > >>>>>> reading.
> > >>>>>>>>>> Quite
> > >>>>>>>>>>>> different than I get 1.9 mhz -- you're correct, it buzzes the
> > >>>>>>>> speaker.
> > >>>>>>>>>>>> I'll

> > >>>>>>>>>>>> try your other suggestions when I get a chance later on this
> > >>>>>> evening.
> > >>>>>>>> I
> > >>>>>>>>>>>> probably should think about checking the relay as Dave
> > >> suggested.
> > >>>>>>>>>>>> One other thing that may be related, is that when I'm on a
> > >> strong
> > >>>>>>>>> signal
> > >>>>>>>>>>> the
> > >>>>>>>>>>>> S-meter fades. In other words, as it is now the strongest
> > >> signals
> > >>>>>> are
> > >>>>>>>>>>> around
> > >>>>>>>>>>>> S7 or so... when I tune on them by watching the S meter, after
> > >> a
> > >>>>>> few
> > >>>>>>>>>>> seconds
> > >>>>>>>>>>>> the S meter drops off and comes back up and drops off. When I
> > >>>>>> connect
> > >>>>>>>>>>> the
> > >>>>>>>>>>>> antenna to VC-1 lug the S meter does not fade -- nor does it
> > >> fade
> > >>>>>> on
> > >>>>>>>>>>> the
> > >>>>>>>>>>>> calibrator signal.
> > >>>>>>>>>>>> 73,
> > >>>>>>>>>>>> WW8X
> > >>>>>>>>>>>> Joe
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> On Wed, Jun 8, 2011 at 6:37 AM, Terry Wagoner<wagstw46@>
> > >>>>>>>>> wrote:
> > >>>>>>>>>>>> Joe--Normal failure at Connector 3 Pin 3 would be a loose or
> > >>>>>>>>>>> intermittent
> > >>>>>>>>>>>> connection and not a short to ground. So if signal is weak
> > >> applied
> > >>>>>>>>> at
> > >>>>>>>>>>> TP-1
> > >>>>>>>>>>>> it
> > >>>>>>>>>>>> points downstream from there. Only place you worked was at L4
> > >> and
> > >>>>>>>>> L41.
> > >>>>>>>>>>>> What is confusing me is --Are you getting good marker signal?
> > >> Have
> > >>>>>>>>> you
> > >>>>>>>>>>>> tried it
> > >>>>>>>>>>>> on bands other than 1.9?
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> If you are getting 20 over marker signal and can peak L41
> > your

> > >>>>>>>> rewind
> > >>>>>>>>>> and
> > >>>>>>>>>>>> re-solder sounds good.
> > >>>>>>>>>>>
> > >>>>>>>>>>>> With 20 over marker signal on 1.9 you should want to turn AF
> > >> gain
> > >>>>>>>> down
> > >>>>>>>>>> as
> > >>>>>>>>>>>> volume
> > >>>>>>>>>>>> would be rattling the speaker. Same for any other band. If
> > >> this is
> > >>>>>>>>> true
> > >>>>>>>>>>>> then you
> > >>>>>>>>>>>> know L4 and L41 are ok. I would try marker on 20 (14.175)
> > >> meters.
> > >>>>>>>> With
> > >>>>>>>>>> it
> > >>>>>>>>>>>> on
> > >>>>>>>>>>>> peak the drive for max s-meter reading. If you dont want to
> > >> reach
> > >>>>>>>> for
> > >>>>>>>>> AF
> > >>>>>>>>>>>> control
> > >>>>>>>>>>>> to turn down the volume then adequate marker signal is not
> > >> passing
> > >>>>>>>>>> L4/L41.
> > >>>>>>>>>>>> Only other components in signal path between TP-1 and L4/L41
> > >> are
> > >>>>>>>>>> coupling
> > >>>>>>>>>>>> caps
> > >>>>>>>>>>>> C1 and C3 and associated filter network caps/coils. Would be
> > >> very
> > >>>>>>>> rare
> > >>>>>>>>>> for
> > >>>>>>>>>>>> any
> > >>>>>>>>>>>> of these to fail.
> > >>>>>>>>>>>
> > >>>>>>>>>>>> I guess you could take a jumper from Pin 2 of Connector 4 and
> > >>>>>> inject
> > >>>>>>>>>> your
> > >>>>>>>>>>>> marker
> > >>>>>>>>>>>> signal at stationary plates of VC-1 and see if marker signal
> > >>>>>>>> increases
> > >>>>>>>>>>>> significantly?
> > >>>>>>>>>>>
> > >>>>>>>>>>>> Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>>> _____
> > >>>>>>>>>>>> From: Joe Loverti<ww8x.joe@>

> > >>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>> Sent: Tue, June 7, 2011 11:42:42 PM
> > >>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] TS-830S closing in on low
> > >>>>>> receive
> > >>>>>>>>>>> problem
> > >>>>>>>>>>>>> Terry:
> > >>>>>>>>>>>>> Interesting. Touching the antenna to TP-1 drops the signal
> > way
> > >>>>>> down.
> > >>>>>>>>> So,
> > >>>>>>>>>>> I
> > >>>>>>>>>>>>> guess I still have a problem with L4 or L41? I adjusted the
> > >> L41 to
> > >>>>>>>>>>> Gordon's
> > >>>>>>>>>>>>> suggestion and was able to get a 20+ db calibrator signal
> > >> reading
> > >>>>>> at
> > >>>>>>>>>>>>> 1.900mhz by turning its slug slowly. Which makes me think I
> > >> did OK
> > >>>>>>>>> with
> > >>>>>>>>>>> the
> > >>>>>>>>>>>>> rewinding. I don't think rewinding it again would make any
> > >>>>>>>> difference?
> > >>>>>>>>> I
> > >>>>>>>>>>> am
> > >>>>>>>>>>>>> certainly willing to do that if you think it would be
> > helpful.
> > >> The
> > >>>>>>>> L4
> > >>>>>>>>>>> was a
> > >>>>>>>>>>>>> replacement Gordon sent me and have no reason to believe it's
> > >> not
> > >>>>>>>>>>> working.
> > >>>>>>>>>>>>> I
> > >>>>>>>>>>>>> checked it for continuity and it seemed fine. BTW, I ordered
> > a
> > >>>>>>>> NTE222
> > >>>>>>>>>>> and a
> > >>>>>>>>>>>>> replacement for D1and D2 on the RF board, but haven't
> > received
> > >>>>>> them
> > >>>>>>>>> yet.
> > >>>>>>>>>>> At
> > >>>>>>>>>>>>> this point I think I'll just save them as spares, because as
> > >> you
> > >>>>>>>>> state,
> > >>>>>>>>>>> Q1
> > >>>>>>>>>>>>> and D2 are good.
> > >>>>>>>>>>>>>

> > >>>>>>>>>>>>> It was great to hear the receive come back alive when
> > touching
> > >> the
> > >>>>>>>>>>>> antenna
> > >>>>>>>>>>>>> to VC-1, now I just have to come up with a permanent fix.
> > Baby
> > >>>>>> steps
> > >>>>>>>>> :□)
> > >>>>>>>>>>>>> Thanks,
> > >>>>>>>>>>>>> 73
> > >>>>>>>>>>>>> WW8X
> > >>>>>>>>>>>>> Joe
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> On Tue, Jun 7, 2011 at 10:48 PM, Terry Wagoner<wagstw46@
> > >>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>>> Joe--When you touch center conductor of your antenna coax to
> > >>>>>>>>>>>> stationary
> > >>>>>>>>>>>>>> plate
> > >>>>>>>>>>>>>> lugs of VC-1 or VC-2 you have bypassed the new L4 and
> > rewound
> > >> L41
> > >>>>>>>>>>>>>> transformer.
> > >>>>>>>>>>>>>> You are down stream of them. You are coupling signals
> > >> directly to
> > >>>>>>>>> the
> > >>>>>>>>>>>>>> gate
> > >>>>>>>>>>>>>> of
> > >>>>>>>>>>>>>> receive RF amp Q1. It proves Q1 and D2 are good. (I believe
> > >> you
> > >>>>>>>>>>>> replaced
> > >>>>>>>>>>>>>> both?)
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> Try touching ant coax center conductor to TP-1 on the RF
> > >> board.
> > >>>>>>>> You
> > >>>>>>>>>>>> will
> > >>>>>>>>>>>>> be
> > >>>>>>>>>>>>>> on
> > >>>>>>>>>>>>>> "input" side of L4 and L41. If your signal is weak when
> > >> touching
> > >>>>>>>>> TP-1
> > >>>>>>>>>>>> it
> > >>>>>>>>>>>>>> means
> > >>>>>>>>>>>>>> something wrong with either L4 and/or L41.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> If signal still strong at TP-1 then move to Pin 3 labeled
> > ANT
> > >> on
> > >>>>>>>>>>>>> Connector

> > >>>>>>>>>>>>>> 3 of
> > >>>>>>>>>>>>>> RF board. Gently wiggle Connector 3 while applying center
> > >>>>>> conductor
> > >>>>>>>>> of
> > >>>>>>>>>>>>>> antenna
> > >>>>>>>>>>>>>> coax. If signal comes and goes you have bad solder joint or
> > >> bad
> > >>>>>>>>> foil
> > >>>>>>>>>>> at
> > >>>>>>>>>>>>>> that
> > >>>>>>>>>>>>>> connector.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> Use your schematic and keep working your way back to your
> > >> SO-239
> > >>>>>>>>>>>>> connector
> > >>>>>>>>>>>>>> on
> > >>>>>>>>>>>>>> rear panel. Next place would be RF attenuator switch. Then
> > >>>>>> Xverter
> > >>>>>>>>>>>>>> connector
> > >>>>>>>>>>>>>> switch , then antenna relay RL-1.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> I had asked you about Xtal Calibrator or Marker signal and I
> > >>>>>>>>> believe
> > >>>>>>>>>>> you
> > >>>>>>>>>>>>>> said it
> > >>>>>>>>>>>>>> was down as well. If Xtal calibrator signal is strong then
> > L4
> > >> and
> > >>>>>>>>> L41
> > >>>>>>>>>>> are
> > >>>>>>>>>>>>>> OK.
> > >>>>>>>>>>>>>> Terry-K9TW
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> _____
> > >>>>>>>>>>>>>> From: ww8x_joe<ww8x.joe@>
> > >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>>> Sent: Tue, June 7, 2011 10:05:11 PM
> > >>>>>>>>>>>>>> Subject: [TS-520_820_530_830] TS-830S closing in on low
> > >> receive
> > >>>>>>>>>>> problem
> > >>>>>>>>>>>>>> I hope you guys aren't tired of this topic yet? Anyway, if
> > >> you've
> > >>>>>>>>> been
> > >>>>>>>>>>>>>> reading
> > >>>>>>>>>>>>>> the threads related to my adventures with my low receive
> > >> problem,
> > >>>>>>>> I
> > >>>>>>>>>>>>>> discovered
> > >>>>>>>>>>>>>> an important clue.

> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> When I take an 18 inch test lead and connect it to one of
> > the
> > >>>>>>> lugs
> > >>>>>>>> on
> > >>>>>>>>>>>>>>> variable
> > >>>>>>>>>>>>>>> capacitor VC1 I hear fairly loud signals. When I connect the
> > >> same
> > >>>>>>>>> test
> > >>>>>>>>>>>>> lead
> > >>>>>>>>>>>>>>> to
> > >>>>>>>>>>>>>>> my outside antenna feedline to the one of the lugs on VC1
> > the
> > >>>>>>>> signals
> > >>>>>>>>>>>>> jump
> > >>>>>>>>>>>>>>> up
> > >>>>>>>>>>>>>>> very loud with normal noise and S meter readings at S9 and
> > >> above
> > >>>>>>> --
> > >>>>>>>>>>> just
> > >>>>>>>>>>>>> as
> > >>>>>>>>>>>>>>> the
> > >>>>>>>>>>>>>>> set used to have before my problems started. Here's the
> > >> curious
> > >>>>>>>>> thing:
> > >>>>>>>>>>>>> When
> > >>>>>>>>>>>>>>> I
> > >>>>>>>>>>>>>>> connect the same test lead that's connected to the antenna
> > to
> > >> the
> > >>>>>>>>>>> center
> > >>>>>>>>>>>>> of
> > >>>>>>>>>>>>>>> the
> > >>>>>>>>>>>>>>> SO239 antenna jack on the rear of the rig... the signals
> > drop
> > >> way
> > >>>>>>>> off
> > >>>>>>>>>>> as
> > >>>>>>>>>>>>> if
> > >>>>>>>>>>>>>>> there's hardly an antenna connected. So in addition to
> > having
> > >> to
> > >>>>>>>>>>> rewind
> > >>>>>>>>>>>>> the
> > >>>>>>>>>>>>>>> L41
> > >>>>>>>>>>>>>>> (which I've already done), there apparently is also
> > something
> > >>>>>>> going
> > >>>>>>>>>>> on

> > >>>>>>>>>>>>> with
> > >>>>>>>>>>>>> my
> > >>>>>>>>>>>>> receive. I think I'm on to something. What do you think?
> > >>>>>>>>>>>>> Thanks,
> > >>>>>>>>>>>>> WW8X
> > >>>>>>>>>>>>> Joe
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
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> > >>>>>>>>>>>>> Yahoo! Groups Links
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> > >>>>>>
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> > >>>>>> Yahoo! Groups Links
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> > others or forwarding without expressed permission is strictly prohibited. If
> > you are not the intended recipient, please contact the sender and delete all
> > copies.
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> > Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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31776. VBT Oscillator Adjust w/o VBT-1 Test Jig

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 11:37:32 UTC
From: Terry Wagoner
Topic: 31776 Message: 31776

Chris Parnell and others;

Chris I forgot to mention that when using the alternate method to perform Step 23 on page 38 of TS-830 service manual that the accepted waveform is mis-labled. You want a sinusoidal pattern that cleanly crosses at zero. You adjust to obtain a null at zero crossing. The pattern marked as "A-OK" is not correct. The pattern marked "NG" is what you want.

There is another method that Kenwood describes in Service Bulletin No. 873 (15-7-1983) that employs 2 audio generators (essentially a 2-tone test). The test method as described will work, but the adjustment steps will not as they are for a TS-930 and not a TS-830. Service Bulletin N0. 873 is readily available on web.

I think for average owner the method described by Richard Measures in the Survival Guide works well. Just takes multiple adjustments to arrive a best filter overlay.

As point of reference I have 2 full filtered rigs and my as left setting of VBT oscillator is 8375.121 and 8375.071. I dont know if being in + direction is norm or not. I do know that just setting to 8375.00 does not optimize VBT.

Chris-I would be curious to know what method(s) you use and your experience/results. 73s Terry_ K9TW

31777. Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 16:50:41 UTC
From: Joe Loverti
Topic: 31735 Message: 31777

Terry/Gordon:
I've worked on a number of those venerable AA5's myself. These transceiver's make those look like child's play!

Attached is a diagram of what I did to rewind the L41. I rewound it with the primary on the bottom of the spindle and the secondary on the upper part. There was some overlap of windings, but not excessive. The ends were crisscrossed however -- and at the time thought it may be a problem. Gordon says its normal for those to crisscross.

73,
WW8X
Joe

[Non-text portions of this message have been removed]

31778. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 17:40:36 UTC
From: n6wk@n6wk.com
Topic: 31735 Message: 31778

Joe,
No attachment came through. Can you send it to me directly?

thanks,
Gordon

On 6/9/2011 9:50 AM, Joe Loverti wrote:
>
> Terry/Gordon:
> I've worked on a number of those venerable AA5's myself. These
> transceiver's
> make those look like child's play!
>
> Attached is a diagram of what I did to rewind the L41. I rewound it
> with the
> primary on the bottom of the spindle and the secondary on the upper part.
> There was some overlap of windings, but not excessive. The ends were
> crisscrossed however -- and at the time thought it may be a problem.
> Gordon
> says its normal for those to crisscross.
>
> 73,
> WW8X
> Joe
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31779. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 17:53:36 UTC
From: Terry Wagoner
Topic: 31735 Message: 31779

Joe--I have never rewound one and wont be hurt if dont get the opportunity! I would certainly go by what Gordon is doing because he has seen the factory winding during autopsy and has had multiple operational successes rewinding these micro xfmrs.

When you remove it would be good to measure resistance of primary and secondary windings at the pins before you remove metal cover. Assumes you can read low ohms reasonably accurately? This will tell if your windings are open circuited. I doubt short circuited as you havent had any source of high current to do that. I would think open circuit or high resistance connection from winding to pins would be more likely reason for weak signal versus inappropriate degree of coupling between the two windings?

Maybe Gordon can give you the as left winding resistances you should have or advise if it is feasible to read them? I recently bought an ESR meter to test capacitors and it has low ohms range of .01 to 99 ohms. With most DMM s best you could do is check continuity and not be able to read low ohms sufficiently accurately. In old days you would use a Wheatstone or Kelvin bridge. Not many hams have those laying around.

I always like to understand failure if I can so I dont repeat same sins! Anxious to hear what you find.
Terry

From: Joe Loverti <ww8x.joe@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 9, 2011 12:50:41 PM
Subject: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Terry/Gordon:
I've worked on a number of those venerable AA5's myself. These transceiver's make those look like child's play!

Attached is a diagram of what I did to rewind the L41. I rewound it with the primary on the bottom of the spindle and the secondary on the upper part. There was some overlap of windings, but not excessive. The ends were crisscrossed however -- and at the time thought it may be a problem. Gordon says its normal for those to crisscross.

73,
WW8X
Joe

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31780. Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 19:42:23 UTC
From: Bill
Topic: 31719 Message: 31780

Hi Dave,

My opinion hasn't changed. My opinion is that the 9 volts applied to the ALC OR using the controls already on the radio will work. I only recently even heard about forcing the ALC. When I tried it, sure enough... it worked. And I noticed I had an extra nine volt battery, some wires, and a pot to *put* somewhere. That's why I choose to use the controls that are already in the radio. If you already have a neat enclosure that contains your battery and pot and a wiring harness all made up then using it will work just as well as the controls that Kenwood supplied built-in to the radio.

It's all good.

73,

Bill KU8H

31781. Re: [TS-520_820_530_830] Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 19:59:35 UTC
From: John Becker
Topic: 31735 Message: 31781

At 11:50 AM 6/9/2011, you wrote:
>Attached is a diagram of what I did to rewind the L41.

This is a plain text list.

All HTML coding is removed (thank GOD) from any post
before sent to list members.

Try sending direct.

31782. Re: [TS-520_820_530_830] Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 20:23:29 UTC
From: John Becker
Topic: 31719 Message: 31782

I think I'm missing something.

Why do I need to do this? It's been working fine since
that day I got it many many years ago.

John, W0JAB

31783. Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 21:29:58 UTC
From: w5rkl
Topic: 31719 Message: 31783

Hello John,

I assume you are referring to the power reduction 9 volt battery and pot circuit. Unless you are considering running low power on sideband then you don't need to do any of this.

However, if you are considering running low power sideband then before using the circuit I recommend learning how the circuit works to control power output. It's a simple way to control power output but it can, if one is not familiar with how the circuit works, be confusing. Knowing and understanding when and how ALC is produced, how ALC controls the IF amplifier gain will make it much easier to understand how this simple 9 volt battery and pot circuit connected to the Remote ALC connection works.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Becker <jab@...> wrote:
>
> I think I'm missing something.
>
> Why do I need to do this? It's been working fine since
> that day I got it many many years ago.
>
> John, W0JAB
>

31784. TS-530S & TS-820S for sale on QTH.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 18:23:17 UTC
From: MD
Topic: 31784 Message: 31784

I have a TS-530S and a TS-820S listed on QTH.com if anyone is interested.

http://swap.qth.com/view_ad.php?counter=916697

http://swap.qth.com/view_ad.php?counter=916695

73
Marty
N5KBP

31785. hello gents i am jon kg6nxx

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 21:23:31 UTC
From: jon
Topic: 31785 Message: 31785

i just joined back in due to computer problems

i just gotten another 830 and it too has very very low receive on it only local signals are heard what could be doing this?

thank you very much 73s and standing by.

31786. Fwd: RE: Strong signals leaking into what is heard on another frequency !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 15:58:50 UTC
From: Prof. Arnaldo Coro Antich
Topic: 31786 Message: 31786

-------- Original Message --------
Subject: RE: Strong signals leaking into what is heard on another frequency !!!
Date: Wed, 08 Jun 2011 11:09:25 -0400
From: Prof. Arnaldo Coro Antich <inforhc@...>
To: TS-520_820_530_830@yahoogroups.com

Hi amigos !
A very annoying problem is affecting my old TS820S ...
Here is how it happens... a local amateur is on 7045 kHz, with a strong signal...
I am listening to a far away station on 7060, his signal is an S7, but the audio from the 7060 station has as a background the audio from the station on 7045 kHz...
And NO, the Noise Limiter is NOT ON !!!
Same thing happens when I try to work QRP stations on 14060 and the ARRL CW drill is on around 14047... the ARRL practice is superimposed atop the weak QRP station !!!
Also, and as an additional problem, the digital readout is stuch reading 9.000. and the the last digits moves from 0 to 9 as I tune the transceiver !!!

Any ideas or suggestions on how to repair - fix both problems will be much appreciated...
BTW, following a recent thread, I can make the TS820-S go down to 500 milliWatts very easily ... transforming it into a terribly inefficient QRP rig !!!

73 and DX
Arnie Coro
CO2KK

[Non-text portions of this message have been removed]

31787. RE: Strong signals leaking into what is heard on another frequency !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-08 15:09:25 UTC
From: Prof. Arnaldo Coro Antich
Topic: 31787 Message: 31787

Hi amigos !
A very annoying problem is affecting my old TS820S ...
Here is how it happens... a local amateur is on 7045 kHz, with a strong signal...
I am listening to a far away station on 7060, his signal is an S7, but the audio from the 7060 station has as a background the audio from the station on 7045 kHz...
And NO, the Noise Limiter is NOT ON !!!
Same thing happens when I try to work QRP stations on 14060 and the ARRL CW drill is on around 14047... the ARRL practice is superimposed atop the weak QRP station !!!
Also, and as an additional problem, the digital readout is stuch reading 9.000. and the the last digits moves from 0 to 9 as I tune the transceiver !!!

Any ideas or suggestions on how to repair - fix both problems will be much appreciated...
BTW, following a recent thread, I can make the TS820-S go down to 500 milliWatts very easily ... transforming it into a terribly inefficient QRP rig !!!

73 and DX
Arnie Coro
CO2KK

31788. Re: [TS-520_820_530_830] hello gents i am jon kg6nxx

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 22:00:18 UTC
From: Bob Macklin
Topic: 31785 Message: 31788

If you have two units doing the same thing are you sure you do not have antenna problem?

Everyone that works on equipment like this needs a simple signal generator like a Heathkit SG-8 or IG-102.

Then if you are not a scope user a Heathkit IT-12 signal tracer can be a help.

All three of these item sell cheaply on eBay. It might also be nice to have a real VTVM.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "jon" <kg6nxx@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Thursday, June 09, 2011 2:23 PM
Subject: [TS-520_820_530_830] hello gents i am jon kg6nxx

>i just joined back in due to computer problems
>
> i just gotten another 830 and it too has very very low receive on it only
> local signals are heard what could be doing this?
>
>
> thank you very much 73s and standing by.
>
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> ------------------------------------
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> Yahoo! Groups Links
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31789. Re: Strong signals leaking into what is heard on another frequency !!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-09 22:54:54 UTC
From: Bill
Topic: 31787 Message: 31789

Hi Arnie,

Yes... nobody said anything about about the wonderful efficiency of one of these transmitters operating QRP! That's good because the efficiency is awful compared to even a purpose built tube-final QRP TX.

Good luck with your 820s.

73,

Bill KU8H

31790. Re: [TS-520_820_530_830] VBT Oscillator Adjust w/o VBT-1 Test Jig

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 00:05:45 UTC
From: Chris Parnell
Topic: 31776 Message: 31790

Hi Terry,

Will let you know when I get around to doing the VBT, what my findings are.

Thanks
Chris, ZL1CDP

On 9/06/2011, at 11:37 PM, Terry Wagoner wrote:

> Chris Parnell and others;
>
> Chris I forgot to mention that when using the alternate method to perform Step 23 on page 38 of TS-830 service manual that the accepted waveform is mis-labled. You want a sinusoidal pattern that cleanly crosses at zero. You adjust to obtain a null at zero crossing. The pattern marked as "A-OK" is not correct. The pattern marked "NG" is what you want.
>
> There is another method that Kenwood describes in Service Bulletin No. 873 (15-7-1983) that employs 2 audio generators (essentially a 2-tone test). The test method as described will work, but the adjustment steps will not as they are for a TS-930 and not a TS-830. Service Bulletin N0. 873 is readily available on web.
>
> I think for average owner the method described by Richard Measures in the Survival Guide works well. Just takes multiple adjustments to arrive a best filter overlay.
>
> As point of reference I have 2 full filtered rigs and my as left setting of VBT oscillator is 8375.121 and 8375.071. I dont know if being in + direction is norm or not. I do know that just setting to 8375.00 does not optimize VBT.
>
> Chris-I would be curious to know what method(s) you use and your experience/results. 73s Terry_ K9TW
>
>

[Non-text portions of this message have been removed]

31791. Re: [TS-520_820_530_830] Re: Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 00:22:12 UTC
From: Chris Parnell
Topic: 31714 Message: 31791

Hi Terry,

I did get the following suggestion, but it didn't make any difference on my set.

Hi,

i found myself exactly in the same situation: simply inject 50 mV instead of 10 mV as stated in the service manual and you will get enough meter to align it. At the end you are balancing proc on vs. proc off positions.

73's Joe.

All I see is as per my original post... (unless I have misunderstood the logic behind Joe's post).

This is where my 830 (or me) gets stuck..
Every step works until I get to the point where I turn the Proc ON and
adjust L27 for the same reading as where the PROC is off.
On adjusting L27 with the PROC ON I get no movement on the meter at this
point, and therefore cannot obtain the same ALC maximum reading.

So, even if I inject 50mV (instead of the stated 10mV in the service manual), I get "full scale deflection (in fact whacking over) with no Proc engaged" and with 50mV with Proc on, I can adjust L27 to get it to full "on-scale" meter of ALC, but my understanding according to the instructions, is that with 10mV injection you should be able to align Proc on and Proc OFF to both read the edge of the ALC scale.

So, I would love to hear from anyone as to what could be going astray here.

Cheers
Chris, ZL1CDP

On 8/06/2011, at 3:18 AM, Terry Wagoner wrote:

> Chris--Did you get an answer to this?
>
> I have not performed this step. I am stuck on Step 31 ALC adjust. I can do Step 1 and adjust VR6 for exact zero but cant do Step 2 as written with mic gain set to max as it pegs my meter hard with 5mv signal injected at mic connector. I have to reduce mic gain to get max full scale reading and then reduce it further to see 5 watt power reduction. I have found that some of these steps cant be performed as written. Because of this and test equipment limitations many(ok-some)of the fellows just perform the Sect 6 maintenance adjustments and a few select Service Manual steps. Setting voltage regulators, carrier adjustments, are all commonly done. Hard to do PLL BPA if you dont have good sweep generator and good scope. Also, spectrum analyzer is beyond reach for many. I watched an experienced kenwood tech adjust VBT oscillator by simply adjusting TC-2 to exactly 8375.0 khz. That is ok if it was grossly out, but real adjustment is described on Pg 38 with two methods that are more complex. I have used these steps and my VBT oscillator in 2 different

830s is set from about 50 to 100hz higher than 8375.00 to align the filter passband windows.
>
> If I ever get past Steps 31 I will move on to Step 32 and give you my results. If you get it figured out I would appreciate you sharing it with me. Good Luck --Terry K9TW
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi all,
> >
> > After aligning the rest of my TS-830s I went to do the Speech Processor
> > alignment as per pages 40 & 41 of the Service Manual.
> >
> > States:
> >
> > SG SW = Off
> > Mode = USB
> > Meter = Comp
> > Mic Gain = MIN
> > Proc = ON
> >
> > Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to
> > Send and adjust Comp Level control until the meter reading is obtained.
> > Adjust L26 for Max. Meter Reading.
> >
> > Done all of the above and all is well.
> >
> > Next step:
> > Set VR5 on the IF unit fully clockwise and adjust the COMP level control
> > until the meter indicates S-1. Set the AG output to 50 mV
> > VR5 Meter indicator 20 dB.
> >
> > Done all of the above and all is well.
> >
> > Next step:
> > Meter to ALC, Adjust Mic-Gain control until the maximum meter reading is
> > obtained.
> > L276 Maximum meter reading.
> >
> > Done all of the above and all is well
> >
> > Next step:
> > Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG
> > output to 10 mV.
> > Adjust the MIC GAIN control until until the meter indicates the maximum
> > on-scale ALC reading. Set the PROC to ON.
> > L27 - Adjust until the same meter reading is obtained (MAX ALC on-scale)
> > Mic input providing the SAME ALC meter reading 10 mV (+/- 3dB).
> >
> >
> > This is where my 830 (or me) gets stuck?..
> > Every step works until I get to the point where I turn the Proc ON and

> > adjust L27 for the same reading as where the PROC is off.
> > On adjusting L27 with the PROC ON I get no movement on the meter at this
> > point, and therefore cannot obtain the same ALC maximum reading.
> >
> > Any help would be gratefully appreciated.
> >
> > Thanks
> > Chris, ZL1CDP
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31792. Re: Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 14:27:25 UTC
From: w5rkl
Topic: 31714 Message: 31792

Chris,

Have you tried lowering the signal level with the processor ON to the point where the indication just starts to show then perform the adjustment? You may have to alternate the processor ON and OFF settings while varying the signal level when making the adjustment so the ON and OFF settings are equal.

Just my 2 cents worth.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> I did get the following suggestion, but it didn't make any difference on my set.
>
> Hi,
>
> i found myself exactly in the same situation: simply inject 50 mV instead of 10 mV as stated in the service manual and you will get enough meter to align it. At the end you are balancing proc on vs. proc off positions.
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> point, and therefore cannot obtain the same ALC maximum reading.
>
> So, even if I inject 50mV (instead of the stated 10mV in the service manual), I get "full scale deflection (in fact whacking over) with no Proc engaged" and with 50mV with Proc on, I can adjust L27 to get it to full "on-scale" meter of ALC, but my understanding according to the instructions, is that with 10mV injection you should be able to align Proc on and Proc OFF to both read the edge of the ALC scale.
>
>
> So, I would love to hear from anyone as to what could be going astray here.
>
> Cheers

> Chris, ZL1CDP
>
>
> On 8/06/2011, at 3:18 AM, Terry Wagoner wrote:
>
> > Chris--Did you get an answer to this?
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> > I have not performed this step. I am stuck on Step 31 ALC adjust. I can do Step 1 and adjust VR6 for exact zero but cant do Step 2 as written with mic gain set to max as it pegs my meter hard with 5mv signal injected at mic connector. I have to reduce mic gain to get max full scale reading and then reduce it further to see 5 watt power reduction. I have found that some of these steps cant be performed as written. Because of this and test equipment limitations many(ok-some)of the fellows just perform the Sect 6 maintenance adjustments and a few select Service Manual steps. Setting voltage regulators, carrier adjustments, are all commonly done. Hard to do PLL BPA if you dont have good sweep generator and good scope. Also, spectrum analyzer is beyond reach for many. I watched an experienced kenwood tech adjust VBT oscillator by simply adjusting TC-2 to exactly 8375.0 khz. That is ok if it was grossly out, but real adjustment is described on Pg 38 with two methods that are more complex. I have used these steps and my VBT oscillator in 2 different 830s is set from about 50 to 100hz higher than 8375.00 to align the filter passband windows.
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> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > >
> > > Hi all,
> > >
> > > After aligning the rest of my TS-830s I went to do the Speech Processor
> > > alignment as per pages 40 & 41 of the Service Manual.
> > >
> > > States:
> > >
> > > SG SW = Off
> > > Mode = USB
> > > Meter = Comp
> > > Mic Gain = MIN
> > > Proc = ON
> > >
> > > Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to
> > > Send and adjust Comp Level control until the meter reading is obtained.
> > > Adjust L26 for Max. Meter Reading.
> > >
> > > Done all of the above and all is well.
> > >
> > > Next step:
> > > Set VR5 on the IF unit fully clockwise and adjust the COMP level control
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> > > VR5 Meter indicator 20 dB.
> > >

> > > Done all of the above and all is well.
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> > > Next step:
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> > > L276 Maximum meter reading.
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> > > Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG
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> > > Adjust the MIC GAIN control until until the meter indicates the maximum
> > > on-scale ALC reading. Set the PROC to ON.
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> > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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31793. Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 15:22:06 UTC
From: Terry Wagoner
Topic: 31735 Message: 31793

Joe--What is the approx diameter of the bobbin? With that I can calc approx resistance for primary and secondary based on 42 guage wire having nominal resistance of .1389 ohms per inch. Did you get my PMT note? Terry

--- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@...> wrote:
>
> Terry/Gordon:
> I've worked on a number of those venerable AA5's myself. These transceiver's
> make those look like child's play!
>
> Attached is a diagram of what I did to rewind the L41. I rewound it with the
> primary on the bottom of the spindle and the secondary on the upper part.
> There was some overlap of windings, but not excessive. The ends were
> crisscrossed however -- and at the time thought it may be a problem. Gordon
> says its normal for those to crisscross.
>
> 73,
> WW8X
> Joe
>
>
> [Non-text portions of this message have been removed]
>

31794. Re: [TS-520_820_530_830] Re: TS520se Tx power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 14:31:29 UTC
From: John Becker
Topic: 31719 Message: 31794

At 04:29 PM 6/9/2011, you wrote:

>I assume you are referring to the power reduction 9 volt battery and pot circuit. Unless you are considering running low power on sideband then you don't need to do any of this.

The old guy that got me into this hobby (SK for many years now) once told me some 40 years ago that QRP was anything < 1KW.

thanks.

.

31795. Re: TS-830S closing in on low receive problem

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 17:26:42 UTC
From: Terry Wagoner
Topic: 31735 Message: 31795

Joe--Rough calcs for 42 guage wire indicate the following:
1/8 inch diameter bobbin--Pri = .327 ohms and Sec = 1.42 ohms
5/32 inch diameter bobbin--Pri = .408 ohms and Sec = 1.77 ohms
Terry

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> Joe--What is the approx diameter of the bobbin? With that I can calc approx resistance for primary and secondary based on 42 guage wire having nominal resistance of .1389 ohms per inch. Did you get my PMT note? Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Joe Loverti <ww8x.joe@> wrote:
> >
> > Terry/Gordon:
> > I've worked on a number of those venerable AA5's myself. These transceiver's
> > make those look like child's play!
> >
> > Attached is a diagram of what I did to rewind the L41. I rewound it with the
> > primary on the bottom of the spindle and the secondary on the upper part.
> > There was some overlap of windings, but not excessive. The ends were
> > crisscrossed however -- and at the time thought it may be a problem. Gordon
> > says its normal for those to crisscross.
> >
> > 73,
> > WW8X
> > Joe
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31796. Re: Speech Processor alignment question.

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 17:32:24 UTC
From: Terry Wagoner
Topic: 31714 Message: 31796

Chris--Let us know if Mikes suggestion works. If not, I have a rig open on the bench now that I am installing new cathode and screen resistors. If I get a chance this weekend after getting it back together I will try to perform the Processor alignment as described in the service manual. Watching 3 year old grand daughter right now and we our on our way out to garage to wash her bike! She doesnt like to work on rigs yet! 73s Terry

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> I did get the following suggestion, but it didn't make any difference on my set.
>
> Hi,
>
> i found myself exactly in the same situation: simply inject 50 mV instead of 10 mV as stated in the service manual and you will get enough meter to align it. At the end you are balancing proc on vs. proc off positions.
>
> 73's Joe.
>
> All I see is as per my original post... (unless I have misunderstood the logic behind Joe's post).
>
> This is where my 830 (or me) gets stuck..
> Every step works until I get to the point where I turn the Proc ON and
> adjust L27 for the same reading as where the PROC is off.
> On adjusting L27 with the PROC ON I get no movement on the meter at this
> point, and therefore cannot obtain the same ALC maximum reading.
>
> So, even if I inject 50mV (instead of the stated 10mV in the service manual), I get "full scale deflection (in fact whacking over) with no Proc engaged" and with 50mV with Proc on, I can adjust L27 to get it to full "on-scale" meter of ALC, but my understanding according to the instructions, is that with 10mV injection you should be able to align Proc on and Proc OFF to both read the edge of the ALC scale.
>
>
> So, I would love to hear from anyone as to what could be going astray here.
>
> Cheers
> Chris, ZL1CDP
>
>
> On 8/06/2011, at 3:18 AM, Terry Wagoner wrote:
>
> > Chris--Did you get an answer to this?
> >
> > I have not performed this step. I am stuck on Step 31 ALC adjust. I can do Step 1 and adjust VR6 for exact zero but

cant do Step 2 as written with mic gain set to max as it pegs my meter hard with 5mv signal injected at mic connector. I have to reduce mic gain to get max full scale reading and then reduce it further to see 5 watt power reduction. I have found that some of these steps cant be performed as written. Because of this and test equipment limitations many(ok-some)of the fellows just perform the Sect 6 maintenance adjustments and a few select Service Manual steps. Setting voltage regulators, carrier adjustments, are all commonly done. Hard to do PLL BPA if you dont have good sweep generator and good scope. Also, spectrum analyzer is beyond reach for many. I watched an experienced kenwood tech adjust VBT oscillator by simply adjusting TC-2 to exactly 8375.0 khz. That is ok if it was grossly out, but real adjustment is described on Pg 38 with two methods that are more complex. I have used these steps and my VBT oscillator in 2 different 830s is set from about 50 to 100hz higher than 8375.00 to align the filter passband windows.
> >
> > If I ever get past Steps 31 I will move on to Step 32 and give you my results. If you get it figured out I would appreciate you sharing it with me. Good Luck --Terry K9TW
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > >
> > > Hi all,
> > >
> > > After aligning the rest of my TS-830s I went to do the Speech Processor
> > > alignment as per pages 40 & 41 of the Service Manual.
> > >
> > > States:
> > >
> > > SG SW = Off
> > > Mode = USB
> > > Meter = Comp
> > > Mic Gain = MIN
> > > Proc = ON
> > >
> > > Connect AG output (1.5kHz, 5 mV) to the Mic Jack, Set the STBY switch to
> > > Send and adjust Comp Level control until the meter reading is obtained.
> > > Adjust L26 for Max. Meter Reading.
> > >
> > > Done all of the above and all is well.
> > >
> > > Next step:
> > > Set VR5 on the IF unit fully clockwise and adjust the COMP level control
> > > until the meter indicates S-1. Set the AG output to 50 mV
> > > VR5 Meter indicator 20 dB.
> > >
> > > Done all of the above and all is well.
> > >
> > > Next step:
> > > Meter to ALC, Adjust Mic-Gain control until the maximum meter reading is
> > > obtained.
> > > L276 Maximum meter reading.
> > >
> > > Done all of the above and all is well
> > >
> > > Next step:
> > > Set the PROC to OFF and set the COMP LEVEL control to maximum. Set the AG
> > > output to 10 mV.

> > > Adjust the MIC GAIN control until until the meter indicates the maximum
> > > on-scale ALC reading. Set the PROC to ON.
> > > L27 - Adjust until the same meter reading is obtained (MAX ALC on-scale)
> > > Mic input providing the SAME ALC meter reading 10 mV (+/- 3dB).
> > >
> > >
> > > This is where my 830 (or me) gets stuck☐..
> > > Every step works until I get to the point where I turn the Proc ON and
> > > adjust L27 for the same reading as where the PROC is off.
> > > On adjusting L27 with the PROC ON I get no movement on the meter at this
> > > point, and therefore cannot obtain the same ALC maximum reading.
> > >
> > > Any help would be gratefully appreciated.
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

31797. Looking for an AT-200

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-10 22:37:48 UTC
From: Jeramy Ross
Topic: 31797 Message: 31797

Hello all,

I am looking for a good AT-200. I have a Ten-Tec model 228
antenna tuner (w/ documentation and original box) to trade with a
willing party. The 228 is in good condition, and works great.
However, now that I have returned to having a hybrid based station
after a fling with Ten-Tec gear, I would like to have the AT-200 which
matches my TS-520S and TS-820S gear.

Thank you in advance and 73,
Jeramy W5XTL

31798. Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 19:46:20 UTC
From: pakjan830
Topic: 31798 Message: 31798

Hi all,

I have a question regarding the handling of the output impedance matching network of the TS830 or any similar rig.

I often tune my rig to 14.070 for PSK operation. Then I move down by 15 KHz to 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in that case. Is that correct or am I too cautious? If so, what would be a safe distance from the tuned frequency where I can move the VFO but not re-tune the output network. 5KHz? 2.5KHz?

vy 73 de Jan

31799. Re: [TS-520_820_530_830] Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 19:50:09 UTC
From: David Rust
Topic: 31798 Message: 31799

Jan, I was always of the opinion it never hurts to peak the drive and dip the plate, doesn't take but a second. Just insert a little carrier and tune it.
73
Dave W0DLR

[Non-text portions of this message have been removed]

31800. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 20:11:20 UTC
From: pakjan830
Topic: 31798 Message: 31800

Dave,

yup, that is what I do right now.

In a voice spectrum we'd have 2.7 KHz coming through the filter so my assumption would be that moving 2.7 KHz up or down with a CW carrier should not hurt.

Just wondering if all OMs here always re-align with every frequency change.

73, Jan DK3LJ

--- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@...> wrote:
>
> Jan, I was always of the opinion it never hurts to peak the drive and dip the plate, doesn't take but a second. Just insert a little carrier and tune it.
> 73
> Dave W0DLR
>
> [Non-text portions of this message have been removed]
>

31801. Re: [TS-520_820_530_830] Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 22:00:57 UTC
From: John Davidson
Topic: 31798 Message: 31801

My TS520 stayted in tune well enough over most bands except 80 and 10M where I really did a big QSY like 100 kHz !

y

From: pakjan830 <lategahn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, June 11, 2011 4:11:20 PM
Subject: [TS-520_820_530_830] Re: Output impedance matching network

Dave,

yup, that is what I do right now.

In a voice spectrum we'd have 2.7 KHz coming through the filter so my assumption would be that moving 2.7 KHz up or down with a CW carrier should not hurt.

Just wondering if all OMs here always re-align with every frequency change.

73, Jan DK3LJ

--- In TS-520_820_530_830@yahoogroups.com, "David Rust" <dlrust@...> wrote:
>
> Jan, I was always of the opinion it never hurts to peak the drive and dip the
>plate, doesn't take but a second. Just insert a little carrier and tune it.
> 73
> Dave W0DLR
>
> [Non-text portions of this message have been removed]
>

[Non-text portions of this message have been removed]

31802. Re: [TS-520_820_530_830] Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 22:03:37 UTC
From: John Davidson
Topic: 31798 Message: 31802

If your CW key down plate current varied much more than 5 or 10 mA with a little QSY like that, you probably have some serious antenna issues !!!!!

From: pakjan830 <lategahn@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, June 11, 2011 3:46:20 PM
Subject: [TS-520_820_530_830] Output impedance matching network

Hi all,

I have a question regarding the handling of the output impedance matching network of the TS830 or any similar rig.

I often tune my rig to 14.070 for PSK operation. Then I move down by 15 KHz to 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in that case. Is that correct or am I too cautious? If so, what would be a safe distance from the tuned frequency where I can move the VFO but not re-tune the output network. 5KHz? 2.5KHz?

vy 73 de Jan

[Non-text portions of this message have been removed]

31803. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 22:04:35 UTC
From: andy_westcott2004
Topic: 31798 Message: 31803

I don't re-tune if the frequency change is small, and 20KHz or so at 14 megs is small.

20KHz at 3.5 megs represents a larger percentage and may benefit from a bit of peaking.

In any case, it can't hurt as long as you don't whack full carrier just to tune up - in BPSK mode using DigiPan I select MODE and TUNE in the software and advance the mic gain just enough to see a deflection, which is enough to peak the rig's DRIVE whilst watching the IP, and dip the PLATE. A bit more power and you can adjust the LOAD. Very quick to do.

31804. Re: [TS-520_820_530_830] Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-11 22:04:00 UTC
From: John Becker
Topic: 31798 Message: 31804

Jan
that depends how far I have to move up or down the band
and what the meter tells me.

John, W0JAB

At 03:11 PM 6/11/2011, you wrote:
>Dave,
>
>yup, that is what I do right now.
>
>In a voice spectrum we'd have 2.7 KHz coming through the filter so my assumption would be that moving 2.7 KHz up or down with a CW carrier should not hurt.
>
>Just wondering if all OMs here always re-align with every frequency change.
>
>73, Jan DK3LJ

31805. TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 00:15:21 UTC
From: ve3gn
Topic: 23875 Message: 31805

Looking at the 830S,how can one tell the difference between the Gold Line and the regular 830S,I bought another 830S that was supposed to be the Gold Line but the only difference i can see is the chassis paint colour is a bit lighter...
Thank you,,Stan VE3GN

31806. Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 00:21:18 UTC
From: n6wk_skcc3
Topic: 23875 Message: 31806

Stan, some where in the 3 million serial number, Kenwood switched to the GOLD series. It has the lettering in Gold under the VFO. There are rumors that all Gold versions came with all the Filters installed, but that is a Myth. The optional filters were added to the Golds as a promotion for a short time. Many Golds did NOT come with all 4 filters installed from the factory.

What is the serial n8umber of the new rig?

73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, "ve3gn" <stnlywhite@...> wrote:
>
> Looking at the 830S,how can one tell the difference between the Gold Line and the regular 830S,I bought another 830S that was supposed to be the Gold Line but the only difference i can see is the chassis paint colour is a bit lighter...
> Thank you,,Stan VE3GN
>

31807. Boomset question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 01:41:29 UTC
From: km5wx@bellsouth.net
Topic: 31807 Message: 31807

Hi gang, I hope someone can answer this and guide me through the procedure. I have an Audio Comm boomset that was made for a Ten Tec omni 5. If I remember correctly (and that is a stretch) My 530 s and 820 s use a dynamic mic? I believe the audio comm is electret. I only used it a few times when I had to sell my omni 5. The recieve audio is very nice and it sounds great to my ears on the Kenwoods. I always got good transmit audio reports. Is there (and I'm pretty sure there is) a way to get this boomset to work on my Kenwoods? I sure would like to. I'd even be willing to send it to one of you and have you do it for me.In other words I'm willing to pay to have someone try. My eyes and hands aren't good for much anymore. Thanks Richard KM5WX

31808. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 02:25:24 UTC
From: pmarkavage@juno.com
Topic: 23875 Message: 31808

Not true Gordon. My TS-830S is Serial # 1081195 and it has the lettering in gold under the VFO. I am the original owner. Kenwood only used the silver lettering in roughly the first year of production and then switched over to the gold lettering under the VFO. As has been reported for years here on the Group, the "Gold" edition, "Gold" line, etc. has been a long running myth of added features/functions/etc. The marketeers added the optional filters at the tail end of the TS-830S life cycle to move the last of them out of the warehouse and out of the dealer's inventory and used the advertising tag "Gold Edition".

Pete, wa2cwa

On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...> writes:
> Stan, some where in the 3 million serial number, Kenwood switched to
> the GOLD series. It has the lettering in Gold under the VFO. There
> are rumors that all Gold versions came with all the Filters
> installed, but that is a Myth. The optional filters were added to
> the Golds as a promotion for a short time. Many Golds did NOT come
> with all 4 filters installed from the factory.
>
> What is the serial n8umber of the new rig?
>
> 73,
> Gordon
>
> --- In TS-520_820_530_830@yahoogroups.com, "ve3gn" <stnlywhite@...>
> wrote:
> >
> > Looking at the 830S,how can one tell the difference between the
> Gold Line and the regular 830S,I bought another 830S that was
> supposed to be the Gold Line but the only difference i can see is
> the chassis paint colour is a bit lighter...
> > Thank you,,Stan VE3GN
> >

31809. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 03:29:58 UTC
From: n6wk@n6wk.com
Topic: 23875 Message: 31809

Well, Don't know what to say Pete as I have had quite a few Silver
editions through here that were in the 2 million and under serials.
They also had the -5 little Murita filter instead of the -12.
I also had a 3.1 million here that had the Silver lettering.
Maybe you have the Only 1.8 million serial gold Version in existence.
Maybe we should get everyone to post their serial and what version they
have on the group.
I agree, the Gold myth is exactly that.. A myth, regarding them coming
with all 4 filters, as I said before.

Gordon

On 6/11/2011 7:25 PM, pmarkavage@... wrote:
>
> Not true Gordon. My TS-830S is Serial # 1081195 and it has the lettering
> in gold under the VFO. I am the original owner. Kenwood only used the
> silver lettering in roughly the first year of production and then
> switched over to the gold lettering under the VFO. As has been reported
> for years here on the Group, the "Gold" edition, "Gold" line, etc. has
> been a long running myth of added features/functions/etc. The marketeers
> added the optional filters at the tail end of the TS-830S life cycle to
> move the last of them out of the warehouse and out of the dealer's
> inventory and used the advertising tag "Gold Edition".
>
> Pete, wa2cwa
>
> On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...
> <mailto:n6wk%40n6wk.com>> writes:
> > Stan, some where in the 3 million serial number, Kenwood switched to
> > the GOLD series. It has the lettering in Gold under the VFO. There
> > are rumors that all Gold versions came with all the Filters
> > installed, but that is a Myth. The optional filters were added to
> > the Golds as a promotion for a short time. Many Golds did NOT come
> > with all 4 filters installed from the factory.
> >
> > What is the serial n8umber of the new rig?
> >
> > 73,
> > Gordon
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "ve3gn" <stnlywhite@...>
> > wrote:
> > >
> > > Looking at the 830S,how can one tell the difference between the

> > Gold Line and the regular 830S,I bought another 830S that was
> > supposed to be the Gold Line but the only difference i can see is
> > the chassis paint colour is a bit lighter...
> > > Thank you,,Stan VE3GN
> > >
>
>

--
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31810. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 03:46:52 UTC
From: W LEWIS
Topic: 23875 Message: 31810

Gordon,Do you have any idea when TS-830S production ceased? Mine is #3010385 and was originally purchased on December 11, 1982 from Henry Radio. Incidentally, the purchase price was $1040.41. I wonder what that would be in today's dollars.73s,Butch LewisKØPSA
P.S. How are things on the left coast?
--- On Sat, 6/11/11, n6wk@... <n6wk@...> wrote:

From: n6wk@... <n6wk@...>
Subject: Re: [TS-520_820_530_830] Re: TS 830S
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, June 11, 2011, 10:29 PM

Well, Don't know what to say Pete as I have had quite a few Silver
editions through here that were in the 2 million and under serials.
They also had the -5 little Murita filter instead of the -12.
I also had a 3.1 million here that had the Silver lettering.
Maybe you have the Only 1.8 million serial gold Version in existence.
Maybe we should get everyone to post their serial and what version they
have on the group.
I agree, the Gold myth is exactly that.. A myth, regarding them coming
with all 4 filters, as I said before.

Gordon

On 6/11/2011 7:25 PM, pmarkavage@... wrote:
>
> Not true Gordon. My TS-830S is Serial # 1081195 and it has the lettering
> in gold under the VFO. I am the original owner. Kenwood only used the
> silver lettering in roughly the first year of production and then
> switched over to the gold lettering under the VFO. As has been reported
> for years here on the Group, the "Gold" edition, "Gold" line, etc. has
> been a long running myth of added features/functions/etc. The marketeers
> added the optional filters at the tail end of the TS-830S life cycle to
> move the last of them out of the warehouse and out of the dealer's
> inventory and used the advertising tag "Gold Edition".
>
> Pete, wa2cwa
>
> On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...
> <mailto:n6wk%40n6wk.com>> writes:
> > Stan, some where in the 3 million serial number, Kenwood switched to
> > the GOLD series. It has the lettering in Gold under the VFO. There
> > are rumors that all Gold versions came with all the Filters
> > installed, but that is a Myth. The optional filters were added to
> > the Golds as a promotion for a short time. Many Golds did NOT come
> > with all 4 filters installed from the factory.
> >

> > What is the serial n8umber of the new rig?
> >
> > 73,
> > Gordon
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "ve3gn" <stnlywhite@...>
> > wrote:
> > >
> > > Looking at the 830S,how can one tell the difference between the
> > Gold Line and the regular 830S,I bought another 830S that was
> > supposed to be the Gold Line but the only difference i can see is
> > the chassis paint colour is a bit lighter...
> > > Thank you,,Stan VE3GN
> > >
>
>

--
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

31811. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 03:56:47 UTC
From: n6wk@n6wk.com
Topic: 23875 Message: 31811

Hi Butch,
I do not know the exact date the production ended. I have seen serials
as high as 4.8 million, so I would assume that sales went into 1984 but
I have no proof.
Is yours a Gold or Silver edition according to the lettering on your VFO ?
Things are good here on the Left Coast. My new Lung is working great and
Life is Fantastic!
How are things with you?

73,
Gordon
N6WK

On 6/11/2011 8:46 PM, W LEWIS wrote:
>
> Gordon,Do you have any idea when TS-830S production ceased? Mine is
> #3010385 and was originally purchased on December 11, 1982 from Henry
> Radio. Incidentally, the purchase price was $1040.41. I wonder what
> that would be in today's dollars.73s,Butch LewisK?PSA
> P.S. How are things on the left coast?
> --- On Sat, 6/11/11, n6wk@... <mailto:n6wk%40n6wk.com>
> <n6wk@... <mailto:n6wk%40n6wk.com>> wrote:
>
> From: n6wk@... <mailto:n6wk%40n6wk.com> <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> Subject: Re: [TS-520_820_530_830] Re: TS 830S
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Date: Saturday, June 11, 2011, 10:29 PM
>
> Well, Don't know what to say Pete as I have had quite a few Silver
> editions through here that were in the 2 million and under serials.
> They also had the -5 little Murita filter instead of the -12.
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> have on the group.
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> Gordon
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> On 6/11/2011 7:25 PM, pmarkavage@...
> <mailto:pmarkavage%40juno.com> wrote:
> >

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> > On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...
> <mailto:n6wk%40n6wk.com>
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "ve3gn" <stnlywhite@...>
> > > wrote:
> > > >
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> > > Gold Line and the regular 830S,I bought another 830S that was
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> > > > Thank you,,Stan VE3GN
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31812. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 05:03:56 UTC
From: W LEWIS
Topic: 23875 Message: 31812

The lettering on mine is faintly gold colored, but it has no additional filters. I just completed replacing the back panel, the original of which was badly corroded. Apparently the previous owner stored the radio for a while in a high humidity area. I got the new one from Bob Mansker. I love buying items from him because they are always in great (near new) condition. Things here are good, but I long for the days of flying the smiley faced PSA airplanes out of Lindbergh Field. I need to get out there for a visit and make some stops at places like Rubio's, In and Out Burger, Fat Burger, El Torrito's and all the rest of the fun places. We're supposed to get storms later tonight but today the weather was like San Diego. Clear and 70 degrees. I guess that's it for now. Take care, glad to hear you are well.73,Butch KØPSA

--- On Sat, 6/11/11, n6wk@... <n6wk@...> wrote:

From: n6wk@... <n6wk@...>
Subject: Re: [TS-520_820_530_830] Re: TS 830S
To: TS-520_820_530_830@yahoogroups.com
Date: Saturday, June 11, 2011, 10:56 PM

Hi Butch,
I do not know the exact date the production ended. I have seen serials
as high as 4.8 million, so I would assume that sales went into 1984 but
I have no proof.
Is yours a Gold or Silver edition according to the lettering on your VFO ?
Things are good here on the Left Coast. My new Lung is working great and
Life is Fantastic!
How are things with you?

73,
Gordon
N6WK

On 6/11/2011 8:46 PM, W LEWIS wrote:
>
> Gordon,Do you have any idea when TS-830S production ceased? Mine is
> #3010385 and was originally purchased on December 11, 1982 from Henry
> Radio. Incidentally, the purchase price was $1040.41. I wonder what
> that would be in today's dollars.73s,Butch LewisKØPSA
> P.S. How are things on the left coast?
> --- On Sat, 6/11/11, n6wk@... <mailto:n6wk%40n6wk.com>
> <n6wk@... <mailto:n6wk%40n6wk.com>> wrote:
>
> From: n6wk@n6wk.com <mailto:n6wk%40n6wk.com> <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> Subject: Re: [TS-520_820_530_830] Re: TS 830S
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>

> Date: Saturday, June 11, 2011, 10:29 PM
>
> Well, Don't know what to say Pete as I have had quite a few Silver
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> > move the last of them out of the warehouse and out of the dealer's
> > inventory and used the advertising tag "Gold Edition".
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> > Pete, wa2cwa
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> > On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...m
> <mailto:n6wk%40n6wk.com>
> > <mailto:n6wk%40n6wk.com>> writes:
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> > >
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> > > Gordon
> > >
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> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "ve3gn" <stnlywhite@...>
> > > wrote:
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[Non-text portions of this message have been removed]

31813. Re: TS 830S (production dates)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 07:08:35 UTC
From: g4fui
Topic: 23875 Message: 31813

Guys,

My TS-830S has serial number 7070114 and according to the date codes on the chips inside (usually a pretty good indication of manufacturing date) it was made in 1986.

This was an EBay purchase, so I have no idea of the provenance of this particular unit.

However I don't think this was one of the enhanced "Gold" units, as I have had to fit the CW filter myself.

I remember being quite surprised at the late date of the unit - a testament to the popularity of the model, I suppose, and note that mine is "Kenwood" branded. The company used the "Trio" brand name in Europe through the early 1980s, I'm not sure exactly when that was dropped and they switched to "Kenwood" as was used continuously in the N.American market.

On the subject of the Kenwood serial numbers versus date of manufacture, I think I read somewhere that there is a rough relationship.

Serials in the "1 million" range made in 1980
Serials in the "2 million" range made in 1981

etc.

This seems to be borne out in my own collection. Comparing serial number with the "component date code" method of dating produces the following :-

TS-180S s/n 9xxxxx made in early 1979
TS-130S s/n 1xxxxxx made in 1980
TS-530S s/n 2xxxxxx made in 1981
TS-830S s/n 7xxxxxx made in 1986

Unfortunately, I haven't found either a serial number or credible date code on my old TS-520!

Unlike the well-known Yaesu numbering/dating scheme I suspect the Trio/Kenwood system is rather less precise, but as you can see the relationship appears to be roughly correct.

Hope this is of interest

Martin - G4FUI
www.g4fui.net

31814. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 08:29:49 UTC
From: pakjan830
Topic: 31798 Message: 31814

It transmits into an ATU anyway so it's always +- 50 Ohm towards the Antenna.

That however is exactly my point. Plate current varies next to nothing with a QSY like that so it might be OK to leave the network in its tuned state.

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> If your CW key down plate current varied much more than 5 or 10 mA with a little
> QSY like that, you probably have some serious antenna issues !!!!!
>
>
>
>
> _____
> From: pakjan830 <lategahn@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sat, June 11, 2011 3:46:20 PM
> Subject: [TS-520_820_530_830] Output impedance matching network
>
> Â
> Hi all,
>
> I have a question regarding the handling of the output impedance matching
> network of the TS830 or any similar rig.
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> I often tune my rig to 14.070 for PSK operation. Then I move down by 15 KHz to
> 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in that case.
> Is that correct or am I too cautious? If so, what would be a safe distance from
> the tuned frequency where I can move the VFO but not re-tune the output network.
> 5KHz? 2.5KHz?
>
> vy 73 de Jan
>
>
>
>
> [Non-text portions of this message have been removed]
>

31815. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 13:47:25 UTC
From: Michael AE6JL
Topic: 23875 Message: 31815

On 06/11/2011 08:46 PM, W LEWIS wrote:

What cost $*1040.41* in 1982 would cost $*2319.14* in 2010.
(http://www.westegg.com/inflation/)

mike ae6jl
> Gordon,Do you have any idea when TS-830S production ceased? Mine is
> #3010385 and was originally purchased on December 11, 1982 from Henry
> Radio. Incidentally, the purchase price was $1040.41. I wonder what
> that would be in today's dollars.73s,Butch LewisKØPSA
> P.S. How are things on the left coast?
> --- On Sat, 6/11/11, n6wk@... <mailto:n6wk%40n6wk.com>
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> From: n6wk@n6wk.com <mailto:n6wk%40n6wk.com> <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> Subject: Re: [TS-520_820_530_830] Re: TS 830S
> To: TS-520_820_530_830@yahoogroups.com
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31816. RE: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 17:46:35 UTC
From: Bill Cromwell
Topic: 31798 Message: 31816

Hi,

I learned form the old timers that the last step in a tuneup is dipping the plate. If I QSY about 10 kc or more I redip the plate. 20 to 25 kc maybe checkup on the drive, too. In my actual operation I don't pay as much attention to the actual frequency as I do to band and sub-band edges. So most of the time if I think I have moved about that far I do the deed. Bottom of the sub-band, Middle of the sub-band, Top of the sub-band sort of thing.

I have a log sheet of where my antenna matcher is set on each band. Once in a while I do a reality check on that. When I want to redip or do the whole tuning process I select the dummy load for the transmitter and do it off-air. When I put the antenna back on it's still good (and I've verified that).

The reason to redip the plate is to maintain the harmonic suppression. The plate dip is the most important part of that (according to the ancients). I haven't got into any trouble doing it that way whether I'm using a Kenwood, a Johnson Ranger, a DX-100, or whatever. They're all the same. They only *look* different.

73,

Bill KU8H

31817. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 18:00:30 UTC
From: w5rkl
Topic: 31798 Message: 31817

The PLATE and LOAD controls are part of the PI Network circuit. As the PLATE control is adjust for a dip in IP current, the input to the PI Network become a closer match to the high impedance of the final amplifier. As the LOAD control is adjusted, the output of the PI Network become more of a match to the load (antenna or dummy load) presented to the PI Networks' output. When these controls are adjusted properly the PI Network is said to be "resonant" at the operating frequency and maximum power is transferred from the final amplifier to the load (antenna or dummy load). Some view the PI Network as an "antenna" tuner which there are similarities.

If the frequency changes, so does the resonance of the PI Network. If the frequency change is only a few Khz or so, a few means 2 or 5Khz, then no adjustment would be needed.

Personally, a change of 15Khz is a significant change that, in my opinion, would require a touch up/adjustment of the the DRIVE, PLATE, and LOAD controls.

If the transmitter is tuned into a load the PI Network cannot match (LOAD control) then the meter indications will be false or misleading. IP current will be much higher and RF output will "appear" to be higher than normal. To eliminate this problem a tuner will be required between the transmitter and the antenna or the antenna will have to be "pruned" to resonant on the operating frequency for lowest SWR. SWR can cause misleading RF output indications such as those hams who say their TS-520 produces "150 watts" output. The limits of the PI Network are typically between 30 ohms or so on the low end (LOAD control set fully CCW) and 125 ohms or so on the high end (LOAD control set fully CW).

The PLATE control does NOT change the high impedance of the final tubes nor does the LOAD control change the impedance presented to the PI Network's output. The 2 controls simply present as close of a match as possible to each side at the operating frequency.

The same applies to a tuner. A tuner does NOT change the load impedance presented to the tuner's input and output but rather, when adjusted properly, provides as close of an impedance match to the impedance presented to the tuner's input and output.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
>
>
> It transmits into an ATU anyway so it's always +- 50 Ohm towards the Antenna.
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> That however is exactly my point. Plate current varies next to nothing with a QSY like that so it might be OK to leave the network in its tuned state.
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> > _____
> > From: pakjan830 <lategahn@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, June 11, 2011 3:46:20 PM
> > Subject: [TS-520_820_530_830] Output impedance matching network
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> >
> > vy 73 de Jan
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31818. generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 18:07:36 UTC
From: CRAIG
Topic: 31818 Message: 31818

what size generator will it take to run ts-520s on field day?

31819. Re: [TS-520_820_530_830] Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 18:19:03 UTC
From: Bob Macklin
Topic: 31798 Message: 31819

The Pi Network final was developed to be able to use a coax fed dipole antenna without an antenna tuner. In those conditions the Pi Network is the antenna tuner.

Prior to the Pi Network output transmitters used some form of link coupling. In those days antenna tuners were devices to connect to balanced lines.

The antenna tuner we know today did not come into used until the conversion od passband solid state finals.

In the early days Heath made a simple L Network tuner to us with the AT-1. They did not produce another tuner until the days of the SB-104. The transmitters preceding the SB-104 all had Pi Network finals.

If you only move 5 or 10 KC you don't have to retune the Pi Network. When fully loaded you don't get the sharp dip.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"

----- Original Message -----
From: "w5rkl" <w5rkl@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, June 12, 2011 11:00 AM
Subject: [TS-520_820_530_830] Re: Output impedance matching network

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73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
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> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > If your CW key down plate current varied much more than 5 or 10 mA with
> > a little
> > QSY like that, you probably have some serious antenna issues !!!!!
> >
> >
> >
> >
> > _____
> > From: pakjan830 <lategahn@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sat, June 11, 2011 3:46:20 PM
> > Subject: [TS-520_820_530_830] Output impedance matching network
> >
> > ?
> > Hi all,

> >
> > I have a question regarding the handling of the output impedance
> > matching
> > network of the TS830 or any similar rig.
> >
> > I often tune my rig to 14.070 for PSK operation. Then I move down by 15
> > KHz to
> > 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in
> > that case.
> > Is that correct or am I too cautious? If so, what would be a safe
> > distance from
> > the tuned frequency where I can move the VFO but not re-tune the output
> > network.
> > 5KHz? 2.5KHz?
> >
> > vy 73 de Jan
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

Yahoo! Groups Links

31820. Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 18:25:50 UTC
From: w5rkl
Topic: 31818 Message: 31820

The TS-520S has a AC power rating of 280 watts at full output.

Let's assume you will be using the following items and those items will have the power consumption as follows:

2 x 60 watt lights (120 watts total)
1 x 45 watts computer for logging
1 x TS-520S at 280 watts

Therefore, the power consumption and demand placed on the generator will be

120 + 45 + 280 = 445 watts

Whether your computer, if used, consumes 45 watts or not, I used this as a figure in my example to show how power adds.

Having said all that, your total power consumption may be different. Therefore you will have to determine the maximum power consumption at any one time based on the individual items plugged into the generator's AC output.

I recommend maintaining a safety margin. Just because, for example, a generator has a constant 1KW power capability, doesn't mean you should have items totaling 1KW plugged into the generator. If, for example, your generator has a constant 1KW power rating, I would not exceed 800 watts.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "CRAIG" <rightflyer60@...> wrote:
>
> what size generator will it take to run ts-520s on field day?
>

31821. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 19:26:06 UTC
From: w5rkl
Topic: 31798 Message: 31821

PI Networks have been used prior to 1960. For example, Heathkit's DX-100 has a coaxial PI Network that had an impedance matching range from 50 ohms to 600 ohms. This was changed in the DX-100B to a much smaller and limited impedance range of 50 to 72 ohms. The Heathkit Apache TX-1 (1958) along with the Marauder HX-10 (1962) also contained a PI Network.

The KnightKit T-60 (1962) used a PI Network. The PLATE and load capacitor both had 2 sections with a shorting band switch wafer as part of the PI Network. Depending on the band selected by the band switch the band switch wafer would short any undesired PI Network tank coil taps.

The Collins KWM2 (1963) also used a PI Network. The band switch wafer selected the desired PI Network tank coil tap instead of shorting the undesired PI Network tank coil taps.

You are correct that many older transmitter final amplifier used link coupling. In many cases link coupling provided a much wider range of impedance matching than the more limited PI Network did.

Regardless of the type of PI Network used, the end result was the same, adjust the output network to resonance for maximum RF transfer from the final amplifier to the load presented to the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> The Pi Network final was developed to be able to use a coax fed dipole
> antenna without an antenna tuner. In those conditions the Pi Network is the
> antenna tuner.
>
> Prior to the Pi Network output transmitters used some form of link coupling.
> In those days antenna tuners were devices to connect to balanced lines.
>
> The antenna tuner we know today did not come into used until the conversion
> od passband solid state finals.
>
> In the early days Heath made a simple L Network tuner to us with the AT-1.
> They did not produce another tuner until the days of the SB-104. The
> transmitters preceding the SB-104 all had Pi Network finals.
>
> If you only move 5 or 10 KC you don't have to retune the Pi Network. When
> fully loaded you don't get the sharp dip.
>
> Bob Macklin
> K5MYJ

> Seattle, Wa.
> "Real Radios Glow In The Dark"
>
>
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Sunday, June 12, 2011 11:00 AM
> Subject: [TS-520_820_530_830] Re: Output impedance matching network
>
>
> The PLATE and LOAD controls are part of the PI Network circuit. As the PLATE
> control is adjust for a dip in IP current, the input to the PI Network
> become a closer match to the high impedance of the final amplifier. As the
> LOAD control is adjusted, the output of the PI Network become more of a
> match to the load (antenna or dummy load) presented to the PI Networks'
> output. When these controls are adjusted properly the PI Network is said to
> be "resonant" at the operating frequency and maximum power is transferred
> from the final amplifier to the load (antenna or dummy load). Some view the
> PI Network as an "antenna" tuner which there are similarities.
>
> If the frequency changes, so does the resonance of the PI Network. If the
> frequency change is only a few Khz or so, a few means 2 or 5Khz, then no
> adjustment would be needed.
>
> Personally, a change of 15Khz is a significant change that, in my opinion,
> would require a touch up/adjustment of the the DRIVE, PLATE, and LOAD
> controls.
>
> If the transmitter is tuned into a load the PI Network cannot match (LOAD
> control) then the meter indications will be false or misleading. IP current
> will be much higher and RF output will "appear" to be higher than normal. To
> eliminate this problem a tuner will be required between the transmitter and
> the antenna or the antenna will have to be "pruned" to resonant on the
> operating frequency for lowest SWR. SWR can cause misleading RF output
> indications such as those hams who say their TS-520 produces "150 watts"
> output. The limits of the PI Network are typically between 30 ohms or so on
> the low end (LOAD control set fully CCW) and 125 ohms or so on the high end
> (LOAD control set fully CW).
>
> The PLATE control does NOT change the high impedance of the final tubes nor
> does the LOAD control change the impedance presented to the PI Network's
> output. The 2 controls simply present as close of a match as possible to
> each side at the operating frequency.
>
> The same applies to a tuner. A tuner does NOT change the load impedance
> presented to the tuner's input and output but rather, when adjusted
> properly, provides as close of an impedance match to the impedance presented
> to the tuner's input and output.
>

>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> >
> >
> > It transmits into an ATU anyway so it's always +- 50 Ohm towards the
> > Antenna.
> >
> > That however is exactly my point. Plate current varies next to nothing
> > with a QSY like that so it might be OK to leave the network in its tuned
> > state.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> > >
> > > If your CW key down plate current varied much more than 5 or 10 mA with
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> > > _____
> > > From: pakjan830 <lategahn@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sat, June 11, 2011 3:46:20 PM
> > > Subject: [TS-520_820_530_830] Output impedance matching network
> > >
> > > Â
> > > Hi all,
> > >
> > > I have a question regarding the handling of the output impedance
> > > matching
> > > network of the TS830 or any similar rig.
> > >
> > > I often tune my rig to 14.070 for PSK operation. Then I move down by 15
> > > KHz to
> > > 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in
> > > that case.
> > > Is that correct or am I too cautious? If so, what would be a safe
> > > distance from
> > > the tuned frequency where I can move the VFO but not re-tune the output
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> > >
> > > vy 73 de Jan

> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
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>
> Yahoo! Groups Links
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31822. Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 20:05:27 UTC
From: Terry Wagoner
Topic: 31818 Message: 31822

Mikes calcs are right on. In addition to capacity I would be a little concerned about the output quality and voltage regulation. I know hams use generators for field day all the time. I think if I was to do that I would install a surge protector between the generator output and my rig and lap top. Maybe a homebrew 120volt box with some MOVs? I am probably just a worrier, but I would hate to have a spike damage my electronics. Maybe not a problem with newer generators?

I have a 5kw 10 hp Dewalt that I use to power my drinking well, fridge etc when we lose power. I have never scoped or monitored the output, but do not use it to power my rig, computer or TV. I know it doesnt have greatest voltage regulation because lites dim when other loads take a bite. There is a warning label on it on it about not using to power electronics, but I suppose manufacturers do that to cover their butts?

Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> The TS-520S has a AC power rating of 280 watts at full output.
>
> Let's assume you will be using the following items and those items will have the power consumption as follows:
>
> 2 x 60 watt lights (120 watts total)
> 1 x 45 watts computer for logging
> 1 x TS-520S at 280 watts
>
> Therefore, the power consumption and demand placed on the generator will be
>
> 120 + 45 + 280 = 445 watts
>
> Whether your computer, if used, consumes 45 watts or not, I used this as a figure in my example to show how power adds.
>
> Having said all that, your total power consumption may be different. Therefore you will have to determine the maximum power consumption at any one time based on the individual items plugged into the generator's AC output.
>
> I recommend maintaining a safety margin. Just because, for example, a generator has a constant 1KW power capability, doesn't mean you should have items totaling 1KW plugged into the generator. If, for example, your generator has a constant 1KW power rating, I would not exceed 800 watts.
>
> 73s
> Mike
> W5RKL
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "CRAIG" <rightflyer60@> wrote:
> >
> > what size generator will it take to run ts-520s on field day?
> >
>

31823. Re: [TS-520_820_530_830] Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 20:48:58 UTC
From: van wd8aam
Topic: 31818 Message: 31823

I was always under the (mis?)impression that the cheaper generators
used modified sine/sqquare wave outputs, while the ones for electronic devices
needed to be true sine wave outputs. Can anyone
shed any light on this subject?
Thanks
Van
wd8aam

At 20:05 6/12/2011, you wrote:
>
>
>Mikes calcs are right on. In addition to
>capacity I would be a little concerned about the
>output quality and voltage regulation. I know
>hams use generators for field day all the time.
>I think if I was to do that I would install a
>surge protector between the generator output and
>my rig and lap top. Maybe a homebrew 120volt box
>with some MOVs? I am probably just a worrier,
>but I would hate to have a spike damage my
>electronics. Maybe not a problem with newer generators?
>
>I have a 5kw 10 hp Dewalt that I use to power my
>drinking well, fridge etc when we lose power. I
>have never scoped or monitored the output, but
>do not use it to power my rig, computer or TV. I
>know it doesnt have greatest voltage regulation
>because lites dim when other loads take a bite.
>There is a warning label on it on it about not
>using to power electronics, but I suppose
>manufacturers do that to cover their butts?
>
>Terry K9TW
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>"w5rkl" <w5rkl@...> wrote:
> >
> > The TS-520S has a AC power rating of 280 watts at full output.
> >
> > Let's assume you will be using the following
> items and those items will have the power consumption as follows:
> >
> > 2 x 60 watt lights (120 watts total)
> > 1 x 45 watts computer for logging

> > 1 x TS-520S at 280 watts
> >
> > Therefore, the power consumption and demand placed on the generator will be
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> > 120 + 45 + 280 = 445 watts
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> > Whether your computer, if used, consumes 45
> watts or not, I used this as a figure in my example to show how power adds.
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> consumption may be different. Therefore you
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> consumption at any one time based on the
> individual items plugged into the generator's AC output.
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> > I recommend maintaining a safety margin. Just
> because, for example, a generator has a
> constant 1KW power capability, doesn't mean you
> should have items totaling 1KW plugged into the
> generator. If, for example, your generator has
> a constant 1KW power rating, I would not exceed 800 watts.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In
> <mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
> "CRAIG" <rightflyer60@> wrote:
> > >
> > > what size generator will it take to run ts-520s on field day?
> > >
> >
>
>

[Non-text portions of this message have been removed]

31824. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 20:51:26 UTC
From: Terry Wagoner
Topic: 31798 Message: 31824

Mike is right the Pi-network has been around long time. I think it was introduced with the advent of coax feedline which made it easier to get feedline into the shack. I am getting old as I actually remember Link Coupling and using 600 ohm homebrew ladder line for multiband antenna.

As Mike states the pi-network matches the impedance of the tube plate to the antenna and at resonance you get maximum power transfer. It doesnt change the impedance of either load. It also does offer better harmonic suppression and of course provides "flywheel" effect for CW operation.

It might help you visualize it if you redraw it from its traditional PI configuration. Draw it as a parallel resonant circuit. On your paper draw a coil vertically oriented. Across that coil draw 2 variable capacitors connected at the center. The top capacitor is your Plate capacitor and the bottom capacitor is your Load capacitor. Bring a lead off the top and label it A. Bring a lead off the center tapped capacitors and label it B. Draw a line off the bottom and label it C. I draw a variable resistor across A-B and label it Rtube or Rplate. I draw a variable resistor across B-C and label it Rant.

Now it is easier to see what you are doing when you adjust either resistor. If you adjust either resistor (same as antenna presenting different resistance when moving in frequency) then you have to adjust the capacitors. Anytime you adjust either capacitor you have to adjust the other to restore balance in the parallel resonant circuit.

This helped me visualize what is going on. I wish Kenwood would have placed Plate cap on left and Load cap on the right side of front panel then it would look more like PI networks drawn in the texts and schematics. Just for us dummies! 73s Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> PI Networks have been used prior to 1960. For example, Heathkit's DX-100 has a coaxial PI Network that had an impedance matching range from 50 ohms to 600 ohms. This was changed in the DX-100B to a much smaller and limited impedance range of 50 to 72 ohms. The Heathkit Apache TX-1 (1958) along with the Marauder HX-10 (1962) also contained a PI Network.
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> The KnightKit T-60 (1962) used a PI Network. The PLATE and load capacitor both had 2 sections with a shorting band switch wafer as part of the PI Network. Depending on the band selected by the band switch the band switch wafer would short any undesired PI Network tank coil taps.
>
> The Collins KWM2 (1963) also used a PI Network. The band switch wafer selected the desired PI Network tank coil tap instead of shorting the undesired PI Network tank coil taps.
>
> You are correct that many older transmitter final amplifier used link coupling. In many cases link coupling provided a much wider range of impedance matching than the more limited

PI Network did.
>
> Regardless of the type of PI Network used, the end result was the same, adjust the output network to resonance for maximum RF transfer from the final amplifier to the load presented to the transmitter.
>
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> > od passband solid state finals.
> >
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> > They did not produce another tuner until the days of the SB-104. The
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> >
> > If you only move 5 or 10 KC you don't have to retune the Pi Network. When
> > fully loaded you don't get the sharp dip.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> >
> >
> > ----- Original Message -----
> > From: "w5rkl" <w5rkl@>
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Sunday, June 12, 2011 11:00 AM
> > Subject: [TS-520_820_530_830] Re: Output impedance matching network
> >
> >
> > The PLATE and LOAD controls are part of the PI Network circuit. As the PLATE
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> > indications such as those hams who say their TS-520 produces "150 watts"
> > output. The limits of the PI Network are typically between 30 ohms or so on
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> > each side at the operating frequency.
> >
> > The same applies to a tuner. A tuner does NOT change the load impedance
> > presented to the tuner's input and output but rather, when adjusted
> > properly, provides as close of an impedance match to the impedance presented
> > to the tuner's input and output.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> > >
> > >
> > > It transmits into an ATU anyway so it's always +- 50 Ohm towards the
> > > Antenna.
> > >
> > > That however is exactly my point. Plate current varies next to nothing
> > > with a QSY like that so it might be OK to leave the network in its tuned
> > > state.
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> > > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
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> > > > If your CW key down plate current varied much more than 5 or 10 mA with
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> > > >
> > > >
> > > >
> > > > _____
> > > > From: pakjan830 <lategahn@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Sat, June 11, 2011 3:46:20 PM
> > > > Subject: [TS-520_820_530_830] Output impedance matching network
> > > >
> > > > Â
> > > > Hi all,
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> > > >
> > > > I often tune my rig to 14.070 for PSK operation. Then I move down by 15
> > > > KHz to
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> > > > that case.
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> > > > 5KHz? 2.5KHz?
> > > >
> > > > vy 73 de Jan
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
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> >
> > Yahoo! Groups Links
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31825. Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 21:26:36 UTC
From: andy_westcott2004
Topic: 31818 Message: 31825

Here's a tip from experience:
You don't say that you will be using an amplifier, but let's suppose for the moment you are.

The 4KVA generator is chugging along nicely when you suddenly key up:
The RPM slows down, the govenors compensate and the electrical regulation within the generator also compensate for the voltage drop. The effect as far as you are concerned is a lowering of the voltage for amoment until things stabilise.

When you let go of the mic, the opposite happens:
the RPM overshoots slightly before the govenors can adjust, and the voltage will increase a bit before the regulation takes hold. This voltage surge might be problematic, but we got around it nicely by connecting a 2KW heater to the generator permanently - this had the effect of loading the generator and the surges deminished to barely noticable. This additional resistive load will also absorb to a good degree any spikes the generator may generate.

In brief:
Get a bigger generator than you need and load it down to perhaps half of its capacity with resistive loads - this could be the above mentioned heater or a collection of lamps. Ensure you have enough spare capacity left to power the rig!

A well-loaded generator will output a more stable and spike-free waveform, in the cases I have experienced. use a 4 or 5 KVA generator - you will put a bit more fuel in the thing, but thats better than damaging a radio.

31826. Re: [TS-520_820_530_830] Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 21:46:02 UTC
From: Terry Wagoner
Topic: 31818 Message: 31826

Andy--What a great idea. If I dont have a heater will a beer cooler work?
--Terry

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 12, 2011 5:26:36 PM
Subject: [TS-520_820_530_830] Re: generator for ts-520s

Here's a tip from experience:
You don't say that you will be using an amplifier, but let's suppose for the moment you are.

The 4KVA generator is chugging along nicely when you suddenly key up:
The RPM slows down, the govenors compensate and the electrical regulation within the generator also compensate for the voltage drop. The effect as far as you are concerned is a lowering of the voltage for amoment until things stabilise.

When you let go of the mic, the opposite happens:
the RPM overshoots slightly before the govenors can adjust, and the voltage will increase a bit before the regulation takes hold. This voltage surge might be problematic, but we got around it nicely by connecting a 2KW heater to the generator permanently - this had the effect of loading the generator and the surges deminished to barely noticable. This additional resistive load will also absorb to a good degree any spikes the generator may generate.

In brief:
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A well-loaded generator will output a more stable and spike-free waveform, in the cases I have experienced. use a 4 or 5 KVA generator - you will put a bit more fuel in the thing, but thats better than damaging a radio.

[Non-text portions of this message have been removed]

31827. Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 22:06:50 UTC
From: Bill
Topic: 23875 Message: 31827

Hello Stan,
Here is what I learned since acquiring my radio last summer.

The Kenwood TS-830S lettering below the VFO knob is gold instead of silver. The gold version was to have the optional filters installed from the factory while the silver did not have the filters installed.
Depending on the production run the WARC bands may or may not have been enabled although they were designed into the radio.

The gold editions being sold used may not have the filters installed if the seller decided to earn a bit extra and remove them and sell them separately and sell the gold as being something special when in fact it is now equal to a silver (no filters).

--- In TS-520_820_530_830@yahoogroups.com, "ve3gn" <stnlywhite@...> wrote:
>
> Looking at the 830S,how can one tell the difference between the Gold Line and the regular 830S,I bought another 830S that was supposed to be the Gold Line but the only difference i can see is the chassis paint colour is a bit lighter...
> Thank you,,Stan VE3GN
>

31828. Re: TS 830S (production dates)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 22:11:05 UTC
From: Bill
Topic: 23875 Message: 31828

I tend to agree with Martin. I was able to finally find the original owner of my radio, a Gold edition, which was date coded via component date codes to 1986 when the original purchase was made for $879.00. S/N 7090031

Hopes this helps.

73,
Bill
AI4WM

--- In TS-520_820_530_830@yahoogroups.com, "g4fui" <martin@...> wrote:
>
>
>
>
>
>
>
>
>
>
>
>
> Guys,
>
> My TS-830S has serial number 7070114 and according to the date codes on the chips inside (usually a pretty good indication of manufacturing date) it was made in 1986.
>
> This was an EBay purchase, so I have no idea of the provenance of this particular unit.
>
> However I don't think this was one of the enhanced "Gold" units, as I have had to fit the CW filter myself.
>
> I remember being quite surprised at the late date of the unit - a testament to the popularity of the model, I suppose, and note that mine is "Kenwood" branded. The company used the "Trio" brand name in Europe through the early 1980s, I'm not sure exactly when that was dropped and they switched to "Kenwood" as was used continuously in the N.American market.
>
> On the subject of the Kenwood serial numbers versus date of manufacture, I think I read somewhere that there is a rough relationship.
>
> Serials in the "1 million" range made in 1980
> Serials in the "2 million" range made in 1981
>
> etc.

>
> This seems to be borne out in my own collection. Comparing serial number with the "component date code" method of dating produces the following :-
>
> TS-180S s/n 9xxxxx made in early 1979
> TS-130S s/n 1xxxxxx made in 1980
> TS-530S s/n 2xxxxxx made in 1981
> TS-830S s/n 7xxxxxx made in 1986
>
> Unfortunately, I haven't found either a serial number or credible date code on my old TS-520!
>
> Unlike the well-known Yaesu numbering/dating scheme I suspect the Trio/Kenwood system is rather less precise, but as you can see the relationship appears to be roughly correct.
>
> Hope this is of interest
>
> Martin - G4FUI
> www.g4fui.net
>

31829. How many of the different hybrid models were made?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-12 22:19:32 UTC
From: Bill
Topic: 31829 Message: 31829

With all the discussion about the TS-830S Gold/Silver/date of manufacture I was wondering ...
Does any one know or have a good guestamation of the quantity of each of the models that were manufactured and sold
For example X number of TS-520S
TS-530S
TS-830S
I know I missed a few models.
Just a thought. Not to create a big mess.

TNX,
Bill
AI4WM

31830. WTB speaker bracket

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 00:34:58 UTC
From: D
Topic: 31830 Message: 31830

I've gotten an SP-70 that is missing that little metal bracket that serves as the rear foot, but also used to hang the speaker from the wall. They look the same as used on the SP-520 and, I'm sure, others.
Does anyone have a spare?
Thanks,
Dave
kd0fqx

31831. TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 03:12:11 UTC
From: ve3pcd
Topic: 31831 Message: 31831

Hello,

I am trying to help my friend solve this problem. The transmit and receive Freq. is out of sync, meaning that when he transmit he is not receiving on the same frequency. How can we adjust this?

73 de Peter

31832. Re: TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 03:17:47 UTC
From: w5rkl
Topic: 31831 Message: 31832

Hello Peter,

What difference in frequency between transmit and receive?

This problem could possibly be an alignment issue which is covered in the 830 service manual available at Gordon's website

www.n6wk.com/kenwood/

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@...> wrote:
>
> Hello,
>
> I am trying to help my friend solve this problem. The transmit and receive Freq. is out of sync, meaning that when he transmit he is not receiving on the same frequency. How can we adjust this?
>
> 73 de Peter
>

31833. Re: TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 03:44:57 UTC
From: ve3pcd
Topic: 31831 Message: 31833

HI Mike,

Thanks for the reply, here is the problems as I am told.

If he wants to work, lets say 14.267.5, he has to tune the radio to 14.267.4, then when he transmits the display changes 14.267.3. Hope this does not confuse you HI HI

de Peter

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Peter,
>
> What difference in frequency between transmit and receive?
>
> This problem could possibly be an alignment issue which is covered in the 830 service manual available at Gordon's website
>
> www.n6wk.com/kenwood/
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@> wrote:
> >
> > Hello,
> >
> > I am trying to help my friend solve this problem. The transmit and receive Freq. is out of sync, meaning that when he transmit he is not receiving on the same frequency. How can we adjust this?
> >
> > 73 de Peter
> >
>

31834. Re: [TS-520_820_530_830] TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 03:26:38 UTC
From: Alan
Topic: 31831 Message: 31834

I the RIT turned off?

I guess you checked it but it's a trap.

73
Alan ZL4FM

----- Original Message -----
From: "ve3pcd" <ve3pcd@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 3:12 PM
Subject: [TS-520_820_530_830] TS-830s Transmit and receive Freq. out of Sync

> Hello,
>
> I am trying to help my friend solve this problem. The transmit and receive
> Freq. is out of sync, meaning that when he transmit he is not receiving on
> the same frequency. How can we adjust this?
>
> 73 de Peter
>
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3699 - Release Date: 06/12/11
18:34:00

No virus found in this outgoing message.
Checked by AVG - www.avg.com
Version: 8.5.449 / Virus Database: 271.1.1/3699 - Release Date: 06/12/11 18:34:00

[Non-text portions of this message have been removed]

31835. Re: TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 03:53:10 UTC
From: ve3pcd
Topic: 31831 Message: 31835

Hi Alan,

Yes the RIT off, that was the first thing we checked.

--- In TS-520_820_530_830@yahoogroups.com, "Alan" <alan@...> wrote:
>
> I the RIT turned off?
>
> I guess you checked it but it's a trap.
>
> 73
> Alan ZL4FM
>
> ----- Original Message -----
> From: "ve3pcd" <ve3pcd@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, June 13, 2011 3:12 PM
> Subject: [TS-520_820_530_830] TS-830s Transmit and receive Freq. out of Sync
>
>
> > Hello,
> >
> > I am trying to help my friend solve this problem. The transmit and receive
> > Freq. is out of sync, meaning that when he transmit he is not receiving on
> > the same frequency. How can we adjust this?
> >
> > 73 de Peter
> >
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
>
>
> --
>
>
>
> No virus found in this incoming message.
> Checked by AVG - www.avg.com

> Version: 8.5.449 / Virus Database: 271.1.1/3699 - Release Date: 06/12/11
> 18:34:00
>
> ----------
>
>
> No virus found in this outgoing message.
> Checked by AVG - www.avg.com
> Version: 8.5.449 / Virus Database: 271.1.1/3699 - Release Date: 06/12/11 18:34:00
>
>
> [Non-text portions of this message have been removed]
>

31836. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 04:11:32 UTC
From: pmarkavage@juno.com
Topic: 23875 Message: 31836

I've had three here over the years including my original one I mentioned in the previous post. The other two had serial numbers 1912243 and 20101xx ("xx" don't remember the last two digits). Both of these also had gold labels. Actually to clarify, Kenwood called it a 830S "badge" or 830S "name plate". To further clarify, all three of these units were TS-830S (K) which meant they were sold directly in the U. S., and came wired for 120V AC (brown AC cord hard-wired into the unit but was 220 volt modifiable). If you can believe Kenwood's documentation, the original silver badge was part number B43-0643-04 and it was used on the TS-830S (K)(W)(X) models and was called out on the parts list for issue 1 of the TS-830S/M service manual, B51-0916-00 dated 1980.

I also have two TS-830S product brochures here, dated July 1980 and February 1981. Both show the silver badge. A July 1981 product brochure now shows the gold badge and the service manual was updated to B51-0916-10, and the parts list now shows the gold badge with part number B43-0656-04. This same part number also appears in the last issue of the TS-830S service manual B51-0916-20, dated 1984.

The TS-830M(W) used the same badge, B43-0649-04, throughout it's life cycle. Note, (W) means 220/240V AC selectable and the 830 came with a 12 pin connector mounted on the rear panel.

One item up in the air: TS-830S(T) was also 220/240V AC selectable and came with a 12 pin connector. Throughout its life cycle it came with a different badge. It's part number is B43-0654-04. I have no clue why, what it said, or what color it is.

It's also seems obvious that Kenwood's serial number branding did not correlate well with actual manufacturing dates or when the final product was actually released for sale.

Pete, wa2cwa

On Sat, 11 Jun 2011 20:29:58 -0700 n6wk@... writes:
> Well, Don't know what to say Pete as I have had quite a few Silver
> editions through here that were in the 2 million and under serials.
> They also had the -5 little Murita filter instead of the -12.
> I also had a 3.1 million here that had the Silver lettering.
> Maybe you have the Only 1.8 million serial gold Version in
> existence.
> Maybe we should get everyone to post their serial and what version
> they
> have on the group.
> I agree, the Gold myth is exactly that.. A myth, regarding them
> coming

> with all 4 filters, as I said before.
>
> Gordon
>
>
>
> On 6/11/2011 7:25 PM, pmarkavage@... wrote:
> >
> > Not true Gordon. My TS-830S is Serial # 1081195 and it has the
> lettering
> > in gold under the VFO. I am the original owner. Kenwood only used
> the
> > silver lettering in roughly the first year of production and then
> > switched over to the gold lettering under the VFO. As has been
> reported
> > for years here on the Group, the "Gold" edition, "Gold" line, etc.
> has
> > been a long running myth of added features/functions/etc. The
> marketeers
> > added the optional filters at the tail end of the TS-830S life
> cycle to
> > move the last of them out of the warehouse and out of the
> dealer's
> > inventory and used the advertising tag "Gold Edition".
> >
> > Pete, wa2cwa
> >
> > On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...
> > <mailto:n6wk%40n6wk.com>> writes:
> > > Stan, some where in the 3 million serial number, Kenwood
> switched to
> > > the GOLD series. It has the lettering in Gold under the VFO.
> There
> > > are rumors that all Gold versions came with all the Filters
> > > installed, but that is a Myth. The optional filters were added
> to
> > > the Golds as a promotion for a short time. Many Golds did NOT
> come
> > > with all 4 filters installed from the factory.
> > >
> > > What is the serial n8umber of the new rig?
> > >
> > > 73,
> > > Gordon

31837. Re: TS-830s Transmit and receive Freq. out of Sync

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 05:28:58 UTC
From: w5rkl
Topic: 31831 Message: 31837

Hi Peter,

I would check the Carrier adjustment in the 830 service manual page 33 step 3.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@...> wrote:
>
> HI Mike,
>
> Thanks for the reply, here is the problems as I am told.
>
> If he wants to work, lets say 14.267.5, he has to tune the radio to 14.267.4, then when he transmits the display changes 14.267.3. Hope this does not confuse you HI HI
>
> de Peter
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Peter,
> >
> > What difference in frequency between transmit and receive?
> >
> > This problem could possibly be an alignment issue which is covered in the 830 service manual available at Gordon's website
> >
> > www.n6wk.com/kenwood/
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "ve3pcd" <ve3pcd@> wrote:
> > >
> > > Hello,
> > >
> > > I am trying to help my friend solve this problem. The transmit and receive Freq. is out of sync, meaning that when he transmit he is not receiving on the same frequency. How can we adjust this?
> > >
> > > 73 de Peter
> > >

> >
>

31838. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 08:13:50 UTC
From: AI4WM Bill
Topic: 23875 Message: 31838

Pete,
That is quite a bit of information. Thank you for your post. I for one like to know more about these really great radios. I only have mine about a year and it quickly became the primary rig in my shack due to the fine RX compared to my FT-101ZD-MKII. I like the Yaesu, and use it quite often, but prefer the better RX on the TS-830S. Then my comparison is really 2 different classes of radios.

73,

Bill

AI4WM

--- On Mon, 6/13/11, pmarkavage@... <pmarkavage@...> wrote:

From: pmarkavage@... <pmarkavage@...>
Subject: Re: [TS-520_820_530_830] Re: TS 830S
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, June 13, 2011, 12:11 AM

I've had three here over the years including my original one I mentioned

in the previous post. The other two had serial numbers 1912243 and

20101xx ("xx" don't remember the last two digits). Both of these also had

gold labels. Actually to clarify, Kenwood called it a 830S "badge" or

830S "name plate". To further clarify, all three of these units were

TS-830S (K) which meant they were sold directly in the U. S., and came

wired for 120V AC (brown AC cord hard-wired into the unit but was 220

volt modifiable). If you can believe Kenwood's documentation, the

original silver badge was part number B43-0643-04 and it was used on the

TS-830S (K)(W)(X) models and was called out on the parts list for issue 1

of the TS-830S/M service manual, B51-0916-00 dated 1980.

I also have two TS-830S product brochures here, dated July 1980 and

February 1981. Both show the silver badge. A July 1981 product brochure

now shows the gold badge and the service manual was updated to

B51-0916-10, and the parts list now shows the gold badge with part number

B43-0656-04. This same part number also appears in the last issue of the TS-830S service manual B51-0916-20, dated 1984.

The TS-830M(W) used the same badge, B43-0649-04, throughout it's life cycle. Note, (W) means 220/240V AC selectable and the 830 came with a 12 pin connector mounted on the rear panel.

One item up in the air: TS-830S(T) was also 220/240V AC selectable and came with a 12 pin connector. Throughout its life cycle it came with a different badge. It's part number is B43-0654-04. I have no clue why, what it said, or what color it is.

It's also seems obvious that Kenwood's serial number branding did not correlate well with actual manufacturing dates or when the final product was actually released for sale.

Pete, wa2cwa

On Sat, 11 Jun 2011 20:29:58 -0700 n6wk@... writes:

> Well, Don't know what to say Pete as I have had quite a few Silver
> editions through here that were in the 2 million and under serials.
> They also had the -5 little Murita filter instead of the -12.
> I also had a 3.1 million here that had the Silver lettering.
> Maybe you have the Only 1.8 million serial gold Version in
> existence.
> Maybe we should get everyone to post their serial and what version
> they
> have on the group.
> I agree, the Gold myth is exactly that.. A myth, regarding them
> coming
> with all 4 filters, as I said before.
>
> Gordon
>

>

>

> On 6/11/2011 7:25 PM, pmarkavage@... wrote:

> >

> > Not true Gordon. My TS-830S is Serial # 1081195 and it has the

> lettering

> > in gold under the VFO. I am the original owner. Kenwood only used

> the

> > silver lettering in roughly the first year of production and then

> > switched over to the gold lettering under the VFO. As has been

> reported

> > for years here on the Group, the "Gold" edition, "Gold" line, etc.

> has

> > been a long running myth of added features/functions/etc. The

> marketeers

> > added the optional filters at the tail end of the TS-830S life

> cycle to

> > move the last of them out of the warehouse and out of the

> dealer's

> > inventory and used the advertising tag "Gold Edition".

> >

> > Pete, wa2cwa

> >

> > On Sun, 12 Jun 2011 00:21:18 -0000 "n6wk_skcc3" <n6wk@...

> > <mailto:n6wk%40n6wk.com>> writes:

> > > Stan, some where in the 3 million serial number, Kenwood

> switched to

> > > the GOLD series. It has the lettering in Gold under the VFO.

> There

> > > are rumors that all Gold versions came with all the Filters

> > > installed, but that is a Myth. The optional filters were added

> to

> > > the Golds as a promotion for a short time. Many Golds did NOT

> come

> > > with all 4 filters installed from the factory.

> > >

> > > What is the serial n8umber of the new rig?

> > >

> > > 73,

> > > Gordon

[Non-text portions of this message have been removed]

31839. Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 15:47:44 UTC
From: joenardo@verizon.net
Topic: 31839 Message: 31839

Ok, I am one of those old hams who grew up in late 50's thrilled to have built an Allied Radio Ocean Hopper kit. Are there any of you that may have been a part of this OH generation?

Joe, WD6R

31840. Re: [TS-520_820_530_830] Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 16:18:38 UTC
From: Bob Macklin
Topic: 31839 Message: 31840

I'm a part of that generation but I did not have an Ocean Hopper.

My first receiver was an original S-38 that had been "RE-KITTED"!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: <joenardo@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 8:47 AM
Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts

> Ok, I am one of those old hams who grew up in late 50's thrilled to have
> built an Allied Radio Ocean Hopper kit. Are there any of you that may
> have been a part of this OH generation?
>
> Joe, WD6R
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

31841. Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 16:59:34 UTC
From: dave_faria2003
Topic: 31839 Message: 31841

Never seen an "Ocean Hopper" but how abt an Allied Knight Kit "Span Master" or the "Star Roamer". I did the span master when I was 12 years old(1962). I'm finishing up the restoration of a BC-348Q this week.

31842. Re: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 18:02:33 UTC
From: David Rust
Topic: 31839 Message: 31842

I built an Ocean Hopper when I was about 12 or 13 years old. Had it for years, finally tossed it, sure wish I had it back. Since then there was a history of Heathkits and various other items. There is good money in ham radio.....I know, cause I have put a lot of it there!

[Non-text portions of this message have been removed]

31843. using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 18:18:03 UTC
From: yvadir
Topic: 31843 Message: 31843

Hi

I am trying to figure out if there is a work around for using the 400 khz CW filters when working the digital modes using AFSK like PSK-31 & RTTY.

I suppose the 400 khz filters could replace the SSB filters but then phone reception would be lost leaving the rig would only be good for CW and narrow modes would it not?

Is there something I may have over looked?

31844. Re: [TS-520_820_530_830] Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 18:25:07 UTC
From: Terry Wagoner
Topic: 31839 Message: 31844

Joe--My dad got me started with "galena" crystal set and then bought me an Allied 8 n1 bread board kit. My favorite circuit to build was an am broadcast band transmitter. Moved on to Space Spanner receiver and boy hood buddy had the Ocean Hopper. His brother held a tech ticket and I used to hang around at his house. The days of plug in coils and regenerative receiver were a lot of fun. Of course you had lots of suppliers then with Allied, Lafayette, B&A, Heath and of course World Radio Labs. 73s Terry K9TW

From: "joenardo@..." <joenardo@verizon.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, June 13, 2011 11:47:44 AM
Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts

Ok, I am one of those old hams who grew up in late 50's thrilled to have built an Allied Radio Ocean Hopper kit. Are there any of you that may have been a part of this OH generation?

Joe, WD6R

[Non-text portions of this message have been removed]

31845. Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 18:29:05 UTC
From: Terry Wagoner
Topic: 31839 Message: 31845

You were rich! I suppose you modified the S-38 with a Q-multiplier?

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> I'm a part of that generation but I did not have an Ocean Hopper.
>
> My first receiver was an original S-38 that had been "RE-KITTED"!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: <joenardo@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, June 13, 2011 8:47 AM
> Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts
>
>
> > Ok, I am one of those old hams who grew up in late 50's thrilled to have
> > built an Allied Radio Ocean Hopper kit. Are there any of you that may
> > have been a part of this OH generation?
> >
> > Joe, WD6R
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
>

31846. Re: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 18:41:29 UTC
From: Bob Macklin
Topic: 31839 Message: 31846

How about a Q-5er!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Terry Wagoner" <wagstw46@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 11:29 AM
Subject: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

> You were rich! I suppose you modified the S-38 with a Q-multiplier?
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...>
> wrote:
>>
>> I'm a part of that generation but I did not have an Ocean Hopper.
>>
>> My first receiver was an original S-38 that had been "RE-KITTED"!
>>
>> Bob Macklin
>> K5MYJ
>> Seattle, Wa.
>> "Real Radios Glow In The Dark"
>> ----- Original Message -----
>> From: <joenardo@...>
>> To: <TS-520_820_530_830@yahoogroups.com>
>> Sent: Monday, June 13, 2011 8:47 AM
>> Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts
>>
>>
>> > Ok, I am one of those old hams who grew up in late 50's thrilled to
>> > have
>> > built an Allied Radio Ocean Hopper kit. Are there any of you that may
>> > have been a part of this OH generation?
>> >
>> > Joe, WD6R
>> >
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>> > Yahoo! Groups Links
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31847. Re: using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 19:24:11 UTC
From: dave@hampton-g3uhu.freeserve.co.uk
Topic: 31843 Message: 31847

A modification is necessary. See msg 27217. I've sold both my TS-830s now, and have probably lost the info. If you can understand the cct diagrams, I expect you can work out how to make the mod.
73
Dave G3UHU

--- In TS-520_820_530_830@yahoogroups.com, "yvadir" <yvadir@...> wrote:
>
> Hi
>
> I am trying to figure out if there is a work around for using the 400 khz CW filters when working the digital modes using AFSK like PSK-31 & RTTY.
>
> I suppose the 400 khz filters could replace the SSB filters but then phone reception would be lost leaving the rig would only be good for CW and narrow modes would it not?
>
> Is there something I may have over looked?
>

31848. Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 19:26:56 UTC
From: Terry Wagoner
Topic: 31839 Message: 31848

Had several command sets but never a Q-5er. How about high Z headphones with cotton covered wire and two pin plugs. If you pulled off one of the pins you couldnt solder it on as the wire was woven cloth braid.

I was lucky to live 90 miles from Chicago and dad would take me to Allied out on Western Ave. I would take all my paper route money and dad would usually help. Probably more than I remember.

I remember getting pretty good at riding the regen control and the bandspread and backing it off just as it went into oscillation. You had to operate those old Allied receivers.

Not sure what this has to do with Kenwood hybrids. Sorry to get carried away.
--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> How about a Q-5er!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: "Terry Wagoner" <wagstw46@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Monday, June 13, 2011 11:29 AM
> Subject: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts
>
>
> > You were rich! I suppose you modified the S-38 with a Q-multiplier?
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@>
> > wrote:
> >>
> >> I'm a part of that generation but I did not have an Ocean Hopper.
> >>
> >> My first receiver was an original S-38 that had been "RE-KITTED"!
> >>
> >> Bob Macklin
> >> K5MYJ
> >> Seattle, Wa.
> >> "Real Radios Glow In The Dark"
> >> ----- Original Message -----
> >> From: <joenardo@>
> >> To: <TS-520_820_530_830@yahoogroups.com>
> >> Sent: Monday, June 13, 2011 8:47 AM
> >> Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts
> >>

> >>
> >> > Ok, I am one of those old hams who grew up in late 50's thrilled to
> >> > have
> >> > built an Allied Radio Ocean Hopper kit. Are there any of you that may
> >> > have been a part of this OH generation?
> >> >
> >> > Joe, WD6R
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31849. Re: [TS-520_820_530_830] Re: TS 830S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 19:26:51 UTC
From: pmarkavage@juno.com
Topic: 23875 Message: 31849

Thanks Bill. I'm sure we'll go through all of this again in a couple of months. This same issue of "gold edition", gold label, gold whatever for TS-830S has been discussed at least a dozen times or more here. A quick search of the archive posts will turn up a bunch of the same discussions.

They're great rigs but living off 70's and early 80's design methodologies and technology. Component aging and deterioration beyond spec is also a big consideration and concern for any of these rigs.

Pete, wa2cwa

On Mon, 13 Jun 2011 01:13:50 -0700 (PDT) AI4WM Bill <ai4wm@...> writes:
> Pete,
> That is quite a bit of information. Thank you for your post. I
> for one like to know more about these really great radios. I only
> have mine about a year and it quickly became the primary rig in my
> shack due to the fine RX compared to my FT-101ZD-MKII. I like the
> Yaesu, and use it quite often, but prefer the better RX on the
> TS-830S. Then my comparison is really 2 different classes of
> radios.
>
> 73,
>
> Bill
>
> AI4WM
>
> --- On Mon, 6/13/11, pmarkavage@... <pmarkavage@...>
> wrote:
>
> From: pmarkavage@... <pmarkavage@...>
> Subject: Re: [TS-520_820_530_830] Re: TS 830S
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, June 13, 2011, 12:11 AM
> I've had three here over the years including my original one I
> mentioned
>
> in the previous post. The other two had serial numbers 1912243 and
>
> 20101xx ("xx" don't remember the last two digits). Both of these
> also had
>
> gold labels. Actually to clarify, Kenwood called it a 830S "badge"
> or
>

> 830S "name plate". To further clarify, all three of these units
> were
>
> TS-830S (K) which meant they were sold directly in the U. S., and
> came
>
> wired for 120V AC (brown AC cord hard-wired into the unit but was
> 220
>
> volt modifiable). If you can believe Kenwood's documentation, the
>
> original silver badge was part number B43-0643-04 and it was used on
> the
>
> TS-830S (K)(W)(X) models and was called out on the parts list for
> issue 1
>
> of the TS-830S/M service manual, B51-0916-00 dated 1980.
>
>
>
> I also have two TS-830S product brochures here, dated July 1980 and
>
> February 1981. Both show the silver badge. A July 1981 product
> brochure
>
> now shows the gold badge and the service manual was updated to
>
> B51-0916-10, and the parts list now shows the gold badge with part
> number
>
> B43-0656-04. This same part number also appears in the last issue of
> the
>
> TS-830S service manual B51-0916-20, dated 1984.
>
>
>
> The TS-830M(W) used the same badge, B43-0649-04, throughout it's
> life
>
> cycle. Note, (W) means 220/240V AC selectable and the 830 came with
> a 12
>
> pin connector mounted on the rear panel.
>
>
>
> One item up in the air: TS-830S(T) was also 220/240V AC selectable
> and

>
> came with a 12 pin connector. Throughout its life cycle it came with
> a
>
> different badge. It's part number is B43-0654-04. I have no clue
> why,
>
> what it said, or what color it is.
>
>
>
> It's also seems obvious that Kenwood's serial number branding did
> not
>
> correlate well with actual manufacturing dates or when the final
> product
>
> was actually released for sale.
>
>
>
> Pete, wa2cwa

31850. Re: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 19:30:30 UTC
From: David Rust
Topic: 31839 Message: 31850

Allied out on Western Ave...ah yes, I think I might even have an old catalog. BA in Kansas City and Lafayette in New York? maybe. Plenty of places to order just one of a single item if thats what you needed. Heathkit, seems like it was last night I worked on one half the night.

One must take a few moments now and then and remember where we came from, now if I just knew where I was going....
W0DLR

[Non-text portions of this message have been removed]

31851. Re: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 20:10:37 UTC
From: Bob Macklin
Topic: 31839 Message: 31851

I have a set of Cannon phones with the cotton wire. But they have crimp terminals on them got use with a PL-55.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Terry Wagoner" <wagstw46@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 12:26 PM
Subject: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts

> Had several command sets but never a Q-5er. How about high Z headphones
> with cotton covered wire and two pin plugs. If you pulled off one of the
> pins you couldnt solder it on as the wire was woven cloth braid.
>
> I was lucky to live 90 miles from Chicago and dad would take me to Allied
> out on Western Ave. I would take all my paper route money and dad would
> usually help. Probably more than I remember.
>
> I remember getting pretty good at riding the regen control and the
> bandspread and backing it off just as it went into oscillation. You had to
> operate those old Allied receivers.
>
> Not sure what this has to do with Kenwood hybrids. Sorry to get carried
> away.
> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...>
> wrote:
>>
>> How about a Q-5er!
>>
>> Bob Macklin
>> K5MYJ
>> Seattle, Wa.
>> "Real Radios Glow In The Dark"
>> ----- Original Message -----
>> From: "Terry Wagoner" <wagstw46@...>
>> To: <TS-520_820_530_830@yahoogroups.com>
>> Sent: Monday, June 13, 2011 11:29 AM
>> Subject: [TS-520_820_530_830] Re: Ocean Hopper Enthusiasts
>>
>>
>> > You were rich! I suppose you modified the S-38 with a Q-multiplier?
>> >

>> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@>
>> > wrote:
>> >>
>> >> I'm a part of that generation but I did not have an Ocean Hopper.
>> >>
>> >> My first receiver was an original S-38 that had been "RE-KITTED"!
>> >>
>> >> Bob Macklin
>> >> K5MYJ
>> >> Seattle, Wa.
>> >> "Real Radios Glow In The Dark"
>> >> ----- Original Message -----
>> >> From: <joenardo@>
>> >> To: <TS-520_820_530_830@yahoogroups.com>
>> >> Sent: Monday, June 13, 2011 8:47 AM
>> >> Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts
>> >>
>> >>
>> >> > Ok, I am one of those old hams who grew up in late 50's thrilled to
>> >> > have
>> >> > built an Allied Radio Ocean Hopper kit. Are there any of you that
>> >> > may
>> >> > have been a part of this OH generation?
>> >> >
>> >> > Joe, WD6R
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31852. Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 20:47:21 UTC
From: james27613
Topic: 31818 Message: 31852

hi Craig,

I would recommend using a full sine wave
UPS to keep the line voltage stable.

APC SmartUPS, Eaton and Liebert are good models.

you may be able to borrow one for field use.

Avoid the modified or stepped square wave
inexpensive ups models.

Many full sine wave models on ebay cheap,
from high rated business sellers without
the battery to save on the shipping.
look for one close to your qth so you save on shipping.

I use an older Liebert UPS for field day, it was
used in pos systems at local supermarkets.

73 james

31853. TS520S bad reception audio

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 22:18:32 UTC
From: Joao
Topic: 31853 Message: 31853

hello there.

the reception on my 520s is a little wrong.

the audio is there, no problem, it just sounds like very thin (almost

no low freqs),

and sometimes it pops and comes back to normal.

maybe any of you guys has had this sort of problem and can point

in the right direction.

ill try to open the thing soon, when i have some patience.

john

31854. TS 830S Calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 22:20:22 UTC
From: wc2c
Topic: 31854 Message: 31854

Hi,
On my TS830S when i turn on the calibration control on the MIC knob, the tone is loudest on 14.024.2 then as I turn higher it diminishes and disappears until 14.049.2, etc. Is this the way it is supposed to be or does the freq. readout need to be adjusted?
Thanks and Best 73 from Aaron, WC2C

31855. Re: [TS-520_820_530_830] using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 22:19:36 UTC
From: Lou Blasco
Topic: 31843 Message: 31855

Hi,

I've see people ask this question before and I wonder why it would be necessary? I understand how a narrow filter helps an operator hear signals on a crowded band but the way I see it the PSK software is quite capable of identifying signals within the passband of the standard filter. Has anyone tried this and tested the difference in performance between a standard filter and a narrow filter on the same signal?

Lou
VK3ALB

At 04:18 14/06/2011, you wrote:
>Hi
>
>I am trying to figure out if there is a work around for using the
>400 khz CW filters when working the digital modes using AFSK like
>PSK-31 & RTTY.
>
>I suppose the 400 khz filters could replace the SSB filters but then
>phone reception would be lost leaving the rig would only be good for
>CW and narrow modes would it not?
>
>Is there something I may have over looked?
>
>
>
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>
>Yahoo! Groups Links
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>

31856. Re: [TS-520_820_530_830] using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 22:38:59 UTC
From: Bob Macklin
Topic: 31843 Message: 31856

Don't run digital modes in CW! Run them in SSB!

If you use a narrow CW filter you will not see adjacent signals in your
waterfall display. The RTTY and PSK software does not need a narrow filter.

Use the CW filter for CW contests!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Lou Blasco" <radio@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 3:19 PM
Subject: Re: [TS-520_820_530_830] using CW filters on digital modes

> Hi,
>
> I've see people ask this question before and I wonder why it would be
> necessary? I understand how a narrow filter helps an operator hear
> signals on a crowded band but the way I see it the PSK software is
> quite capable of identifying signals within the passband of the
> standard filter. Has anyone tried this and tested the difference in
> performance between a standard filter and a narrow filter on the same
> signal?
>
> Lou
> VK3ALB
>
>
> At 04:18 14/06/2011, you wrote:
>>Hi
>>
>>I am trying to figure out if there is a work around for using the
>>400 khz CW filters when working the digital modes using AFSK like
>>PSK-31 & RTTY.
>>
>>I suppose the 400 khz filters could replace the SSB filters but then
>>phone reception would be lost leaving the rig would only be good for
>>CW and narrow modes would it not?
>>
>>Is there something I may have over looked?
>>
>>
>>

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>>Yahoo! Groups Links
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31857. Re: using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-13 23:01:23 UTC
From: yvadir
Topic: 31843 Message: 31857

--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
>
> Hi,
>
> I've see people ask this question before and I wonder why it would be
> necessary? I understand how a narrow filter helps an operator hear
> signals on a crowded band but the way I see it the PSK software is
> quite capable of identifying signals within the passband of the
> standard filter. Has anyone tried this and tested the difference in
> performance between a standard filter and a narrow filter on the same signal?
>
> Lou
> VK3ALB
>
>
> At 04:18 14/06/2011, you wrote:
> >Hi
> >
> >I am trying to figure out if there is a work around for using the
> >400 khz CW filters when working the digital modes using AFSK like
> >PSK-31 & RTTY.
> >
> >I suppose the 400 khz filters could replace the SSB filters but then
> >phone reception would be lost leaving the rig would only be good for
> >CW and narrow modes would it not?
> >
> >Is there something I may have over looked?
> >
> >
> >
> >------------------------------------
> >
> >Yahoo! Groups Links
> >
> >
> >
>
I found a few good answers as to why it can't be done, easily at least.
I've had some good experiences with PSK-31 working DX. I just hate it when someone over drives their signal for whatever reason and it takes out signals a kc or two either side of their signal, frequently a DX signal! I use VBT a good bit and I just thought it would be even cooler if I could tighten it down on narrower signals.

31858. Re: [TS-520_820_530_830] Re: using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 00:30:46 UTC
From: Lou Blasco
Topic: 31843 Message: 31858

Hi (I don't know your name),

I understand your concern but if you have in-band signal directly interfering with the desired signal I think you'll still have the problem even if you do install a narrow filter. I think your original question also summarizes the downside of this change. If you do install a narrow filter you will not be able to use your radio for normal voice communication.

I agree with Bob but I also think that we are all obliged to make sure we make sure our transmission is clean at all times and more so when using these narrow modes. Unfortunately as you have already found not everyone understands or cares about their signal quality and we all pay the price.

Lou
VK3ALB

At 09:01 14/06/2011, you wrote:

>--- In TS-520_820_530_830@yahoogroups.com, Lou Blasco <radio@...> wrote:
> >
> > Hi,
> >
> > I've see people ask this question before and I wonder why it would be
> > necessary? I understand how a narrow filter helps an operator hear
> > signals on a crowded band but the way I see it the PSK software is
> > quite capable of identifying signals within the passband of the
> > standard filter. Has anyone tried this and tested the difference in
> > performance between a standard filter and a narrow filter on the
> same signal?
> >
> > Lou
> > VK3ALB
> >
> >
> > At 04:18 14/06/2011, you wrote:
> > >Hi
> > >
> > >I am trying to figure out if there is a work around for using the
> > >400 khz CW filters when working the digital modes using AFSK like
> > >PSK-31 & RTTY.
> > >
> > >I suppose the 400 khz filters could replace the SSB filters but then
> > >phone reception would be lost leaving the rig would only be good for
> > >CW and narrow modes would it not?

> > >
> > >Is there something I may have over looked?
> > >
> > >
> > >
> > >----------
> > >
> > >Yahoo! Groups Links
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> > >
> > >
> >
>I found a few good answers as to why it can't be done, easily at least.
>I've had some good experiences with PSK-31 working DX. I just hate
>it when someone over drives their signal for whatever reason and it
>takes out signals a kc or two either side of their signal,
>frequently a DX signal! I use VBT a good bit and I just thought it
>would be even cooler if I could tighten it down on narrower signals.
>
>
>
>----------
>
>Yahoo! Groups Links
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>

31859. Re: [TS-520_820_530_830] TS 830S Calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 01:16:26 UTC
From: pmarkavage@juno.com
Topic: 31854 Message: 31859

See page 21, section 4.7 of the operating manual on how to adjust/check
the dial calibration (simple adjustment if needed).
Pete, wa2cwa

On Mon, 13 Jun 2011 22:20:22 -0000 "wc2c" <wc2c@...> writes:
> Hi,
> On my TS830S when i turn on the calibration control on the MIC
> knob, the tone is loudest on 14.024.2 then as I turn higher it
> diminishes and disappears until 14.049.2, etc. Is this the way it
> is supposed to be or does the freq. readout need to be adjusted?
> Thanks and Best 73 from Aaron, WC2C

31860. Re: [TS-520_820_530_830] Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 01:45:43 UTC
From: John Davidson
Topic: 31818 Message: 31860

You're thinking backwards.
 Power inverters for converting a 12V battery to 120VAC can use a noisy chopper circuit and have non-sine wave output !

From: van wd8aam <vlincoln@frontiernet.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 12, 2011 4:48:58 PM
Subject: Re: [TS-520_820_530_830] Re: generator for ts-520s

I was always under the (mis?)impression that the cheaper generators
used modified sine/sqquare wave outputs, while the ones for electronic devices
needed to be true sine wave outputs. Can anyone
shed any light on this subject?
Thanks
Van
wd8aam

At 20:05 6/12c >Terry K9TW
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>
>"w5rkl" <w5rkl@...> wrote:
> >
> > The TS-520S has a AC power rating of 280 watts at full output.
> >
> > Let's assume you will be using the following
> items and those items will have the power consumption as follows:
> >
> > 2 x 60 watt lights (120 watts total)
> > 1 x 45 watts computer for logging
> > 1 x TS-520S at 280 watts
> >
> > Therefore, the power consumption and demand placed on the generator will be
> >
> > 120 + 45 + 280 = 445 watts
> >
> > Whether your computer, if used, consumes 45
> watts or not, I used this as a figure in my example to show how power adds.
> >
> > Having said all that, your total power
> consumption may be different. Therefore you
> will have to determine the maximum power
> consumption at any one time based on the
> individual items plugged into the generator's AC output.

> >
> > I recommend maintaining a safety margin. Just
> because, for example, a generator has a
> constant 1KW power capability, doesn't mean you
> should have items totaling 1KW plugged into the
> generator. If, for example, your generator has
> a constant 1KW power rating, I would not exceed 800 watts.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>
> "CRAIG" <rightflyer60@> wrote:
> > >
> > > what size generator will it take to run ts-520s on field day?
> > >
> >
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

31861. Re: [TS-520_820_530_830] Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 01:51:01 UTC
From: Bob Macklin
Topic: 31818 Message: 31861

Some solid state inverters produce a Pseudo Sine Wave.

The thing to use for Field Day is a Honda generator. It produces a near 60HZ
sine wave.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "John Davidson" <k8jd@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 6:45 PM
Subject: Re: [TS-520_820_530_830] Re: generator for ts-520s

You're thinking backwards.
Power inverters for converting a 12V battery to 120VAC can use a noisy
chopper
circuit and have non-sine wave output !

_____
From: van wd8aam <vlincoln@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 12, 2011 4:48:58 PM
Subject: Re: [TS-520_820_530_830] Re: generator for ts-520s

I was always under the (mis?)impression that the cheaper generators
used modified sine/sqquare wave outputs, while the ones for electronic
devices
needed to be true sine wave outputs. Can anyone
shed any light on this subject?
Thanks
Van
wd8aam

At 20:05 6/12c >Terry K9TW
>
>--- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>
>"w5rkl" <w5rkl@...> wrote:
> >
> > The TS-520S has a AC power rating of 280 watts at full output.
> >
> > Let's assume you will be using the following
> items and those items will have the power consumption as follows:

> >
> > 2 x 60 watt lights (120 watts total)
> > 1 x 45 watts computer for logging
> > 1 x TS-520S at 280 watts
> >
> > Therefore, the power consumption and demand placed on the generator will
> > be
> >
> > 120 + 45 + 280 = 445 watts
> >
> > Whether your computer, if used, consumes 45
> watts or not, I used this as a figure in my example to show how power
> adds.
> >
> > Having said all that, your total power
> consumption may be different. Therefore you
> will have to determine the maximum power
> consumption at any one time based on the
> individual items plugged into the generator's AC output.
> >
> > I recommend maintaining a safety margin. Just
> because, for example, a generator has a
> constant 1KW power capability, doesn't mean you
> should have items totaling 1KW plugged into the
> generator. If, for example, your generator has
> a constant 1KW power rating, I would not exceed 800 watts.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In
><mailto:TS-520_820_530_830%40yahoogroups.com>TS-520_820_530_830@yahoogroups.com,
>
> "CRAIG" <rightflyer60@> wrote:
> > >
> > > what size generator will it take to run ts-520s on field day?
> > >
> >
>
>

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

Yahoo! Groups Links

31862. Re: [TS-520_820_530_830] Ocean Hopper Enthusiasts

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 01:58:13 UTC
From: John Davidson
Topic: 31839 Message: 31862

YES I built an Ocean Hopper.
I loved the little trap door on top where you reached in to change the band coils.
Even heard some distant VLF beacons , good code practice.

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, June 13, 2011 12:18:38 PM
Subject: Re: [TS-520_820_530_830] Ocean Hopper Enthusiasts

I'm a part of that generation but I did not have an Ocean Hopper.

My first receiver was an original S-38 that had been "RE-KITTED"!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: <joenardo@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 13, 2011 8:47 AM
Subject: [TS-520_820_530_830] Ocean Hopper Enthusiasts

> Ok, I am one of those old hams who grew up in late 50's thrilled to have
> built an Allied Radio Ocean Hopper kit. Are there any of you that may
> have been a part of this OH generation?
>
> Joe, WD6R
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

31863. Re: TS 830S Calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 09:12:02 UTC
From: wc2c
Topic: 31854 Message: 31863

Hi Pete,
Thanks very much.
73 de WC2C

--- In TS-520_820_530_830@yahoogroups.com, pmarkavage@... wrote:
>
> See page 21, section 4.7 of the operating manual on how to adjust/check
> the dial calibration (simple adjustment if needed).
> Pete, wa2cwa
>
> On Mon, 13 Jun 2011 22:20:22 -0000 "wc2c" <wc2c@...> writes:
> > Hi,
> > On my TS830S when i turn on the calibration control on the MIC
> > knob, the tone is loudest on 14.024.2 then as I turn higher it
> > diminishes and disappears until 14.049.2, etc. Is this the way it
> > is supposed to be or does the freq. readout need to be adjusted?
> > Thanks and Best 73 from Aaron, WC2C
>

31864. Re: TS 830S Calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 10:09:35 UTC
From: pakjan830
Topic: 31854 Message: 31864

Hi Aaron,

that said, your TS830S behaves like it should, assuming the MODE switch was in the CW W or CW N or USB position.

It makes perfect sense to perform the described alignment once in a while (after warm up!) to ensure accuracy of the displayed frequency.

73, Jan DK3LJ

--- In TS-520_820_530_830@yahoogroups.com, "wc2c" <wc2c@...> wrote:
>
> Hi Pete,
> Thanks very much.
> 73 de WC2C
>
> --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@ wrote:
> >
> > See page 21, section 4.7 of the operating manual on how to adjust/check
> > the dial calibration (simple adjustment if needed).
> > Pete, wa2cwa
> >
> > On Mon, 13 Jun 2011 22:20:22 -0000 "wc2c" <wc2c@> writes:
> > > Hi,
> > > On my TS830S when i turn on the calibration control on the MIC
> > > knob, the tone is loudest on 14.024.2 then as I turn higher it
> > > diminishes and disappears until 14.049.2, etc. Is this the way it
> > > is supposed to be or does the freq. readout need to be adjusted?
> > > Thanks and Best 73 from Aaron, WC2C
> >
>

31865. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 10:43:36 UTC
From: pakjan830
Topic: 31798 Message: 31865

Hi Mike,

interesting! Do we know something about the particular impedance range on the load side that the network in the TS830 can handle?

The manual states a 50 Ohm load in section 4.3 but as it handles half wave dipoles, 72 Ohm certainly work too. The manual also says something about a maximum SWR of 2 so by right we should be able to match 25 to 100 Ohm (assuming jX=0)?

The manual is a bit scarce in this area. Say if I tune up into a dummy load of perfect 50 Ohm, then switch over to a real dipole of 72 Ohm impedance, I would need to re-tune, right? Apart from reducing the noise on the air, is there a good reason to tune into the dummy load first? Any best practices?

vy 73 de Jan, DK3LJ

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
>
> PI Networks have been used prior to 1960. For example, Heathkit's DX-100 has a coaxial PI Network that had an impedance matching range from 50 ohms to 600 ohms. This was changed in the DX-100B to a much smaller and limited impedance range of 50 to 72 ohms. The Heathkit Apache TX-1 (1958) along with the Marauder HX-10 (1962) also contained a PI Network.
>
> The KnightKit T-60 (1962) used a PI Network. The PLATE and load capacitor both had 2 sections with a shorting band switch wafer as part of the PI Network. Depending on the band selected by the band switch the band switch wafer would short any undesired PI Network tank coil taps.
>
> The Collins KWM2 (1963) also used a PI Network. The band switch wafer selected the desired PI Network tank coil tap instead of shorting the undesired PI Network tank coil taps.
>
> You are correct that many older transmitter final amplifier used link coupling. In many cases link coupling provided a much wider range of impedance matching than the more limited PI Network did.
>
> Regardless of the type of PI Network used, the end result was the same, adjust the output network to resonance for maximum RF transfer from the final amplifier to the load presented to the transmitter.
>
> 73s
> Mike
> W5RKL
>
>

> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> >
> > The Pi Network final was developed to be able to use a coax fed dipole
> > antenna without an antenna tuner. In those conditions the Pi Network is the
> > antenna tuner.
> >
> > Prior to the Pi Network output transmitters used some form of link coupling.
> > In those days antenna tuners were devices to connect to balanced lines.
> >
> > The antenna tuner we know today did not come into used until the conversion
> > od passband solid state finals.
> >
> > In the early days Heath made a simple L Network tuner to us with the AT-1.
> > They did not produce another tuner until the days of the SB-104. The
> > transmitters preceding the SB-104 all had Pi Network finals.
> >
> > If you only move 5 or 10 KC you don't have to retune the Pi Network. When
> > fully loaded you don't get the sharp dip.
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> >
> >
> > ----- Original Message -----
> > From: "w5rkl" <w5rkl@>
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Sunday, June 12, 2011 11:00 AM
> > Subject: [TS-520_820_530_830] Re: Output impedance matching network
> >
> >
> > The PLATE and LOAD controls are part of the PI Network circuit. As the PLATE
> > control is adjust for a dip in IP current, the input to the PI Network
> > become a closer match to the high impedance of the final amplifier. As the
> > LOAD control is adjusted, the output of the PI Network become more of a
> > match to the load (antenna or dummy load) presented to the PI Networks'
> > output. When these controls are adjusted properly the PI Network is said to
> > be "resonant" at the operating frequency and maximum power is transferred
> > from the final amplifier to the load (antenna or dummy load). Some view the
> > PI Network as an "antenna" tuner which there are similarities.
> >
> > If the frequency changes, so does the resonance of the PI Network. If the
> > frequency change is only a few Khz or so, a few means 2 or 5Khz, then no
> > adjustment would be needed.
> >
> > Personally, a change of 15Khz is a significant change that, in my opinion,
> > would require a touch up/adjustment of the the DRIVE, PLATE, and LOAD
> > controls.
> >

> > If the transmitter is tuned into a load the PI Network cannot match (LOAD
> > control) then the meter indications will be false or misleading. IP current
> > will be much higher and RF output will "appear" to be higher than normal. To
> > eliminate this problem a tuner will be required between the transmitter and
> > the antenna or the antenna will have to be "pruned" to resonant on the
> > operating frequency for lowest SWR. SWR can cause misleading RF output
> > indications such as those hams who say their TS-520 produces "150 watts"
> > output. The limits of the PI Network are typically between 30 ohms or so on
> > the low end (LOAD control set fully CCW) and 125 ohms or so on the high end
> > (LOAD control set fully CW).
> >
> > The PLATE control does NOT change the high impedance of the final tubes nor
> > does the LOAD control change the impedance presented to the PI Network's
> > output. The 2 controls simply present as close of a match as possible to
> > each side at the operating frequency.
> >
> > The same applies to a tuner. A tuner does NOT change the load impedance
> > presented to the tuner's input and output but rather, when adjusted
> > properly, provides as close of an impedance match to the impedance presented
> > to the tuner's input and output.
> >
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> > >
> > >
> > > It transmits into an ATU anyway so it's always +- 50 Ohm towards the
> > > Antenna.
> > >
> > > That however is exactly my point. Plate current varies next to nothing
> > > with a QSY like that so it might be OK to leave the network in its tuned
> > > state.
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> > > >
> > > > If your CW key down plate current varied much more than 5 or 10 mA with
> > > > a little
> > > > QSY like that, you probably have some serious antenna issues !!!!!
> > > >
> > > >
> > > >
> > > >
> > > >
> > > > _____
> > > > From: pakjan830 <lategahn@>
> > > > To: TS-520_820_530_830@yahoogroups.com

> > > > Sent: Sat, June 11, 2011 3:46:20 PM
> > > > Subject: [TS-520_820_530_830] Output impedance matching network
> > > >
> > > > Â
> > > > Hi all,
> > > >
> > > > I have a question regarding the handling of the output impedance
> > > > matching
> > > > network of the TS830 or any similar rig.
> > > >
> > > > I often tune my rig to 14.070 for PSK operation. Then I move down by 15
> > > > KHz to
> > > > 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in
> > > > that case.
> > > > Is that correct or am I too cautious? If so, what would be a safe
> > > > distance from
> > > > the tuned frequency where I can move the VFO but not re-tune the output
> > > > network.
> > > > 5KHz? 2.5KHz?
> > > >
> > > > vy 73 de Jan
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
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> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
>

31866. Re: TS 830S Calibration

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 16:12:15 UTC
From: wc2c
Topic: 31854 Message: 31866

Hi jan,
Thanks for your help.
Be well,
73 de WC2C - Aaron
--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
>
>
> Hi Aaron,
>
> that said, your TS830S behaves like it should, assuming the MODE switch was in the CW W or CW N or USB position.
>
> It makes perfect sense to perform the described alignment once in a while (after warm up!) to ensure accuracy of the displayed frequency.
>
> 73, Jan DK3LJ
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "wc2c" <wc2c@> wrote:
> >
> > Hi Pete,
> > Thanks very much.
> > 73 de WC2C
> >
> > --- In TS-520_820_530_830@yahoogroups.com, pmarkavage@ wrote:
> > >
> > > See page 21, section 4.7 of the operating manual on how to adjust/check
> > > the dial calibration (simple adjustment if needed).
> > > Pete, wa2cwa
> > >
> > > On Mon, 13 Jun 2011 22:20:22 -0000 "wc2c" <wc2c@> writes:
> > > > Hi,
> > > > On my TS830S when i turn on the calibration control on the MIC
> > > > knob, the tone is loudest on 14.024.2 then as I turn higher it
> > > > diminishes and disappears until 14.049.2, etc. Is this the way it
> > > > is supposed to be or does the freq. readout need to be adjusted?
> > > > Thanks and Best 73 from Aaron, WC2C
> > >
> >
>

31867. Re: Output impedance matching network

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 16:29:59 UTC
From: w5rkl
Topic: 31798 Message: 31867

Hi Jan,

The typical impedance range of the hybrids is like most other tube based final amplifiers, 50 to 75 ohms with a little left over on each end.

After tuning the transmitter into a 50 ohm dummy load or feeding a low SWR resonant antenna with 50 ohm feed line (50 ohm coax), switching to a higher impedance antenna with a higher impedance feed line such as 75 ohms, more than likely will require some "tweaking" of the LOAD control to ensure maximum power transfer. It also would require a check of the PLATE control for any additional dip in IP current.

A change in impedance/load presented to the transmitter, whether capacitance or inductance reactance, will affect the transfer of power to the load presented to the transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@...> wrote:
>
>
> Hi Mike,
>
> interesting! Do we know something about the particular impedance range on the load side that the network in the TS830 can handle?
>
> The manual states a 50 Ohm load in section 4.3 but as it handles half wave dipoles, 72 Ohm certainly work too. The manual also says something about a maximum SWR of 2 so by right we should be able to match 25 to 100 Ohm (assuming jX=0)?
>
> The manual is a bit scarce in this area. Say if I tune up into a dummy load of perfect 50 Ohm, then switch over to a real dipole of 72 Ohm impedance, I would need to re-tune, right? Apart from reducing the noise on the air, is there a good reason to tune into the dummy load first? Any best practices?
>
> vy 73 de Jan, DK3LJ
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> >
> > PI Networks have been used prior to 1960. For example, Heathkit's DX-100 has a coaxial

PI Network that had an impedance matching range from 50 ohms to 600 ohms. This was changed in the DX-100B to a much smaller and limited impedance range of 50 to 72 ohms. The Heathkit Apache TX-1 (1958) along with the Marauder HX-10 (1962) also contained a PI Network.
> >
> > The KnightKit T-60 (1962) used a PI Network. The PLATE and load capacitor both had 2 sections with a shorting band switch wafer as part of the PI Network. Depending on the band selected by the band switch the band switch wafer would short any undesired PI Network tank coil taps.
> >
> > The Collins KWM2 (1963) also used a PI Network. The band switch wafer selected the desired PI Network tank coil tap instead of shorting the undesired PI Network tank coil taps.
> >
> > You are correct that many older transmitter final amplifier used link coupling. In many cases link coupling provided a much wider range of impedance matching than the more limited PI Network did.
> >
> > Regardless of the type of PI Network used, the end result was the same, adjust the output network to resonance for maximum RF transfer from the final amplifier to the load presented to the transmitter.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> > >
> > > The Pi Network final was developed to be able to use a coax fed dipole
> > > antenna without an antenna tuner. In those conditions the Pi Network is the
> > > antenna tuner.
> > >
> > > Prior to the Pi Network output transmitters used some form of link coupling.
> > > In those days antenna tuners were devices to connect to balanced lines.
> > >
> > > The antenna tuner we know today did not come into used until the conversion
> > > od passband solid state finals.
> > >
> > > In the early days Heath made a simple L Network tuner to us with the AT-1.
> > > They did not produce another tuner until the days of the SB-104. The
> > > transmitters preceding the SB-104 all had Pi Network finals.
> > >
> > > If you only move 5 or 10 KC you don't have to retune the Pi Network. When
> > > fully loaded you don't get the sharp dip.
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > >
> > >

> > > ----- Original Message -----
> > > From: "w5rkl" <w5rkl@>
> > > To: <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Sunday, June 12, 2011 11:00 AM
> > > Subject: [TS-520_820_530_830] Re: Output impedance matching network
> > >
> > >
> > > The PLATE and LOAD controls are part of the PI Network circuit. As the PLATE
> > > control is adjust for a dip in IP current, the input to the PI Network
> > > become a closer match to the high impedance of the final amplifier. As the
> > > LOAD control is adjusted, the output of the PI Network become more of a
> > > match to the load (antenna or dummy load) presented to the PI Networks'
> > > output. When these controls are adjusted properly the PI Network is said to
> > > be "resonant" at the operating frequency and maximum power is transferred
> > > from the final amplifier to the load (antenna or dummy load). Some view the
> > > PI Network as an "antenna" tuner which there are similarities.
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> > > If the frequency changes, so does the resonance of the PI Network. If the
> > > frequency change is only a few Khz or so, a few means 2 or 5Khz, then no
> > > adjustment would be needed.
> > >
> > > Personally, a change of 15Khz is a significant change that, in my opinion,
> > > would require a touch up/adjustment of the the DRIVE, PLATE, and LOAD
> > > controls.
> > >
> > > If the transmitter is tuned into a load the PI Network cannot match (LOAD
> > > control) then the meter indications will be false or misleading. IP current
> > > will be much higher and RF output will "appear" to be higher than normal. To
> > > eliminate this problem a tuner will be required between the transmitter and
> > > the antenna or the antenna will have to be "pruned" to resonant on the
> > > operating frequency for lowest SWR. SWR can cause misleading RF output
> > > indications such as those hams who say their TS-520 produces "150 watts"
> > > output. The limits of the PI Network are typically between 30 ohms or so on
> > > the low end (LOAD control set fully CCW) and 125 ohms or so on the high end
> > > (LOAD control set fully CW).
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> > > The PLATE control does NOT change the high impedance of the final tubes nor
> > > does the LOAD control change the impedance presented to the PI Network's
> > > output. The 2 controls simply present as close of a match as possible to
> > > each side at the operating frequency.
> > >
> > > The same applies to a tuner. A tuner does NOT change the load impedance
> > > presented to the tuner's input and output but rather, when adjusted
> > > properly, provides as close of an impedance match to the impedance presented
> > > to the tuner's input and output.
> > >
> > >
> > > 73s
> > > Mike
> > > W5RKL

> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "pakjan830" <lategahn@> wrote:
> > > >
> > > >
> > > > It transmits into an ATU anyway so it's always +- 50 Ohm towards the
> > > > Antenna.
> > > >
> > > > That however is exactly my point. Plate current varies next to nothing
> > > > with a QSY like that so it might be OK to leave the network in its tuned
> > > > state.
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> > > > >
> > > > > If your CW key down plate current varied much more than 5 or 10 mA with
> > > > > a little
> > > > > QSY like that, you probably have some serious antenna issues !!!!!
> > > > >
> > > > >
> > > > >
> > > > >
> > > > > _____
> > > > > From: pakjan830 <lategahn@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Sat, June 11, 2011 3:46:20 PM
> > > > > Subject: [TS-520_820_530_830] Output impedance matching network
> > > > >
> > > > > Â
> > > > > Hi all,
> > > > >
> > > > > I have a question regarding the handling of the output impedance
> > > > > matching
> > > > > network of the TS830 or any similar rig.
> > > > >
> > > > > I often tune my rig to 14.070 for PSK operation. Then I move down by 15
> > > > > KHz to
> > > > > 14.055 for QRS CW. Of course I would retune Drive, Plate and Load in
> > > > > that case.
> > > > > Is that correct or am I too cautious? If so, what would be a safe
> > > > > distance from
> > > > > the tuned frequency where I can move the VFO but not re-tune the output
> > > > > network.
> > > > > 5KHz? 2.5KHz?
> > > > >
> > > > > vy 73 de Jan
> > > > >
> > > > >
> > > > >
> > > > >

> > > > > [Non-text portions of this message have been removed]
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> > >
> > > Yahoo! Groups Links
> > >
> >
>

31868. foil side numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 19:07:52 UTC
From: Joseph Stiles
Topic: 31868 Message: 31868

Greeting Group,

Has anyone figured out why the certain boards with the same "board number" but, "different foil side numbers" are not interchangeable? Changes in circuit(s)/etc are one thing...but...I have an 820S with a bad AF-AVR board. I can not find another board with the correct "foil side number" which ends in -03. Bob Mansker does not have any...I have several KNOWN good boards...but none have the "correct" foil side number...is this rig now for parts?

73's joe wb7uqu

[Non-text portions of this message have been removed]

31869. Re: generator for ts-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 19:40:03 UTC
From: andy_westcott2004
Topic: 31818 Message: 31869

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Some solid state inverters produce a Pseudo Sine Wave.

They do indeed, but a decent UPS for computer backup should output a sine wave - if it does, it will say so in the literature as it is a selling point, although this type are more expensive as all the ones I have encountered incorporate a conventional laminated iron transformer.

The only problem with the UPS route is that whilst on line and drawing normal AC power, it may not add any regulation or cleaning to that unless it is a very expensive one.

31870. Re: using CW filters on digital modes

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 19:45:31 UTC
From: andy_westcott2004
Topic: 31843 Message: 31870

--- In TS-520_820_530_830@yahoogroups.com, "yvadir" <yvadir@...> wrote:

I just hate it when someone over drives their signal for whatever reason and it takes out signals a kc or two either side of their signal...

From the way you describe this, a narrow filter will do nothing to help. I'm also wondering if the rig is simply responding to a very strong signal - the old 'darkening my waterfall' complaint. This, of course, doesn't mean they are running unnecessarily high power, it may be just that the path between you is good.

If the strong signal is quite a way from the wanted signal then a narrow filter will help, but I use BPSK31 extensively with my 520 and never have had a problem. If a strong signal appears, wind back the RF gain and turn up the audio - your station will still be there somewhere and the software will find it!

31871. Re: foil side numbers

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-14 22:02:51 UTC
From: w5rkl
Topic: 31868 Message: 31871

Afternoon Joe,

I have, in front of me now, a TS-820S AF-AVR board with foil side number J25-1381-03. It's complete, no missing parts, all pins are straight, etc. I don't know what operational condition it's in but you can have it for the cost of shipping.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greeting Group,
>
>   Has anyone figured out why the certain boards with the same "board number" but, "different foil side numbers" are not interchangeable? Changes in circuit(s)/etc are one thing...but...I have an 820S with a bad AF-AVR board. I can not find another board with the correct "foil side number" which ends in -03. Bob Mansker does not have any...I have several KNOWN good boards...but none have the "correct" foil side number...is this rig now for parts?
>
>   73's   joe   wb7uqu
>
>
> [Non-text portions of this message have been removed]
>

31872. Driver tube replacement question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-15 13:08:47 UTC
From: Ravi
Topic: 31872 Message: 31872

Hi friends,

If I replace the driver tube in a hybride,do I have do nutralisation?

Just pull out the old one and plug in a new one will enough? (assuming that driver is bad)

Thanks
Ravi 4S6RAV

31873. Re: Driver tube replacement question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-15 14:12:36 UTC
From: w5rkl
Topic: 31872 Message: 31873

Hi Ravi,

No you do not have to neutralize the final amplifier if you replace the driver tube.

If I may ask, what made you think the driver tube needed to be replaced? When you peak the ALC meter with the DRIVE control in TUNE mode, is the ALC meter indication stable? If it is then you don't have to replace the driver tube. If the ALC meter peaks with the DRIVE control but the ALC meter starts to drop back towards zero then the driver tube is weak and would need replacing.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi friends,
>
> If I replace the driver tube in a hybride,do I have do nutralisation?
>
> Just pull out the old one and plug in a new one will enough? (assuming that driver is bad)
>
> Thanks
> Ravi 4S6RAV
>

31874. Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-15 15:08:01 UTC
From: Terry Wagoner
Topic: 31874 Message: 31874

Has anyone modified a hybrid to have a screen grid voltage regulator?

I am interested in hearing from anyone who has installed an old fashioned zener diode string or a mosfet shunt regulator.

I would be interested in your schematic,pictures of how you mounted the components,and wiring changes required to address the SG switch functions. Also, what is your results as far as no load and full load voltage swing.

Thanks--Terry K9TW

31875. Re: [TS-520_820_530_830] Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-15 23:47:41 UTC
From: John Davidson
Topic: 31874 Message: 31875

When I put my first ARC-5 on the air I built a regulator for the oscillator (VFO) and the PA screen and plate were unregulated. it STILL chirped when sending. Somehow I got the idea to regulate the screen voltage and adding another gas regulator tube to my power supply FIXED the chirp problem !
Not a hybrid but may help you decide.

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 15, 2011 11:08:01 AM
Subject: [TS-520_820_530_830] Hybrid Screen Grid Regulation

Has anyone modified a hybrid to have a screen grid voltage regulator?

I am interested in hearing from anyone who has installed an old fashioned zener diode string or a mosfet shunt regulator.

I would be interested in your schematic,pictures of how you mounted the components,and wiring changes required to address the SG switch functions. Also, what is your results as far as no load and full load voltage swing.

Thanks--Terry K9TW

[Non-text portions of this message have been removed]

31876. Re: [TS-520_820_530_830] Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 00:06:26 UTC
From: Terry Wagoner
Topic: 31874 Message: 31876

John-- I remember the OA2 and OB2 days and the Command sets. I dont have any operational problems like cw chirping.

With regulated screen voltage would expect signal to be more linear, but no way for me to measure that. I would just like to lower screen to around 175v to180v to primarily improve the tube life and improve IMD. Exceeding screen dissipation is not good for 6146s and they are being run on the edge.

With screen voltage held under 200v should not see any measurable loss in output power. Have seen some designs that run 150volts on the screens so 175v seems like good compromise. Thanks-Terry

---
From: John Davidson <k8jd@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 15, 2011 7:47:41 PM
Subject: Re: [TS-520_820_530_830] Hybrid Screen Grid Regulation

When I put my first ARC-5 on the air I built a regulator for the oscillator (VFO) and the PA screen and plate were unregulated. it STILL chirped when sending. Somehow I got the idea to regulate the screen voltage and adding another gas regulator tube to my power supply FIXED the chirp problem !
Not a hybrid but may help you decide.

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 15, 2011 11:08:01 AM
Subject: [TS-520_820_530_830] Hybrid Screen Grid Regulation

Has anyone modified a hybrid to have a screen grid voltage regulator?

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I would be interested in your schematic,pictures of how you mounted the components,and wiring changes required to address the SG switch functions. Also,

what is your results as far as no load and full load voltage swing.

Thanks--Terry K9TW

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31877. INRAD 2800 Hz for TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 08:47:11 UTC
From: guzziv502001
Topic: 31877 Message: 31877

I would buy a 2800Hz 455Hz Inrad filter.
I guess it could be the best filter for SSB (the 2100Hz could be good but sharper than already installed Kenwood 2.4 Hz).
Is the Inrad a 8 poles easy plug-in filter or a cabled and larger size filter ?
Thank you
Paul i8ixo

31878. Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 11:00:44 UTC
From: Chris Parnell
Topic: 31878 Message: 31878

Hi Terry, did you get chance to test the SP alignment in the 830 at the weekend?

Cheers
Chris, ZL1CDP

31879. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 11:05:55 UTC
From: Terry Wagoner
Topic: 31878 Message: 31879

Chris --Sorry I did not. It is supposed to rain all day so I will give it a try today and report back. Terry

--- In TS-520_820_530_830@...m, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry, did you get chance to test the SP alignment in the 830 at the weekend?
>
>
> Cheers
> Chris, ZL1CDP
>

31880. Re: INRAD 2800 Hz for TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 11:08:01 UTC
From: Terry Wagoner
Topic: 31877 Message: 31880

Paul- Rob N8RT former owner of INRAD is a member of our group. Drop him a note. If anyone would be able to advice on INRAD filters in TS-830s he is your guy. Terry-K9TW

--- In TS-520_820_530_830@yahoogroups.com, "guzziv502001" <copa054@...> wrote:
>
> I would buy a 2800Hz 455Hz Inrad filter.
> I guess it could be the best filter for SSB (the 2100Hz could be good but sharper than already installed Kenwood 2.4 Hz).
> Is the Inrad a 8 poles easy plug-in filter or a cabled and larger size filter ?
> Thank you
> Paul i8ixo
>

31881. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 11:07:51 UTC
From: Chris Parnell
Topic: 31878 Message: 31881

Ok Terry, thank you.

Been troubleshooting my 990 for a week so haven't had much chance to check myself, but would be keen to know how it works for you.

Cheers
Chris

On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:

> Chris --Sorry I did not. It is supposed to rain all day so I will give it a try today and report back. Terry
>
> --- In TS-520_820_530_830@...m, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry, did you get chance to test the SP alignment in the 830 at the weekend?
> >
> >
> > Cheers
> > Chris, ZL1CDP
> >
>
>

[Non-text portions of this message have been removed]

31882. Re: INRAD 2800 Hz for TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 16:03:42 UTC
From: w5rkl
Topic: 31877 Message: 31882

Hello Paul,

Below are 2 links to a couple of INRADs sideband filters for the TS-830. INRAD's website does not have a graph showing the skirts for the 2.1Khz 8.830Mhz sideband filter so I included the 2.8Khz 8.830Mhz sideband filter's link. I would suspect the 2.1Khz 8.830Mhz sideband filter will have similar graphs as the 455Khz sideband filter has.

The first link is for the 455Khz 2.1Khz sideband filter.

The second link is the 2.8Khz 8.830Mhz sideband filter.

INRAD does not show a graph for the 2.1Khz 8.830Mhz sideband filter.

http://www.inrad.net/product.php?productid=23&cat=55&page=1

http://www.inrad.net/product.php?productid=212&cat=55&page=1

I installed the INRAD 1.8Khz 5.645Mhz sideband filter in my Drake R4C and it is far superior to the Drake's factory sideband filter.

I also installed the INRAD 6Khz 5.645Mhz AM filter. I don't have an original Drake factory AM filter to compare it to but I am very pleased with the results from INRAD's 6Khz AM filter.

I'm no filter expert. I just thought you might like to see the graphs for INRAD's various sideband filters.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "guzziv502001" <copa054@...> wrote:
>
> I would buy a 2800Hz 455Hz Inrad filter.
> I guess it could be the best filter for SSB (the 2100Hz could be good but sharper than already installed Kenwood 2.4 Hz).
> Is the Inrad a 8 poles easy plug-in filter or a cabled and larger size filter ?
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31883. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 16:19:39 UTC
From: Terry Wagoner
Topic: 31878 Message: 31883

Chris-Just completed Item 32 Speech Processor Adjustment on pages 40&41. As usual the service manual leaves out a few thing!

They should tell you to load up normally. Then switch off SG switch and LEAVE THE HEATER SWITCH ON. You wont get any ALC indication with the heater off of the Driver Tube. A minor detail. I think they rely on previous step conditions still being in force?

1. Step 1 is OK except I would prefer that they would say "max meter reading on the Compression Scale".

2. Step 2 is OK but again they tell you to obtain S-1 reading. That would be on the S-meter scale. Then they tell you to obtain meter indication of 20db and that would be on the Compression Scale. So would be better with a multi-scale meter for them to tell you the expected value and on what meter scale.

3. Step 3 is OK but I would prefer they would tell you to set mic gain approximately 1200 o'clock or No. 5 position. I set mine at 1200 and peaked L27.

4. Step 4 (top of page 41) Is ok, but might help if they would say something like "top or far right end of black bordered ALC meter scale box". Just make it very clear what meter position and what scale you are to read.

So, I think if you load up, place SG switch to off, and leave heater switch on you will be able to complete this Item. Let me know. Terry -K9TW

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Ok Terry, thank you.
>
> Been troubleshooting my 990 for a week so haven't had much chance to check myself, but would be keen to know how it works for you.
>
> Cheers
> Chris
>
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> > >
> > > Hi Terry, did you get chance to test the SP alignment in the 830 at the weekend?
> > >
> > >
> > > Cheers

> > > Chris, ZL1CDP
> > >
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

31884. anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 20:20:22 UTC
From: Victor Schirmer
Topic: 31884 Message: 31884

Hey guys, my name is victor, WV1V (not a vanity I got lucky!!) my ts-440s question is: I need this rig for CW for field day, I have a MFJ CW keyer with only one input 1/4 jack and 2 rca outs. I have used this thing in the past to key american rigs that had 4 pin mic jacks, just cross 1 &4 for CW on american rigs--SGC, Patcomm 16000, etc.

My question is: how do I rig this up for a TS-400s????

any help would be great!!

Victor WV1V

[Non-text portions of this message have been removed]

31885. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 21:00:42 UTC
From: Chris Parnell
Topic: 31878 Message: 31885

Hi Terry, thanks for this.

All of that makes sense, and is exactly how I read it to be (Heater on etc), but none of it explains why I (and evidently others), can not "align" the speech processor based on this step at the top of page 41:-

Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG output to 10 mV Adjust the MIC GAIN control until the meter indicates the maximum on-scale ALC reading. Set the PROC to ON.

Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
Mic input providing the same ALC meter reading 10mV......

This is where my 830 (or me) gets stuck..
Every step up until here works fine. I get to the point where I turn the Proc ON and adjust L27 for the same reading as where the PROC is off.
On adjusting L27 with the PROC ON I get no movement on the meter at this point, and therefore cannot obtain the same ALC maximum reading.

Cheers
Chris

On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

> Chris-Just completed Item 32 Speech Processor Adjustment on pages 40&41. As usual the service manual leaves out a few thing!
>
> They should tell you to load up normally. Then switch off SG switch and LEAVE THE HEATER SWITCH ON. You wont get any ALC indication with the heater off of the Driver Tube. A minor detail. I think they rely on previous step conditions still being in force?
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> 1. Step 1 is OK except I would prefer that they would say "max meter reading on the Compression Scale".
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> 3. Step 3 is OK but I would prefer they would tell you to set mic gain approximately 1200 o'clock or No. 5 position. I set mine at 1200 and peaked L27.
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31886. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 21:55:05 UTC
From: Terry Wagoner
Topic: 31878 Message: 31886

Chris--OK you are telling me the following:
Step A:
1. You have the Processor button off and Compression level pot max clockwise. You are in USB mode.
2. You have the meter switch to ALC position.
3. You inject 1500hz @10 mv into mic input.
4. You flip Stand-by switch to Tune.
5. You adjust mic gain until meter pointer is at the far right end of the ALC black bordered box.
6. You return to Stand-by.

Is the above correct? Where is your mic gain at? You should be between 1000 and 1100.

You then turn Processor on with Comp Level max cw. What would you expect the ALC reading to do for the same mic gain setting? Would you expect the meter to peg hard upscale far right? If you had a mic connected and whistled what would you expect ALC meter to do? Just some food for thought.

Step B:
With Processor on and Comp level set max clockwise and the mic gain not touched from above you are telling me that you have no ALC indication when you flip to Tune position? You then try to tweak L27 in attempt to obtain any ALC meter indication and get no ALC indication. Is This correct?

If so, try slowly turning mic gain up a little. It will be very sensitive and you should reach a point where it will drive meter hard up scale. Quickly turn mic gain back down until meter is at far right end of ALC black box. Mic gain pot will be sensitive. Once you have ALC indication staying at far end of ALC box you can peak L27. You may have to go back and forth several times until you no longer have to tweak the mic gain up a hair from Step A. This adjustment is a little difficult due to the ALC time constant. The meter tends to peg hard right and then slowly come back down. So it will tend to float around the max end of the ALC box until things settle down. If you switch meter to Comp you should see about 20db on Comp Scale.

Terry

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 16, 2011 5:00:42 PM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry, thanks for this.

All of that makes sense, and is exactly how I read it to be (Heater on etc), but none of it explains why I (and evidently others), can not "align" the speech processor based on this step at the top of page 41:-

Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG output to 10 mV
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On adjusting L27 with the PROC ON I get no movement on the meter at this point, and therefore cannot obtain the same ALC maximum reading.

Cheers
Chris

On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

> Chris-Just completed Item 32 Speech Processor Adjustment on pages 40&41. As >usual the service manual leaves out a few thing!
>
> They should tell you to load up normally. Then switch off SG switch and LEAVE >THE HEATER SWITCH ON. You wont get any ALC indication with the heater off of the >Driver Tube. A minor detail. I think they rely on previous step conditions still >being in force?
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> 1. Step 1 is OK except I would prefer that they would say "max meter reading on >the Compression Scale".
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> 2. Step 2 is OK but again they tell you to obtain S-1 reading. That would be on >the S-meter scale. Then they tell you to obtain meter indication of 20db and >that would be on the Compression Scale. So would be better with a multi-scale >meter for them to tell you the expected value and on what meter scale.
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> 3. Step 3 is OK but I would prefer they would tell you to set mic gain >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and peaked L27.
>
> 4. Step 4 (top of page 41) Is ok, but might help if they would say something >like "top or far right end of black bordered ALC meter scale box". Just make it >very clear what meter position and what scale you are to read.
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> So, I think if you load up, place SG switch to off, and leave heater switch on >you will be able to complete this Item. Let me know. Terry -K9TW
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> > Ok Terry, thank you.
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Yahoo! Groups Links

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31887. RE: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 22:04:16 UTC
From: Walter Milton
Topic: 31878 Message: 31887

All,

Don't you have to turn the SG switch back on???

Walt, KA2NJF

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Thursday, June 16, 2011 5:01 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry, thanks for this.

All of that makes sense, and is exactly how I read it to be (Heater on
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the speech processor based on this step at the top of page 41:-

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Chris

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> So, I think if you load up, place SG switch to off, and leave heater switch on you will be able to complete this Item. Let me know. Terry -K9TW
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> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Ok Terry, thank you.
> >
> > Been troubleshooting my 990 for a week so haven't had much chance to check myself, but would be keen to know how it works for you.
> >
> > Cheers
> > Chris
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> > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> >
> > > Chris --Sorry I did not. It is supposed to rain all day so I will give it a try today and report back. Terry
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Yahoo! Groups Links

31888. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 22:05:02 UTC
From: andy_westcott2004
Topic: 31874 Message: 31888

I can't see that regulating the screen grid supply for the PA stage is going to do any good.

The screen grid is only there to screen the cathode from the wide voltage fluctuations on the anode, and it doesn't matter in this particular application whether the screen supply is regulated or not as long as it is well decoupled both from RF and supply ripple.

Poor regulation will simply alter the bias point a little, not a problem in a PA stage.

31889. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 22:11:52 UTC
From: Terry Wagoner
Topic: 31878 Message: 31889

Chris -- I forgot to mention it may be easier initially (meter switch in the ALC position) to do your adjustment with the ALC indicated level at 20db on the Compression scale as opposed to down at the high end of the ALC box. Less decay time to mess with. Terry

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--OK you are telling me the following:
> Step A:
> 1. You have the Processor button off and Compression level pot max clockwise.
> You are in USB mode.
> 2. You have the meter switch to ALC position.
> 3. You inject 1500hz @10 mv into mic input.
> 4. You flip Stand-by switch to Tune.
> 5. You adjust mic gain until meter pointer is at the far right end of the ALC
> black bordered box.
> 6. You return to Stand-by.
>
> Is the above correct? Where is your mic gain at? You should be between 1000 and
> 1100.
>
> You then turn Processor on with Comp Level max cw. What would you expect the ALC
> reading to do for the same mic gain setting? Would you expect the meter to peg
> hard upscale far right? If you had a mic connected and whistled what would you
> expect ALC meter to do? Just some food for thought.
>
> Step B:
> With Processor on and Comp level set max clockwise and the mic gain not touched
> from above you are telling me that you have no ALC indication when you flip to
> Tune position? You then try to tweak L27 in attempt to obtain any ALC meter
> indication and get no ALC indication. Is This correct?
>
> If so, try slowly turning mic gain up a little. It will be very sensitive and
> you should reach a point where it will drive meter hard up scale. Quickly turn
> mic gain back down until meter is at far right end of ALC black box. Mic gain
> pot will be sensitive. Once you have ALC indication staying at far end of ALC
> box you can peak L27. You may have to go back and forth several times until you
> no longer have to tweak the mic gain up a hair from Step A. This adjustment is
> a little difficult due to the ALC time constant. The meter tends to peg hard
> right and then slowly come back down. So it will tend to float around the max
> end of the ALC box until things settle down. If you switch meter to Comp you
> should see about 20db on Comp Scale.
>
> Terry
>
>

>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 16, 2011 5:00:42 PM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry, thanks for this.
>
> All of that makes sense, and is exactly how I read it to be (Heater on etc), but
> none of it explains why I (and evidently others), can not "align" the speech
> processor based on this step at the top of page 41:-
>
> Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG output to
> 10 mV
> Adjust the MIC GAIN control until the meter indicates the maximum on-scale ALC
> reading. Set the PROC to ON.
>
> Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
> Mic input providing the same ALC meter reading 10mV......
>
> This is where my 830 (or me) gets stuck..
> Every step up until here works fine. I get to the point where I turn the Proc ON
> and
> adjust L27 for the same reading as where the PROC is off.
> On adjusting L27 with the PROC ON I get no movement on the meter at this
> point, and therefore cannot obtain the same ALC maximum reading.
>
> Cheers
> Chris
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> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
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> > Chris-Just completed Item 32 Speech Processor Adjustment on pages 40&41. As
> >usual the service manual leaves out a few thing!
> >
> > They should tell you to load up normally. Then switch off SG switch and LEAVE
> >THE HEATER SWITCH ON. You wont get any ALC indication with the heater off of the
> >Driver Tube. A minor detail. I think they rely on previous step conditions still
> >being in force?
> >
> > 1. Step 1 is OK except I would prefer that they would say "max meter reading on
> >the Compression Scale".
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> > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That would be on
> >the S-meter scale. Then they tell you to obtain meter indication of 20db and

> >that would be on the Compression Scale. So would be better with a multi-scale
> >meter for them to tell you the expected value and on what meter scale.
> >
> > 3. Step 3 is OK but I would prefer they would tell you to set mic gain
> >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and peaked L27.
> >
> > 4. Step 4 (top of page 41) Is ok, but might help if they would say something
> >like "top or far right end of black bordered ALC meter scale box". Just make it
> >very clear what meter position and what scale you are to read.
> >
> > So, I think if you load up, place SG switch to off, and leave heater switch on
> >you will be able to complete this Item. Let me know. Terry -K9TW
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> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
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> > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
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31890. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 22:18:50 UTC
From: Terry Wagoner
Topic: 31878 Message: 31890

Walt--No-you would then be keying the finals. No RF output required for this adjustment. That is done under Step 31 where you adjust ALC. Terry

---
From: Walter Milton <wmilton@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 16, 2011 6:04:16 PM
Subject: RE: [TS-520_820_530_830] Re: Speech Processor alignment

All,

Don't you have to turn the SG switch back on???

Walt, KA2NJF

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Chris Parnell
Sent: Thursday, June 16, 2011 5:01 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry, thanks for this.

All of that makes sense, and is exactly how I read it to be (Heater on etc), but none of it explains why I (and evidently others), can not "align" the speech processor based on this step at the top of page 41:-

Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG output to 10 mV
Adjust the MIC GAIN control until the meter indicates the maximum on-scale ALC reading. Set the PROC to ON.

Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled). Mic input providing the same ALC meter reading 10mV......

This is where my 830 (or me) gets stuck..
Every step up until here works fine. I get to the point where I turn the Proc ON and
adjust L27 for the same reading as where the PROC is off.
On adjusting L27 with the PROC ON I get no movement on the meter at this point, and therefore cannot obtain the same ALC maximum reading.

Cheers
Chris

On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

> Chris-Just completed Item 32 Speech Processor Adjustment on pages 40&41. As usual the service manual leaves out a few thing!
>
> They should tell you to load up normally. Then switch off SG switch and LEAVE THE HEATER SWITCH ON. You wont get any ALC indication with the heater off of the Driver Tube. A minor detail. I think they rely on previous step conditions still being in force?
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> 1. Step 1 is OK except I would prefer that they would say "max meter reading on the Compression Scale".
>
> 2. Step 2 is OK but again they tell you to obtain S-1 reading. That would be on the S-meter scale. Then they tell you to obtain meter indication of 20db and that would be on the Compression Scale. So would be better with a multi-scale meter for them to tell you the expected value and on what meter scale.
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> 3. Step 3 is OK but I would prefer they would tell you to set mic gain approximately 1200 o'clock or No. 5 position. I set mine at 1200 and peaked L27.
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> 4. Step 4 (top of page 41) Is ok, but might help if they would say something like "top or far right end of black bordered ALC meter scale box". Just make it very clear what meter position and what scale you are to read.
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> So, I think if you load up, place SG switch to off, and leave heater switch on you will be able to complete this Item. Let me know. Terry -K9TW
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> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
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Yahoo! Groups Links

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31891. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 22:19:40 UTC
From: Chris Parnell
Topic: 31878 Message: 31891

Thanks Terry....

Will hopefully get around to confirming all of this later tonight NZ time.

Cheers
Chris

On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:

> Chris -- I forgot to mention it may be easier initially (meter switch in the ALC position) to do your adjustment with the ALC indicated level at 20db on the Compression scale as opposed to down at the high end of the ALC box. Less decay time to mess with.
> Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > Chris--OK you are telling me the following:
> > Step A:
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> > 1100.
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> > hard upscale far right? If you had a mic connected and whistled what would you
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> > a little difficult due to the ALC time constant. The meter tends to peg hard
> > right and then slowly come back down. So it will tend to float around the max
> > end of the ALC box until things settle down. If you switch meter to Comp you
> > should see about 20db on Comp Scale.
> >
> > Terry
> >
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, June 16, 2011 5:00:42 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry, thanks for this.
> >
> > All of that makes sense, and is exactly how I read it to be (Heater on etc), but
> > none of it explains why I (and evidently others), can not "align" the speech
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> >
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> > 10 mV
> > Adjust the MIC GAIN control until the meter indicates the maximum on-scale ALC
> > reading. Set the PROC to ON.
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> > Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
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> > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
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31892. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:07:32 UTC
From: Terry Wagoner
Topic: 31874 Message: 31892

Andy--I agree that poor regulation will cause the bias point to vary over the RF envelope in SSB. I also agree about importance of low ripple supply and decoupling caps.

I havent looked at tube curves to see what affect the screen grid swing would be on the bias point. I know screen voltage swings approx 40 volts from no load to key down (264 to 222), but have never measured it during SSB operation. Obviously wont be that much.

As a Ham I dont want to say I dont care about linearity or IMD, but my primary concern is tube life. I believe max screen voltage for 6146Bs is 250 volts and current is 8ma per tube. So it would be very easy to exceed screen grid current and dissipation. Cant be good for tube life.

I am especially sensitive because I recently experienced 2 sets of 6146 final tube arc-overs that pegged my meter and blew open my cathode resistors. Dont want that experience any time soon.

I suspect I wont find anyone who has made this mod on the hybrids. I looked at FT-101 and FT-102s and their screen grid supply is nearly identical to Kenwoods. I guess zeners existed back then, but not sure about mosfets?

I did have a Drake T4 xmtr here a month or so ago and someone had replaced the sweep tubes with 6146s and they had installed a shunt regulator and the screen voltage was approx 150 volts. The anode was around 675 volts. Both voltages significantly lower than our hybrids. No idea how this affected the tube life in this rig. This is actually what got me thinking about possible mod to our rigs. Terry-K9TW

From: andy_westcott2004 <andywestcottpublic@tiscali.co.uk>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 16, 2011 6:05:02 PM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

I can't see that regulating the screen grid supply for the PA stage is going to do any good.

The screen grid is only there to screen the cathode from the wide voltage fluctuations on the anode, and it doesn't matter in this particular application whether the screen supply is regulated or not as long as it is well decoupled both from RF and supply ripple.

Poor regulation will simply alter the bias point a little, not a problem in a PA stage.

[Non-text portions of this message have been removed]

31893. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:11:48 UTC
From: Ruben Echevarria KA2HHB
Topic: 31884 Message: 31893

What's the model number on the MFJ keyer?
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Victor Schirmer
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 16, 2011 4:20 PM
Subject: [TS-520_820_530_830] anyone know ts-440s??

Hey guys, my name is victor, WV1V (not a vanity I got lucky!!) my
ts-440s question is: I need this rig for CW for field day, I have a
MFJ CW keyer with only one input 1/4 jack and 2 rca outs. I have used
this thing in the past to key american rigs that had 4 pin mic jacks,
just cross 1 &4 for CW on american rigs--SGC, Patcomm 16000, etc.

My question is: how do I rig this up for a TS-400s????

any help would be great!!

Victor WV1V

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[Non-text portions of this message have been removed]

31894. RE: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:20:18 UTC
From: Walter Milton
Topic: 31878 Message: 31894

Thank You Terry ;-)

Walt

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Terry Wagoner
Sent: Thursday, June 16, 2011 6:19 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Walt--No-you would then be keying the finals. No RF output required for this adjustment. That is done under Step 31 where you adjust ALC. Terry

---
From: Walter Milton <wmilton@... <mailto:wmilton%40comcast.net> >
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Sent: Thu, June 16, 2011 6:04:16 PM
Subject: RE: [TS-520_820_530_830] Re: Speech Processor alignment

All,

Don't you have to turn the SG switch back on???

Walt, KA2NJF

-----Original Message-----
From: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com> [mailto:TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>] On Behalf Of Chris Parnell
Sent: Thursday, June 16, 2011 5:01 PM
To: TS-520_820_530_830@yahoogroups.com <mailto:TS-520_820_530_830%40yahoogroups.com>
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry, thanks for this.

All of that makes sense, and is exactly how I read it to be (Heater on etc), but none of it explains why I (and evidently others), can not "align" the speech processor based on this step at the top of page 41:-

Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG output to 10 mV
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Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled). Mic input providing the same ALC meter reading 10mV.....

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Every step up until here works fine. I get to the point where I turn the
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adjust L27 for the same reading as where the PROC is off.
On adjusting L27 with the PROC ON I get no movement on the meter at this
point, and therefore cannot obtain the same ALC maximum reading.

Cheers
Chris

On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

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As usual the service manual leaves out a few thing!
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> They should tell you to load up normally. Then switch off SG switch and
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> 2. Step 2 is OK but again they tell you to obtain S-1 reading. That would
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, Chris Parnell
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Yahoo! Groups Links

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31895. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:27:13 UTC
From: Terry Wagoner
Topic: 31878 Message: 31895

Chris--Just repeated adjustments and was able to get pretty good equal indications at far right of ALC black box or S-9 on the S-meter scale with the mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no longer needed to tweak the mic gain to get an indication. I cant go any lower on mic gain with 10mv input. Good Luck-Terry

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
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> Thanks Terry....
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> Will hopefully get around to confirming all of this later tonight NZ time.
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> Cheers
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> > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
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> > > Step A:
> > > 1. You have the Processor button off and Compression level pot max clockwise.
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> > > black bordered box.
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> > > 1100.
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> > > reading to do for the same mic gain setting? Would you expect the meter to peg
> > > hard upscale far right? If you had a mic connected and whistled what would you
> > > expect ALC meter to do? Just some food for thought.
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> > > Step B:
> > > With Processor on and Comp level set max clockwise and the mic gain not touched

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> > > you should reach a point where it will drive meter hard up scale. Quickly turn
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> > > no longer have to tweak the mic gain up a hair from Step A. This adjustment is
> > > a little difficult due to the ALC time constant. The meter tends to peg hard
> > > right and then slowly come back down. So it will tend to float around the max
> > > end of the ALC box until things settle down. If you switch meter to Comp you
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> > > Terry
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> > >
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry, thanks for this.
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> > > 10 mV
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31896. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:29:50 UTC
From: Chris Parnell
Topic: 31878 Message: 31896

Thanks Terry,

So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON to same point? that's what it states from memory... point of exercise is to have ALC reading same position with Proc ON and OFF.

Cheers
Chris

On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:

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31897. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-16 23:52:51 UTC
From: Terry Wagoner
Topic: 31878 Message: 31897

Yes--Objective is for a given mic gain setting with 10mv applied to have same ALC reading (max) with Processor on and off. You should not have to adjust mic gain or input signal level once balanced. You should be able to flip to Tune with Proc on and off and see approx the same max ALC indication.

If you initially get no indication (I think that is your problem?) you can move mic gain up slightly until you get an indication. It wont take much and will be very touchy and will want to peg the meter. Only other choice you have is to set audio generator output higher as others suggested. I chose to just increase mic gain until I got an indication. After I found that point I no longer needed to touch the mic gain. If I had to increase mic gain each time then it would not be a valid adjustment. As I mentioned I ended up getting pretty good matched ALC indication with mic gain just a hair past No.4. Terry

---
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 16, 2011 7:29:50 PM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Thanks Terry,

So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON to same point? that's what it states from memory... point of exercise is to have ALC reading same position with Proc ON and OFF.

Cheers
Chris

On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:

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> > > > reading. Set the PROC to ON.
> > > > >
> > > > Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
> > > > Mic input providing the same ALC meter reading 10mV......
> > > > >
> > > > This is where my 830 (or me) gets stuck..
> > > > Every step up until here works fine. I get to the point where I turn the
>Proc ON
>
> > > > and
> > > > adjust L27 for the same reading as where the PROC is off.
> > > > On adjusting L27 with the PROC ON I get no movement on the meter at this
> > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > >
> > > > Cheers
> > > > Chris
> > > > >
> > > > >
> > > > >
> > > > >
> > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > >
> > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
>40&41. As
>
> > > > >usual the service manual leaves out a few thing!
> > > > > >
> > > > > They should tell you to load up normally. Then switch off SG switch and
>LEAVE
>
> > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the heater
>off of the
>
> > > > >Driver Tube. A minor detail. I think they rely on previous step
>conditions still
>
> > > > >being in force?

> > > > >
> > > > > 1. Step 1 is OK except I would prefer that they would say "max meter
>reading on
>
> > > > >the Compression Scale".
> > > > > >
> > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
>would be on
>
> > > > >the S-meter scale. Then they tell you to obtain meter indication of 20db
>and
>
> > > > >that would be on the Compression Scale. So would be better with a
>multi-scale
>
> > > > >meter for them to tell you the expected value and on what meter scale.
> > > > > >
> > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic gain

> > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
>peaked L27.
> > > > > >
> > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say
>something
>
> > > > >like "top or far right end of black bordered ALC meter scale box". Just
>make it
>
> > > > >very clear what meter position and what scale you are to read.
> > > > > >
> > > > > So, I think if you load up, place SG switch to off, and leave heater
>switch on
>
> > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > >
> > > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
> > > > >wrote:
> > > > > > >
> > > > > > Ok Terry, thank you.
> > > > > > >
> > > > > > Been troubleshooting my 990 for a week so haven't had much chance to
>check
>
> > > > >myself, but would be keen to know how it works for you.
> > > > > > >
> > > > > > Cheers
> > > > > > Chris

> > > > > >
> > > > > >
> > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I will
>give it a
>
> > > > >try today and report back. Terry
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
> > > > >wrote:
> > > > > > > >
> > > > > > > > Hi Terry, did you get chance to test the SP alignment in the 830
>at the
>
> > > > >weekend?
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris, ZL1CDP
> > > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > [Non-text portions of this message have been removed]
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> > > > > > Yahoo! Groups Links
> > > > > >
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Yahoo! Groups Links

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31898. Re: [TS-520_820_530_830] Re: Driver tube replacement question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 00:40:04 UTC
From: ravi sumith
Topic: 31872 Message: 31898

Hi Mike,

Thanks for the advice.
In my 520, I am not getting full power out in all bands.80-100W in 80 &
40 meters and around 50-65W in others.Then I can remember some one suggested to
clean the MODE and BAND switches.Which I did with a contact cleaner liquid but
more or less with same results.
I was wondering whether my driver is bad or transmitter section needs
alignment.However, when tuning, ALC meter is stable. So now it appears
re-alignment is necessary.If I follow the instructions in the manual for TX alignment, I
will be OK I guess.

73's
Ravi

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, 15 June 2011 7:42 PM
Subject: [TS-520_820_530_830] Re: Driver tube replacement question

Hi Ravi,

No you do not have to neutralize the final amplifier if you replace the driver tube.

If I may ask, what made you think the driver tube needed to be replaced? When you peak the ALC meter with the DRIVE control in TUNE mode, is the ALC meter indication stable? If it is then you don't have to replace the driver tube. If the ALC meter peaks with the DRIVE control but the ALC meter starts to drop back towards zero then the driver tube is weak and would need replacing.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Ravi" <mindover2003@...> wrote:
>
> Hi friends,
>
> If I replace the driver tube in a hybride,do I have do nutralisation?
>
> Just pull out the old one and plug in a new one will enough? (assuming that driver is bad)
>
> Thanks
> Ravi 4S6RAV
>

[Non-text portions of this message have been removed]

31899. Re: [TS-520_820_530_830] Capacitors blown off!!

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 00:41:11 UTC
From: ravi sumith
Topic: 31497 Message: 31899

Thanks Brad

From: brad <kb2chy@frontiernet.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, May 26, 2011 10:06 PM
Subject: RE: [TS-520_820_530_830] Capacitors blown off!!

Well the Radio blew the fuse as designed. Replace the caps and check the high voltage to be sure it is correct. If all seems well, forget it and chalk it up to age. I would purchase a spare set to be on the safe side. It's an old radio and I know how much fun they are to use, so have fun and don't try and second guess age. Have fun.Brad KB2CHY

From: TS-520_820_530_830@yahoogroups.com
[mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of Ravi
Sent: Thursday, May 26, 2011 12:27
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Capacitors blown off!!

Hi Friends

Today my TS520SE stopped suddenly with a 'pop'.

When checked, the AC fuse was blown.I opened the covers and noted that one of the small ceramic capacitors across high voltage caps was blown. This is noted as C17 or C18 in the circuit diagram. The high voltage caps are C19 & C20 connected to 800V line in the rectifier unit.

I can replace both after discharging high voltage caps.My worry is why this has happened? Is it due to aging of the caps or for some other reason.Looks like caps are originals but not sure as previous repair notes are not available.
Appreciate any views/suggestions.73's de 4S6RAV (Ravi)

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31900. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 01:03:39 UTC
From: Victor Schirmer
Topic: 31884 Message: 31900

Thanks for your reply, it is an MFJ 407B.

Victor WV1V

[Non-text portions of this message have been removed]

31901. Picked up a TS 520 today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 01:33:52 UTC
From: Brian
Topic: 31901 Message: 31901

The ham said he thought it was an early model. It's serial number is 390585, and the fan cover on the back is a gold screen. Not the black cover on most models. Also the vfo frequency reading area is completely white.

Some one installed a switch on the bottom. I appears this may cut a cw filter on and off, is this a mod that was done?

Also the receive strength sometimes comes and goes and can be corrected by putting pressure on the band switch. Do you think a cleaning will fix this?

Thanks Guys, KB4MNG Brian in nc

31902. Re: [TS-520_820_530_830] Picked up a TS 520 today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 02:20:56 UTC
From: Joseph Stiles
Topic: 31901 Message: 31902

Brian,

I do think that the "early" models have the screened fan as you say. These rig have been around for awhile...a good cleaning of ALL controls can't hurt...DEOXIT and some "canned air" work well. I would look VERY close as to what that switch is wire to. Very often these rigs get the CB HACK JOB aka "FREE BANDING" Double check any crystal frequency with one on the schematic.

73's joe wb7uqu

From: Brian <bsa0791@yahoo.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 16, 2011 6:33 PM
Subject: [TS-520_820_530_830] Picked up a TS 520 today...

The ham said he thought it was an early model. It's serial number is 390585, and the fan cover on the back is a gold screen. Not the black cover on most models. Also the vfo frequency reading area is completely white.

Some one installed a switch on the bottom. I appears this may cut a cw filter on and off, is this a mod that was done?

Also the receive strength sometimes comes and goes and can be corrected by putting pressure on the band switch. Do you think a cleaning will fix this?

Thanks Guys, KB4MNG Brian in nc

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31903. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 02:34:21 UTC
From: Ruben Echevarria KA2HHB
Topic: 31884 Message: 31903

Looks to me that you plug your key in and choose and direct keying then iambic ..... leave grid block alone ...
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Victor Schirmer
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 16, 2011 9:03 PM
Subject: Re: [TS-520_820_530_830] anyone know ts-440s??

Thanks for your reply, it is an MFJ 407B.

Victor WV1V

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[Non-text portions of this message have been removed]

31904. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 02:38:19 UTC
From: Ruben Echevarria KA2HHB
Topic: 31884 Message: 31904

http://morse-rss-news.sourceforge.net/keyerdoc/modeab.pdf

Defintion of an iambic keyer or mode ....

Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Victor Schirmer
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 16, 2011 9:03 PM
Subject: Re: [TS-520_820_530_830] anyone know ts-440s??

Thanks for your reply, it is an MFJ 407B.

Victor WV1V

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31905. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 02:40:28 UTC
From: Ruben Echevarria KA2HHB
Topic: 31884 Message: 31905

So you plug your key into the key jack, make a cable from the direct connector to your TS440 and then choose iambic....
Ruben Echevarria KA2HHB
Newark, New Jersey 07104
070 Club#861 LONP#141
30MDG#1148 10-10#33308
EPC#3390
----- Original Message -----
From: Victor Schirmer
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 16, 2011 9:03 PM
Subject: Re: [TS-520_820_530_830] anyone know ts-440s??

Thanks for your reply, it is an MFJ 407B.

Victor WV1V

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31906. Re: [TS-520_820_530_830] anyone know ts-440s??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 03:46:55 UTC
From: John Davidson
Topic: 31884 Message: 31906

You do not send CW with the mic jack !.
 there is A 1/4 inch KEY jack on the rear panel of the TS440s.
On the keyer, Use the Standard RCA jack that is positive keying (not grid block)
with a cable with male RCA to male 1/4 inch single circuit plug to the radio.

Your 1/4 inch socket on the Keyer is a 2 circuit (stereo) phone input for the
paddle.
Hope to hear you on the CW frequencies soon.

From: Victor Schirmer <vas1776@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 16, 2011 4:20:22 PM
Subject: [TS-520_820_530_830] anyone know ts-440s??

Hey guys, my name is victor, WV1V (not a vanity I got lucky!!) my
ts-440s question is: I need this rig for CW for field day, I have a
MFJ CW keyer with only one input 1/4 jack and 2 rca outs. I have used
this thing in the past to key american rigs that had 4 pin mic jacks,
just cross 1 &4 for CW on american rigs--SGC, Patcomm 16000, etc.

My question is: how do I rig this up for a TS-400s????

any help would be great!!

Victor WV1V

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31907. Re: [TS-520_820_530_830] Picked up a TS 520 today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 04:20:49 UTC
From: Marucs Rodgers Sr.
Topic: 31901 Message: 31907

A good cleaning never hurts.

--- On Thu, 6/16/11, Brian <bsa0791@...m> wrote:

> From: Brian <bsa0791@...>
> Subject: [TS-520_820_530_830] Picked up a TS 520 today...
> To: TS-520_820_530_830@yahoogroups.com
> Date: Thursday, June 16, 2011, 9:33 PM
> The ham said he thought it was an
> early model. It's serial number is 390585, and the fan cover
> on the back is a gold screen. Not the black cover on most
> models. Also the vfo frequency reading area is completely
> white.
>
> Some one installed a switch on the bottom. I appears this
> may cut a cw filter on and off, is this a mod that was
> done?
>
>
> Also the receive strength sometimes comes and goes and can
> be corrected by putting pressure on the band switch. Do you
> think a cleaning will fix this?
>
> Thanks Guys, KB4MNG Brian in nc
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>   TS-520_820_530_830-fullfeatured@yahoogroups.com
>
>
>

31908. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 12:33:17 UTC
From: Chris Parnell
Topic: 31878 Message: 31908

Hi Terry, in a nutshell,

It doesn't weigh up here.

Following to the letter the service manual and then taking into account your notes, the final situation is that I end up with full on-scale deflection of ALC (ie end of black ALC setting), with processor on and full scale (pegged meter) deflection without PROC engaged, just Mic.

God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.

Thanks
Chris

Sent from my iPhone

On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:

> Yes--Objective is for a given mic gain setting with 10mv applied to have same
> ALC reading (max) with Processor on and off. You should not have to adjust mic
> gain or input signal level once balanced. You should be able to flip to Tune
> with Proc on and off and see approx the same max ALC indication.
>
> If you initially get no indication (I think that is your problem?) you can move
> mic gain up slightly until you get an indication. It wont take much and will be
> very touchy and will want to peg the meter. Only other choice you have is to set
> audio generator output higher as others suggested. I chose to just increase
> mic gain until I got an indication. After I found that point I no longer needed
> to touch the mic gain. If I had to increase mic gain each time then it would
> not be a valid adjustment. As I mentioned I ended up getting pretty good matched
> ALC indication with mic gain just a hair past No.4. Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 16, 2011 7:29:50 PM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Thanks Terry,
>
> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON to
> same point? that's what it states from memory... point of exercise is to have
> ALC reading same position with Proc ON and OFF.
>
> Cheers
> Chris
>

> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>
> > Chris--Just repeated adjustments and was able to get pretty good equal
> >indications at far right of ALC black box or S-9 on the S-meter scale with the
> >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no
> >longer needed to tweak the mic gain to get an indication. I cant go any lower on
> >mic gain with 10mv input. Good Luck-Terry
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> >wrote:
> > >
> > > Thanks Terry....
> > >
> > > Will hopefully get around to confirming all of this later tonight NZ time.
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > >
> > > > Chris -- I forgot to mention it may be easier initially (meter switch in
> >the ALC position) to do your adjustment with the ALC indicated level at 20db on
> >the Compression scale as opposed to down at the high end of the ALC box. Less
> >decay time to mess with. Terry
> >
> > > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> wrote:
> > > > > >
> > > > > Chris--OK you are telling me the following:
> > > > > Step A:
> > > > > 1. You have the Processor button off and Compression level pot max
> >clockwise.
> >
> > > > > You are in USB mode.
> > > > > 2. You have the meter switch to ALC position.
> > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > 4. You flip Stand-by switch to Tune.
> > > > > 5. You adjust mic gain until meter pointer is at the far right end of the
> >ALC
> >
> > > > > black bordered box.
> > > > > 6. You return to Stand-by.
> > > > >
> > > > > Is the above correct? Where is your mic gain at? You should be between
> >1000 and
> >
> > > > > 1100.

> > > > >
> > > > > You then turn Processor on with Comp Level max cw. What would you expect
> >the ALC
> >
> > > > > reading to do for the same mic gain setting? Would you expect the meter
> >to peg
> >
> > > > > hard upscale far right? If you had a mic connected and whistled what
> >would you
> >
> > > > > expect ALC meter to do? Just some food for thought.
> > > > > >
> > > > > Step B:
> > > > > With Processor on and Comp level set max clockwise and the mic gain not
> >touched
> >
> > > > > from above you are telling me that you have no ALC indication when you
> >flip to
> >
> > > > > Tune position? You then try to tweak L27 in attempt to obtain any ALC
> >meter
> >
> > > > > indication and get no ALC indication. Is This correct?
> > > > > >
> > > > > If so, try slowly turning mic gain up a little. It will be very sensitive
> >and
> >
> > > > > you should reach a point where it will drive meter hard up scale. Quickly
> >turn
> >
> > > > > mic gain back down until meter is at far right end of ALC black box. Mic
> >gain
> >
> > > > > pot will be sensitive. Once you have ALC indication staying at far end of
> >ALC
> >
> > > > > box you can peak L27. You may have to go back and forth several times
> >until you
> >
> > > > > no longer have to tweak the mic gain up a hair from Step A. This
> >adjustment is
> >
> > > > > a little difficult due to the ALC time constant. The meter tends to peg
> >hard
> >
> > > > > right and then slowly come back down. So it will tend to float around the
> >max
> >
> > > > > end of the ALC box until things settle down. If you switch meter to Comp
> >you

> >
> > > > > should see about 20db on Comp Scale.
> > > > > >
> > > > > > Terry
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Hi Terry, thanks for this.
> > > > > >
> > > > > > All of that makes sense, and is exactly how I read it to be (Heater on
> >etc), but
> >
> > > > > > none of it explains why I (and evidently others), can not "align" the
> >speech
> >
> > > > > > processor based on this step at the top of page 41:-
> > > > > >
> > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG
> >output to
> >
> > > > > > 10 mV
> > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> >on-scale ALC
> >
> > > > > > reading. Set the PROC to ON.
> > > > > >
> > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
> > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > >
> > > > > > This is where my 830 (or me) gets stuck..
> > > > > > Every step up until here works fine. I get to the point where I turn the
> >Proc ON
> >
> > > > > > and
> > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at this
> > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > >

> > > > >
> > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> >40&41. As
> >
> > > > > > >usual the service manual leaves out a few thing!
> > > > > > >
> > > > > > > They should tell you to load up normally. Then switch off SG switch and
> >LEAVE
> >
> > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the heater
> >off of the
> >
> > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> >conditions still
> >
> > > > > > >being in force?
> > > > > > >
> > > > > > > 1. Step 1 is OK except I would prefer that they would say "max meter
> >reading on
> >
> > > > > > >the Compression Scale".
> > > > > > >
> > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
> >would be on
> >
> > > > > > >the S-meter scale. Then they tell you to obtain meter indication of 20db
> >and
> >
> > > > > > >that would be on the Compression Scale. So would be better with a
> >multi-scale
> >
> > > > > > >meter for them to tell you the expected value and on what meter scale.
> > > > > > >
> > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic gain
> >
> > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
> >peaked L27.
> > > > > > >
> > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say
> >something
> >
> > > > > > >like "top or far right end of black bordered ALC meter scale box". Just
> >make it
> >
> > > > > > >very clear what meter position and what scale you are to read.
> > > > > > >
> > > > > > > So, I think if you load up, place SG switch to off, and leave heater
> >switch on

> >
> > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Ok Terry, thank you.
> > > > > > > > >
> > > > > > > > > Been troubleshooting my 990 for a week so haven't had much chance to
> >check
> > >
> > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I will
> >give it a
> > >
> > > > > > >try today and report back. Terry
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> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> > >
> > > > > > >wrote:
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> > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in the 830
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> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > >
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31909. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 12:36:35 UTC
From: Chris Parnell
Topic: 31878 Message: 31909

Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC setting), with processor on and full scale (pegged meter) deflection without PROC NOT engaged, just Mic.

Chris
Sent from my iPhone

On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi Terry, in a nutshell,
>
> It doesn't weigh up here.
>
> Following to the letter the service manual and then taking into account your notes, the final situation is that I end up with full on-scale deflection of ALC (ie end of black ALC setting), with processor on and full scale (pegged meter) deflection without PROC engaged, just Mic.
>
> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>
> Thanks
> Chris
>
> Sent from my iPhone
>
> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
>
> > Yes--Objective is for a given mic gain setting with 10mv applied to have same
> > ALC reading (max) with Processor on and off. You should not have to adjust mic
> > gain or input signal level once balanced. You should be able to flip to Tune
> > with Proc on and off and see approx the same max ALC indication.
> >
> > If you initially get no indication (I think that is your problem?) you can move
> > mic gain up slightly until you get an indication. It wont take much and will be
> > very touchy and will want to peg the meter. Only other choice you have is to set
> > audio generator output higher as others suggested. I chose to just increase
> > mic gain until I got an indication. After I found that point I no longer needed
> > to touch the mic gain. If I had to increase mic gain each time then it would
> > not be a valid adjustment. As I mentioned I ended up getting pretty good matched
> > ALC indication with mic gain just a hair past No.4. Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, June 16, 2011 7:29:50 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >

> > Thanks Terry,
> >
> > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON to
> > same point? that's what it states from memory... point of exercise is to have
> > ALC reading same position with Proc ON and OFF.
> >
> > Cheers
> > Chris
> >
> > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >
> > > Chris--Just repeated adjustments and was able to get pretty good equal
> > >indications at far right of ALC black box or S-9 on the S-meter scale with the
> > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no
> > >longer needed to tweak the mic gain to get an indication. I cant go any lower on
> > >mic gain with 10mv input. Good Luck-Terry
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> > >wrote:
> > > >
> > > > Thanks Terry....
> > > >
> > > > Will hopefully get around to confirming all of this later tonight NZ time.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris -- I forgot to mention it may be easier initially (meter switch in
> > >the ALC position) to do your adjustment with the ALC indicated level at 20db on
> > >the Compression scale as opposed to down at the high end of the ALC box. Less
> > >decay time to mess with. Terry
> > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > wrote:
> > > > > >
> > > > > > Chris--OK you are telling me the following:
> > > > > > Step A:
> > > > > > 1. You have the Processor button off and Compression level pot max
> > >clockwise.
> > > >
> > > > > > You are in USB mode.
> > > > > > 2. You have the meter switch to ALC position.
> > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > 5. You adjust mic gain until meter pointer is at the far right end of the

> > >ALC
> > >
> > > > > > black bordered box.
> > > > > > 6. You return to Stand-by.
> > > > > >
> > > > > > Is the above correct? Where is your mic gain at? You should be between
> > >1000 and
> > >
> > > > > > 1100.
> > > > > >
> > > > > > You then turn Processor on with Comp Level max cw. What would you expect
> > >the ALC
> > >
> > > > > > reading to do for the same mic gain setting? Would you expect the meter
> > >to peg
> > >
> > > > > > hard upscale far right? If you had a mic connected and whistled what
> > >would you
> > >
> > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > >
> > > > > > Step B:
> > > > > > With Processor on and Comp level set max clockwise and the mic gain not
> > >touched
> > >
> > > > > > from above you are telling me that you have no ALC indication when you
> > >flip to
> > >
> > > > > > Tune position? You then try to tweak L27 in attempt to obtain any ALC
> > >meter
> > >
> > > > > > indication and get no ALC indication. Is This correct?
> > > > > > >
> > > > > > If so, try slowly turning mic gain up a little. It will be very sensitive
> > >and
> > >
> > > > > > you should reach a point where it will drive meter hard up scale. Quickly
> > >turn
> > >
> > > > > > mic gain back down until meter is at far right end of ALC black box. Mic
> > >gain
> > >
> > > > > > pot will be sensitive. Once you have ALC indication staying at far end of
> > >ALC
> > >
> > > > > > box you can peak L27. You may have to go back and forth several times
> > >until you
> > >
> > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > >adjustment is

> > >
> > > > > > a little difficult due to the ALC time constant. The meter tends to peg
> > >hard
> > >
> > > > > > right and then slowly come back down. So it will tend to float around the
> > >max
> > >
> > > > > > end of the ALC box until things settle down. If you switch meter to Comp
> > >you
> > >
> > > > > > should see about 20db on Comp Scale.
> > > > > > >
> > > > > > Terry
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > Hi Terry, thanks for this.
> > > > > > >
> > > > > > All of that makes sense, and is exactly how I read it to be (Heater on
> > >etc), but
> > >
> > > > > > none of it explains why I (and evidently others), can not "align" the
> > >speech
> > >
> > > > > > processor based on this step at the top of page 41:-
> > > > > > >
> > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the AG
> > >output to
> > >
> > > > > > 10 mV
> > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > >on-scale ALC
> > >
> > > > > > reading. Set the PROC to ON.
> > > > > > >
> > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC on-scaled).
> > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > >
> > > > > > This is where my 830 (or me) gets stuck..
> > > > > > Every step up until here works fine. I get to the point where I turn the
> > >Proc ON
> > >
> > > > > > and

> > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at this
> > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> > >40&41. As
> > >
> > > > > > >usual the service manual leaves out a few thing!
> > > > > > >
> > > > > > > They should tell you to load up normally. Then switch off SG switch and
> > >LEAVE
> > >
> > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the heater
> > >off of the
> > >
> > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > >conditions still
> > >
> > > > > > >being in force?
> > > > > > >
> > > > > > > 1. Step 1 is OK except I would prefer that they would say "max meter
> > >reading on
> > >
> > > > > > >the Compression Scale".
> > > > > > >
> > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
> > >would be on
> > >
> > > > > > >the S-meter scale. Then they tell you to obtain meter indication of 20db
> > >and
> > >
> > > > > > >that would be on the Compression Scale. So would be better with a
> > >multi-scale
> > >
> > > > > > >meter for them to tell you the expected value and on what meter scale.
> > > > > > >
> > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic gain
> > >
> > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
> > >peaked L27.
> > > > > > >
> > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say

> > >something
> > >
> > > > > > >like "top or far right end of black bordered ALC meter scale box". Just
> > >make it
> > >
> > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > >
> > > > > > > > So, I think if you load up, place SG switch to off, and leave heater
> > >switch on
> > >
> > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@>
> > >
> > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much chance to
> > >check
> > >
> > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I will
> > >give it a
> > >
> > > > > > > >try today and report back. Terry
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@>
> > >
> > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in the 830
> > >at the
> > >
> > > > > > > >weekend?
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > >

> > > > > > > > > >
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31910. Re: Picked up a TS 520 today...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 12:49:10 UTC
From: w5rkl
Topic: 31901 Message: 31910

I agree, a good cleaning would be a good idea. I also recommend inspecting the band switch wafer assemblies for a lose ground(s) and/or connections.

The all white dial indicates the 520 you have is the first model in the 520 series (80 thru 10, no WARC Bands).

The TS-520 (white dial model) has an input power rating of 200 watt PEP on sideband (USB and LSB) and a DC input power rating of 160 watts in CW mode. This relates to a an average power output of 110 watts on sideband and 90 watts output on CW.

If you do not have the TS-520 operator and service manuals, go to Gordon's website, www.n6wk.com/kenwood/ and download them. Take the time to read the operator's manual before you attempt to operate the TS-520. Reading the operators manual will allow you to become familiar with the various controls on the front and rear panel. Pay close attention to the rear panels "SG" switch. The rear panel SG switch must ALWAYS be in the "ON" position for normal operation. The other controls on the rear panel are the bias pot and the RF indicator pot. The function of these control is discussed in the manual. In addition, there is a 9 pin socket on the rear panel. This socket is where the remote VFO (optional feature) connects to the 520. If you do not have the remote VFO (VFO-520 or VFO-820) then the factory jumper plug must be plugged into this socket. If you do not have the factory jumper plug (Gordon has this plug, contract Gordon for details on purchasing the plug) then you can use a simple wire jumper between pins 8 and 9. See the operators manual for details which pins are 8 and 9. Without pins 8 and 9 connected (factory jumper plug or piece of wire), the 520 will power up but not work.

If do you have a 50 ohm dummy load then I highly recommend you borrow or purchase one. The dummy load should have a power rating of at least 300 watts, higher if you are using a linear amplifier with the 520.

Again, take the time to read the operators manual before you operate the 520.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Marucs Rodgers Sr." <kc8pxs618@...> wrote:
>
> A good cleaning never hurts.
>
> --- On Thu, 6/16/11, Brian <bsa0791@...> wrote:
>
> > From: Brian <bsa0791@...>
> > Subject: [TS-520_820_530_830] Picked up a TS 520 today...
> > To: TS-520_820_530_830@...m
> > Date: Thursday, June 16, 2011, 9:33 PM
> > The ham said he thought it was an
> > early model. It's serial number is 390585, and the fan cover

> > on the back is a gold screen. Not the black cover on most
> > models. Also the vfo frequency reading area is completely
> > white.
> >
> > Some one installed a switch on the bottom. I appears this
> > may cut a cw filter on and off, is this a mod that was
> > done?
> >
> >
> > Also the receive strength sometimes comes and goes and can
> > be corrected by putting pressure on the band switch. Do you
> > think a cleaning will fix this?
> >
> > Thanks Guys, KB4MNG Brian in nc
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> >
> >   TS-520_820_530_830-fullfeatured@yahoogroups.com
> >
> >
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> >
>

31911. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 13:13:52 UTC
From: Terry Wagoner
Topic: 31878 Message: 31911

Chris--This appears different than what you originally reported of getting no ALC indication? Why now getting ALC indication? What did you do different? Where is your mic gain set at? I would not leave meter pegged to long as it is hard on the movement. I would slowly turn down mic gain until I could get meter off the peg.

With Proc off key rig and back off mic gain to get ALC at 20db or at least off the peg and on the meter scale. Now turn on Proc and key rig and report back what your ALC reading is. Based on what you are reporting I would expect it to be something less than far right of ALC black box? Assuming it is somewhere in the ALC box window can you adjust L27 and bring the reading up? Terry

---
From: Chris Parnell <cparnell1001@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Fri, June 17, 2011 8:36:35 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC setting), with processor on and full scale (pegged meter) deflection without PROC NOT engaged, just Mic.

Chris
Sent from my iPhone

On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:

> Hi Terry, in a nutshell,
>
> It doesn't weigh up here.
>
> Following to the letter the service manual and then taking into account your
>notes, the final situation is that I end up with full on-scale deflection of ALC
>(ie end of black ALC setting), with processor on and full scale (pegged meter)
>deflection without PROC engaged, just Mic.
>
>
> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>
> Thanks
> Chris
>
> Sent from my iPhone
>
> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:

>
> > Yes--Objective is for a given mic gain setting with 10mv applied to have same
>
> > ALC reading (max) with Processor on and off. You should not have to adjust
>mic
>
> > gain or input signal level once balanced. You should be able to flip to Tune

> > with Proc on and off and see approx the same max ALC indication.
> >
> > If you initially get no indication (I think that is your problem?) you can
>move
>
> > mic gain up slightly until you get an indication. It wont take much and will
>be
>
> > very touchy and will want to peg the meter. Only other choice you have is to
>set
>
> > audio generator output higher as others suggested. I chose to just increase
> > mic gain until I got an indication. After I found that point I no longer
>needed
>
> > to touch the mic gain. If I had to increase mic gain each time then it would

> > not be a valid adjustment. As I mentioned I ended up getting pretty good
>matched
>
> > ALC indication with mic gain just a hair past No.4. Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, June 16, 2011 7:29:50 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Thanks Terry,
> >
> > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
>to
>
> > same point? that's what it states from memory... point of exercise is to have
>
> > ALC reading same position with Proc ON and OFF.
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> > Cheers
> > Chris
> >
> > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >
> > > Chris--Just repeated adjustments and was able to get pretty good equal

> > >indications at far right of ALC black box or S-9 on the S-meter scale with
>the
>
> > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no

> > >longer needed to tweak the mic gain to get an indication. I cant go any
>lower on
>
> > >mic gain with 10mv input. Good Luck-Terry
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>
> > >wrote:
> > > >
> > > > Thanks Terry....
> > > >
> > > > Will hopefully get around to confirming all of this later tonight NZ
>time.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris -- I forgot to mention it may be easier initially (meter switch
>in
>
> > >the ALC position) to do your adjustment with the ALC indicated level at 20db
>on
>
> > >the Compression scale as opposed to down at the high end of the ALC box.
>Less
>
> > >decay time to mess with. Terry
> > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > wrote:
> > > > > >
> > > > > Chris--OK you are telling me the following:
> > > > > Step A:
> > > > > 1. You have the Processor button off and Compression level pot max
> > >clockwise.
> > >
> > > > > You are in USB mode.
> > > > > 2. You have the meter switch to ALC position.
> > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > 4. You flip Stand-by switch to Tune.

> > > > > > 5. You adjust mic gain until meter pointer is at the far right end of
>the
>
> > >ALC
> > >
> > > > > > black bordered box.
> > > > > > 6. You return to Stand-by.
> > > > > > >
> > > > > > Is the above correct? Where is your mic gain at? You should be
>between
>
> > >1000 and
> > >
> > > > > > 1100.
> > > > > > >
> > > > > > You then turn Processor on with Comp Level max cw. What would you
>expect
>
> > >the ALC
> > >
> > > > > > reading to do for the same mic gain setting? Would you expect the
>meter
>
> > >to peg
> > >
> > > > > > hard upscale far right? If you had a mic connected and whistled what

> > >would you
> > >
> > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > >
> > > > > > Step B:
> > > > > > With Processor on and Comp level set max clockwise and the mic gain
>not
>
> > >touched
> > >
> > > > > > from above you are telling me that you have no ALC indication when
>you
>
> > >flip to
> > >
> > > > > > Tune position? You then try to tweak L27 in attempt to obtain any ALC
>
> > >meter
> > >
> > > > > > indication and get no ALC indication. Is This correct?
> > > > > > >
> > > > > > If so, try slowly turning mic gain up a little. It will be very
>sensitive

>
> > >and
> > >
> > > > > > you should reach a point where it will drive meter hard up scale.
>Quickly
>
> > >turn
> > >
> > > > > > mic gain back down until meter is at far right end of ALC black box.
>Mic
>
> > >gain
> > >
> > > > > > pot will be sensitive. Once you have ALC indication staying at far
>end of
>
> > >ALC
> > >
> > > > > > box you can peak L27. You may have to go back and forth several times
>
> > >until you
> > >
> > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > >adjustment is
> > >
> > > > > > a little difficult due to the ALC time constant. The meter tends to
>peg
>
> > >hard
> > >
> > > > > > right and then slowly come back down. So it will tend to float around
>the
>
> > >max
> > >
> > > > > > end of the ALC box until things settle down. If you switch meter to
>Comp
>
> > >you
> > >
> > > > > > should see about 20db on Comp Scale.
> > > > > > >
> > > > > > Terry
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com

> > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Hi Terry, thanks for this.
> > > > > >
> > > > > > All of that makes sense, and is exactly how I read it to be (Heater
>on
>
> > >etc), but
> > >
> > > > > > none of it explains why I (and evidently others), can not "align" the
>
> > >speech
> > >
> > > > > > processor based on this step at the top of page 41:-
> > > > > >
> > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
>AG
>
> > >output to
> > >
> > > > > > 10 mV
> > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > >on-scale ALC
> > >
> > > > > > reading. Set the PROC to ON.
> > > > > >
> > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
>on-scaled).
> > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > >
> > > > > > This is where my 830 (or me) gets stuck..
> > > > > > Every step up until here works fine. I get to the point where I turn
>the
>
> > >Proc ON
> > >
> > > > > > and
> > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
>this
> > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > >
> > > > > >
> > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

> > > > > >
> > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> > >40&41. As
> > >
> > > > > > >usual the service manual leaves out a few thing!
> > > > > > > >
> > > > > > > They should tell you to load up normally. Then switch off SG switch
>and
>
> > >LEAVE
> > >
> > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
>heater
>
> > >off of the
> > >
> > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > >conditions still
> > >
> > > > > > >being in force?
> > > > > > > >
> > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
>meter
>
> > >reading on
> > >
> > > > > > >the Compression Scale".
> > > > > > > >
> > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
>
> > >would be on
> > >
> > > > > > >the S-meter scale. Then they tell you to obtain meter indication of
>20db
>
> > >and
> > >
> > > > > > >that would be on the Compression Scale. So would be better with a
> > >multi-scale
> > >
> > > > > > >meter for them to tell you the expected value and on what meter
>scale.
> > > > > > > >
> > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
>gain
>
> >
> > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
>
> > >peaked L27.

> > > > > > >
> > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say

> > >something
> > >
> > > > > > >like "top or far right end of black bordered ALC meter scale box".
>Just
>
> > >make it
> > >
> > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > >
> > > > > > > > So, I think if you load up, place SG switch to off, and leave
>heater
>
> > >switch on
> > >
> > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@>
> > >
> > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much chance
>to
>
> > >check
> > >
> > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
>will
>
> > >give it a
> > >
> > > > > > >try today and report back. Terry
> > > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@>
> > >

> > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in the
>830
>
> > >at the
> > >
> > > > > > >weekend?
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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31912. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 14:08:00 UTC
From: Chris Parnell
Topic: 31878 Message: 31912

Hi Terry,

The only difference from my original post is that I increased the "gain" on the input (Mic gain), therefore got an ALC reading.
Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...

I don't leave it pegged, I immediately back down the Mic gain to compensate.

> Based on what you are reporting I would expect it to
> be something less than far right of ALC black box? Assuming it is somewhere in
> the ALC box window can you adjust L27 and bring the reading up?
>

Once I have done the initial adjustment Terry, and get the ALC to the far right of the "ALC BOX" I cannot get L27 to peak the reading up to the same.

Hope this makes sense..

Cheers
Chris

On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:

> Chris--This appears different than what you originally reported of getting no
> ALC indication? Why now getting ALC indication? What did you do different? Where
> is your mic gain set at? I would not leave meter pegged to long as it is hard on
> the movement. I would slowly turn down mic gain until I could get meter off the
> peg.
>
> With Proc off key rig and back off mic gain to get ALC at 20db or at least off
> the peg and on the meter scale. Now turn on Proc and key rig and report back
> what your ALC reading is. Based on what you are reporting I would expect it to
> be something less than far right of ALC black box? Assuming it is somewhere in
> the ALC box window can you adjust L27 and bring the reading up? Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Sent: Fri, June 17, 2011 8:36:35 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> setting), with processor on and full scale (pegged meter) deflection without
> PROC NOT engaged, just Mic.
>
> Chris

> Sent from my iPhone
>
> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
>
> > Hi Terry, in a nutshell,
> >
> > It doesn't weigh up here.
> >
> > Following to the letter the service manual and then taking into account your
> >notes, the final situation is that I end up with full on-scale deflection of ALC
> >(ie end of black ALC setting), with processor on and full scale (pegged meter)
> >deflection without PROC engaged, just Mic.
> >
> >
> > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > Thanks
> > Chris
> >
> > Sent from my iPhone
> >
> > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > > Yes--Objective is for a given mic gain setting with 10mv applied to have same
> >
> > > ALC reading (max) with Processor on and off. You should not have to adjust
> >mic
> >
> > > gain or input signal level once balanced. You should be able to flip to Tune
>
> > > with Proc on and off and see approx the same max ALC indication.
> > >
> > > If you initially get no indication (I think that is your problem?) you can
> >move
> >
> > > mic gain up slightly until you get an indication. It wont take much and will
> >be
> >
> > > very touchy and will want to peg the meter. Only other choice you have is to
> >set
> >
> > > audio generator output higher as others suggested. I chose to just increase
> > > mic gain until I got an indication. After I found that point I no longer
> >needed
> >
> > > to touch the mic gain. If I had to increase mic gain each time then it would
>
> > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> >matched
> >

> > > ALC indication with mic gain just a hair past No.4. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Thanks Terry,
> > >
> > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
> >to
> >
> > > same point? that's what it states from memory... point of exercise is to have
> >
> > > ALC reading same position with Proc ON and OFF.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >
> > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > > >indications at far right of ALC black box or S-9 on the S-meter scale with
> >the
> >
> > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no
> >
> > > >longer needed to tweak the mic gain to get an indication. I cant go any
> >lower on
> >
> > > >mic gain with 10mv input. Good Luck-Terry
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> >
> > > >wrote:
> > > > >
> > > > > Thanks Terry....
> > > > >
> > > > > Will hopefully get around to confirming all of this later tonight NZ
> >time.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > >
> > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris -- I forgot to mention it may be easier initially (meter switch

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> > > >the ALC position) to do your adjustment with the ALC indicated level at 20db
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> >
> > > >the Compression scale as opposed to down at the high end of the ALC box.
> >Less
> >
> > > >decay time to mess with. Terry
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> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > > wrote:
> > > > > > >
> > > > > > > Chris--OK you are telling me the following:
> > > > > > > Step A:
> > > > > > > 1. You have the Processor button off and Compression level pot max
> > > >clockwise.
> > > >
> > > > > > > You are in USB mode.
> > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > 5. You adjust mic gain until meter pointer is at the far right end of
> >the
> >
> > > >ALC
> > > >
> > > > > > > black bordered box.
> > > > > > > 6. You return to Stand-by.
> > > > > > >
> > > > > > > Is the above correct? Where is your mic gain at? You should be
> >between
> >
> > > >1000 and
> > > >
> > > > > > > 1100.
> > > > > > >
> > > > > > > You then turn Processor on with Comp Level max cw. What would you
> >expect
> >
> > > >the ALC
> > > >
> > > > > > > reading to do for the same mic gain setting? Would you expect the
> >meter
> >
> > > >to peg
> > > >
> > > > > > > hard upscale far right? If you had a mic connected and whistled what
>

> > > >would you
> > > >
> > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > >
> > > > > > > > Step B:
> > > > > > > > With Processor on and Comp level set max clockwise and the mic gain
> >not
> >
> > > >touched
> > > > >
> > > > > > > > from above you are telling me that you have no ALC indication when
> >you
> >
> > > >flip to
> > > > >
> > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any ALC
> >
> > > >meter
> > > > >
> > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > >
> > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> >sensitive
> >
> > > >and
> > > > >
> > > > > > > > you should reach a point where it will drive meter hard up scale.
> >Quickly
> >
> > > >turn
> > > > >
> > > > > > > > mic gain back down until meter is at far right end of ALC black box.
> >Mic
> >
> > > >gain
> > > > >
> > > > > > > > pot will be sensitive. Once you have ALC indication staying at far
> >end of
> >
> > > >ALC
> > > > >
> > > > > > > > box you can peak L27. You may have to go back and forth several times
> >
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> > > > >
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> > > > >adjustment is
> > > > >
> > > > > > > > a little difficult due to the ALC time constant. The meter tends to
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> >
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> > > >
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> >Comp
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> > > >you
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> > > > > > > >
> > > > > > > Terry
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > Hi Terry, thanks for this.
> > > > > > > >
> > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
> >on
> >
> > > >etc), but
> > > >
> > > > > > > none of it explains why I (and evidently others), can not "align" the
> >
> > > >speech
> > > >
> > > > > > > processor based on this step at the top of page 41:-
> > > > > > > >
> > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
> >AG
> >
> > > >output to
> > > >
> > > > > > > 10 mV
> > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > > >on-scale ALC
> > > >
> > > > > > > reading. Set the PROC to ON.
> > > > > > > >

> > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> >on-scaled).
> > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > >
> > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > Every step up until here works fine. I get to the point where I turn
> >the
> > >
> > > > >Proc ON
> > > > >
> > > > > > > > and
> > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
> >this
> > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> > > > >40&41. As
> > > > >
> > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > >
> > > > > > > > > They should tell you to load up normally. Then switch off SG switch
> >and
> > >
> > > > >LEAVE
> > > > >
> > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> >heater
> > >
> > > > >off of the
> > > > >
> > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > > >conditions still
> > > > >
> > > > > > > > >being in force?
> > > > > > > > >
> > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> >meter
> > >
> > > > >reading on
> > > > >
> > > > > > > > >the Compression Scale".

> > > > > > > >
> > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
> >
> > > >would be on
> > > >
> > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication of
> >20db
> >
> > > >and
> > > >
> > > > > > > > >that would be on the Compression Scale. So would be better with a
> > > >multi-scale
> > > >
> > > > > > > > >meter for them to tell you the expected value and on what meter
> >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
> >gain
> >
> > >
> > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
> >
> > > >peaked L27.
> > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say
>
> > > >something
> > > >
> > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
> >Just
> >
> > > >make it
> > > >
> > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> >heater
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> > > >switch on
> > > >
> > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >
> > > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > >

> > > > > > > > > Been troubleshooting my 990 for a week so haven't had much chance
> >to
> >
> > > >check
> > > >
> > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
> >will
> >
> > > >give it a
> > > > > >
> > > > > > > > >try today and report back. Terry
> > > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > >
> > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in the
> >830
> >
> > > >at the
> > > > > >
> > > > > > > > >weekend?
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
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> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > > ------------------------------------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
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> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > >
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31913. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 15:13:09 UTC
From: Terry Wagoner
Topic: 31878 Message: 31913

Chris--I will give some more thought. Not sure what is going on. I am just about out of ideas.

I just repeated the test on my daily operating TS-830 with the covers on the rig. I just unplugged the mic and brought the test equipment to the operating position.

I use a spare mic connector and clipped the generator output to it with mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at No. 4 position. I set SG switch on rear of rig to off and turn on rig and heater switches. Let it warm up a little.

I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave Tek generator to exactly 10 mv.

I turned Proc off and set Comp level to max CW. I set mode switch to USB. I place meter switch in ALC position.

I then flip to Send and get ALC meter indication that is just outside the max end of the black ALC box. Maybe a needles worth.

I flip back to Stand-by and turn on Proc button. Meter is still in ALC position and I have not touched mic gain pot.

I flip to Send and the ALC meter indication is a little bit more outside the black ALC box. It could be adjusted a little to get a match if I had the covers off, but close enough. I switch the meter from ALC to Comp and it indicates just a little above 20db on the Comp scale.

I repeatedly switched Proc on and off and get the same results. In short my as found condition for my daily operator is very close to being right on the same indicated level on the ALC meter scale (near max on black border) with Proc on and off.

At this point Chris not sure I can be of any more help? I will think about it some more and if I come up with something will write.

Whatever you do you should not have to increase mic gain position or increase audio generator output level above 10 mv. Depending on the pre-amp gain in your rig you may have to be a little higher than position 4 on the mic gain , but I wouldnt think much higher.

Also, you might want to measure the sig gen level at your mic connection when flipped to Send to make sure it is staying at 10 mv. Mine does not vary from Stand-by to Send. Other than that I think I have exhausted my experience. Good luck Terry

---
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 10:08:00 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry,

The only difference from my original post is that I increased the "gain" on the input (Mic gain), therefore got an ALC reading.
Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...

I don't leave it pegged, I immediately back down the Mic gain to compensate.

> Based on what you are reporting I would expect it to
> be something less than far right of ALC black box? Assuming it is somewhere in

> the ALC box window can you adjust L27 and bring the reading up?
>

Once I have done the initial adjustment Terry, and get the ALC to the far right of the "ALC BOX" I cannot get L27 to peak the reading up to the same.

Hope this makes sense..

Cheers
Chris

On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:

> Chris--This appears different than what you originally reported of getting no
> ALC indication? Why now getting ALC indication? What did you do different?
>Where
>
> is your mic gain set at? I would not leave meter pegged to long as it is hard
>on
>
> the movement. I would slowly turn down mic gain until I could get meter off the
>
> peg.
>
> With Proc off key rig and back off mic gain to get ALC at 20db or at least off

> the peg and on the meter scale. Now turn on Proc and key rig and report back
> what your ALC reading is. Based on what you are reporting I would expect it to

> be something less than far right of ALC black box? Assuming it is somewhere in

> the ALC box window can you adjust L27 and bring the reading up? Terry
>
> ---
> From: Chris Parnell <cparnell1001@...>
> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>

> Sent: Fri, June 17, 2011 8:36:35 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> setting), with processor on and full scale (pegged meter) deflection without
> PROC NOT engaged, just Mic.
>
> Chris
> Sent from my iPhone
>
> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
>
> > Hi Terry, in a nutshell,
> >
> > It doesn't weigh up here.
> >
> > Following to the letter the service manual and then taking into account your

> >notes, the final situation is that I end up with full on-scale deflection of
>ALC
>
> >(ie end of black ALC setting), with processor on and full scale (pegged meter)
>
> >deflection without PROC engaged, just Mic.
> >
> >
> > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > Thanks
> > Chris
> >
> > Sent from my iPhone
> >
> > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> >
> > > Yes--Objective is for a given mic gain setting with 10mv applied to have
>same
>
> >
> > > ALC reading (max) with Processor on and off. You should not have to adjust

> >mic
> >
> > > gain or input signal level once balanced. You should be able to flip to
>Tune
>
>
> > > with Proc on and off and see approx the same max ALC indication.
> > >
> > > If you initially get no indication (I think that is your problem?) you can
>

> >move
> >
> > > mic gain up slightly until you get an indication. It wont take much and
>will
>
> >be
> >
> > > very touchy and will want to peg the meter. Only other choice you have is
>to
>
> >set
> >
> > > audio generator output higher as others suggested. I chose to just increase
>
> > > mic gain until I got an indication. After I found that point I no longer
> >needed
> >
> > > to touch the mic gain. If I had to increase mic gain each time then it
>would
>
>
> > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> >matched
> >
> > > ALC indication with mic gain just a hair past No.4. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Thanks Terry,
> > >
> > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
>
> >to
> >
> > > same point? that's what it states from memory... point of exercise is to
>have
>
> >
> > > ALC reading same position with Proc ON and OFF.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >
> > > > Chris--Just repeated adjustments and was able to get pretty good equal

> > > >indications at far right of ALC black box or S-9 on the S-meter scale with
>
> >the
> >
> > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
>no
>
>
> > > >longer needed to tweak the mic gain to get an indication. I cant go any
> >lower on
> >
> > > >mic gain with 10mv input. Good Luck-Terry
> > > >
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@...>
>
> >
> > > >wrote:
> > > > >
> > > > > Thanks Terry....
> > > > >
> > > > > Will hopefully get around to confirming all of this later tonight NZ
> >time.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > >
> > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris -- I forgot to mention it may be easier initially (meter switch
>
> >in
> >
> > > >the ALC position) to do your adjustment with the ALC indicated level at
>20db
>
> >on
> >
> > > >the Compression scale as opposed to down at the high end of the ALC box.
> >Less
> >
> > > >decay time to mess with. Terry
> > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>

> > > wrote:
> > > > > > >

> > > > > > > Chris--OK you are telling me the following:
> > > > > > > Step A:
> > > > > > > 1. You have the Processor button off and Compression level pot max

> > > >clockwise.
> > > >
> > > > > > > You are in USB mode.
> > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > 5. You adjust mic gain until meter pointer is at the far right end
>of
>
> >the
> >
> > > >ALC
> > > >
> > > > > > > black bordered box.
> > > > > > > 6. You return to Stand-by.
> > > > > > >
> > > > > > > Is the above correct? Where is your mic gain at? You should be
> >between
> >
> > > >1000 and
> > > >
> > > > > > > 1100.
> > > > > > >
> > > > > > > You then turn Processor on with Comp Level max cw. What would you
> >expect
> >
> > > >the ALC
> > > >
> > > > > > > reading to do for the same mic gain setting? Would you expect the
> >meter
> >
> > > >to peg
> > > >
> > > > > > > hard upscale far right? If you had a mic connected and whistled
>what
>
>
> > > >would you
> > > >
> > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > >
> > > > > > > Step B:
> > > > > > > With Processor on and Comp level set max clockwise and the mic gain
>
> >not
> >

> > > >touched
> > > >
> > > > > > > from above you are telling me that you have no ALC indication when
> >you
> >
> > > >flip to
> > > >
> > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
>ALC
>
> >
> > > >meter
> > > >
> > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > >
> > > > > > > If so, try slowly turning mic gain up a little. It will be very
> >sensitive
> >
> > > >and
> > > >
> > > > > > > you should reach a point where it will drive meter hard up scale.
> >Quickly
> >
> > > >turn
> > > >
> > > > > > > mic gain back down until meter is at far right end of ALC black
>box.
>
> >Mic
> >
> > > >gain
> > > >
> > > > > > > pot will be sensitive. Once you have ALC indication staying at far
> >end of
> >
> > > >ALC
> > > >
> > > > > > > box you can peak L27. You may have to go back and forth several
>times
>
> >
> > > >until you
> > > >
> > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > > >adjustment is
> > > >
> > > > > > > a little difficult due to the ALC time constant. The meter tends to
>
> >peg

> >
> > > >hard
> > > >
> > > > > > > right and then slowly come back down. So it will tend to float
>around
>
> >the
> >
> > > >max
> > > >
> > > > > > > end of the ALC box until things settle down. If you switch meter to
>
> >Comp
> >
> > > >you
> > > >
> > > > > > > should see about 20db on Comp Scale.
> > > > > > > >
> > > > > > > Terry
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > Hi Terry, thanks for this.
> > > > > > > >
> > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
>
> >on
> >
> > > >etc), but
> > > >
> > > > > > > none of it explains why I (and evidently others), can not "align"
>the
>
> >
> > > >speech
> > > >
> > > > > > > processor based on this step at the top of page 41:-
> > > > > > > >
> > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
>
> >AG
> >
> > > >output to

> > > >
> > > > > > > 10 mV
> > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > >on-scale ALC
> > > >
> > > > > > > > reading. Set the PROC to ON.
> > > > > > > >
> > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> >on-scaled).
> > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > >
> > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > Every step up until here works fine. I get to the point where I
>turn
>
> >the
> >
> > > > >Proc ON
> > > > >
> > > > > > > > and
> > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
>
> >this
> > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > >
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> > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
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> > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > >
> > > > > > > > > They should tell you to load up normally. Then switch off SG
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>
> >and
> >
> > > > >LEAVE
> > > > >
> > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> >heater
> >

> > > >off of the
> > > >
> > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > >conditions still
> > > >
> > > > > > > >being in force?
> > > > > > > > >
> > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> >meter
> >
> > > >reading on
> > > >
> > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
>That
>
> >
> > > >would be on
> > > >
> > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
>of
>
> >20db
> >
> > > >and
> > > >
> > > > > > > >that would be on the Compression Scale. So would be better with a

> > > >multi-scale
> > > >
> > > > > > > >meter for them to tell you the expected value and on what meter
> >scale.
> > > > > > > > >
> > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
>
> >gain
> >
> > > >
> > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
>and
>
> >
> > > >peaked L27.
> > > > > > > > >
> > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
>say
>
>
> > > >something

> > > >
> > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
>
> >Just
> >
> > > >make it
> > > >
> > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > >
> > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> >heater
> >
> > > >switch on
> > > >
> > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >
> > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Ok Terry, thank you.
> > > > > > > > >
> > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
>chance
>
> >to
> >
> > > >check
> > > >
> > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I

> >will
> >
> > > >give it a
> > > >
> > > > > > > >try today and report back. Terry
> > > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >

> > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
>the
>
> >830
> >
> > > >at the
> > > >
> > > > > > > >weekend?
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
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> > > [Non-text portions of this message have been removed]

> > >
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> > > Yahoo! Groups Links
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Yahoo! Groups Links

[Non-text portions of this message have been removed]

31914. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 15:43:32 UTC
From: w5rkl
Topic: 31878 Message: 31914

Chris,

Are you adjusting L26 for maximum "ALC" meter scale indication or a maximum "meter" indication?

The first 3 steps in the speech processor adjustment calls for "maximum meter" indication. The only step that clearly states to adjust L27 for maximum ALC "meter scale" indication is the last step, processor ON and OFF.

The only portion of the adjustment where it clearly states to adjust for maximum ALC scale indication is the last step, processor ON and OFF.

Also, how you are determining the 1.5Khz audio signal level? A scope or an audio meter, VTVM?

Also, have you tried taking voltage readings? There could be a failed component in the IF processor circuit that is causing your problem. Use the 830 high resolution schematic (has voltages listed in RED) when taking voltage readings.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--I will give some more thought. Not sure what is going on. I am just about
> out of ideas.
>
> I just repeated the test on my daily operating TS-830 with the covers on the
> rig. I just unplugged the mic and brought the test equipment to the operating
> position.
>
> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at
> No. 4 position. I set SG switch on rear of rig to off and turn on rig and heater
> switches. Let it warm up a little.
>
> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
> Tek generator to exactly 10 mv.
>
> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position

> and I have not touched mic gain pot.
>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box. It could be adjusted a little to get a match if I had the covers
> off, but close enough. I switch the meter from ALC to Comp and it indicates just
> a little above 20db on the Comp scale.
>
> I repeatedly switched Proc on and off and get the same results. In short my as
> found condition for my daily operator is very close to being right on the same
> indicated level on the ALC meter scale (near max on black border) with Proc on
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
> rig you may have to be a little higher than position 4 on the mic gain , but I
> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good
> luck Terry
>
>
>
>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere in
>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right

> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
>
> Hope this makes sense..
>
> Cheers
> Chris
>
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> >
> > is your mic gain set at? I would not leave meter pegged to long as it is hard
> >on
> >
> > the movement. I would slowly turn down mic gain until I could get meter off the
> >
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least off
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back
> > what your ALC reading is. Based on what you are reporting I would expect it to
>
> > be something less than far right of ALC black box? Assuming it is somewhere in
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without
> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.

> > >
> > > Following to the letter the service manual and then taking into account your
>
> > >notes, the final situation is that I end up with full on-scale deflection of
> >ALC
> >
> > >(ie end of black ALC setting), with processor on and full scale (pegged meter)
> >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >same
> >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to adjust
>
> > >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to
> >Tune
> >
> >
> > > > with Proc on and off and see approx the same max ALC indication.
> > > >
> > > > If you initially get no indication (I think that is your problem?) you can
> >
> > >move
> > >
> > > > mic gain up slightly until you get an indication. It wont take much and
> >will
> >
> > >be
> > >
> > > > very touchy and will want to peg the meter. Only other choice you have is
> >to
> >
> > >set
> > >
> > > > audio generator output higher as others suggested. I chose to just increase
> >

> > > > mic gain until I got an indication. After I found that point I no longer
> > >needed
> > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it
> >would
> > >
> > >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> > >matched
> > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Thanks Terry,
> > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
> > >
> > >to
> > >
> > > > same point? that's what it states from memory... point of exercise is to
> >have
> > >
> > >
> > > > ALC reading same position with Proc ON and OFF.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > > > >indications at far right of ALC black box or S-9 on the S-meter scale with
> > >
> > >the
> > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> >no
> > >
> > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> > >lower on
> > >
> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > >
> > > > >

> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > >
> > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ
> > > >time.
> > > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > Chris -- I forgot to mention it may be easier initially (meter switch
> > >
> > > >in
> > > >
> > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >20db
> > >
> > > >on
> > > >
> > > > >the Compression scale as opposed to down at the high end of the ALC box.
> > > >Less
> > > >
> > > > >decay time to mess with. Terry
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> >
> > > > > wrote:
> > > > > > > > > > > >
> > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > Step A:
> > > > > > > > > > > 1. You have the Processor button off and Compression level pot max
> >
> > > > > >clockwise.
> > > > > > > >
> > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right end
> > >of
> > > >
> > > > >the

> > >
> > > > >ALC
> > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > > > >1000 and
> > > > >
> > > > > > > > > 1100.
> > > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > >expect
> > >
> > > > >the ALC
> > > > >
> > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > >meter
> > >
> > > > >to peg
> > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> > >
> > >
> > > > >would you
> > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic gain
> > >
> > >not
> > >
> > > > >touched
> > > > >
> > > > > > > > > from above you are telling me that you have no ALC indication when
> >
> > >you
> > >
> > > > >flip to
> > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> >ALC
> > >
> > >
> > > > >meter
> > > > > > > > >

> > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > >sensitive
> > > >
> > > > > >and
> > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
> > > >Quickly
> > > >
> > > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >box.
> > >
> > > >Mic
> > > >
> > > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at far
> >
> > > >end of
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >times
> > >
> > > >
> > > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends to
> > >
> > > >peg
> > > >
> > > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> > >around
> > >
> > > >the
> > > >
> > > > > >max
> > > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch meter to
> > >
> > > >Comp

> > >
> > > > >you
> > > > >
> > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
> > >
> > > >on
> > > >
> > > > >etc), but
> > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not "align"
> > >the
> > >
> > > >
> > > > >speech
> > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > >
> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
> > >
> > > >AG
> > > >
> > > > >output to
> > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > > > > > > > >on-scale ALC
> > > > > > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >on-scaled).
> > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I

> >turn
> >
> > >the
> > >
> > > > >Proc ON
> > > > > >
> > > > > > > > > and
> > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
> >
> > >this
> > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> >
> > > > >40&41. As
> > > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> >
> > >and
> > > >
> > > > >LEAVE
> > > > > >
> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >heater
> > > >
> > > > >off of the
> > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > > > >conditions still
> > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> > > >meter
> > > >
> > > > >reading on
> > > > > >
> > > > > > > > > > >the Compression Scale".

> > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> >That
> >
> > >
> > > > >would be on
> > > > > >
> > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> >of
> >
> > >20db
> > >
> > > > >and
> > > > > >
> > > > > > > > > >that would be on the Compression Scale. So would be better with a
>
> > > > >multi-scale
> > > > > >
> > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >scale.
> > > > > > > > > >
> > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
> >
> > >gain
> > >
> > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> >and
> >
> > >
> > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >say
> >
> >
> > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
> >
> > >Just
> > >
> > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >heater
> > >
> > > > >switch on

> > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> >
> > >to
> > >
> > > > >check
> > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
> >
> > >will
> > >
> > > > >give it a
> > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
> >the
> >
> > >830
> > >
> > > > >at the
> > > > >
> > > > > > > > > >weekend?
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Cheers

> > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > >
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> > > > > > > > > > > > Yahoo! Groups Links
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31915. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 16:31:27 UTC
From: andy_westcott2004
Topic: 31874 Message: 31915

Terry - using a lower screen grid voltage is the way to go for extended tube life, I'd have thought. The maximum power output would be reduced, which would be the main mechanism by which dissipation throughout the tube would be kept down.

Yes, zeners were available then as were gas regulators, but it seems none of the manufacturers deemed this a worthwhile move.

Looking through many schematics from the 60s and 70s both amateur and professional I haven't seen any designs that use screen grid regulation, so am of the opinion that if the designers didn't see the benefit, chances are neither will we.

I do wonder if regulating the plate supply would be an advantage though, although we would be dealing with a fair bit of dissipation in the pass device.

31916. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 16:37:41 UTC
From: Bob Macklin
Topic: 31874 Message: 31916

Why regulate the plate supply? Pentodes don't need it.

And with SSB the duty cycle on the plate supply is low.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "andy_westcott2004" <andywestcottpublic@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Friday, June 17, 2011 9:31 AM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

> Terry - using a lower screen grid voltage is the way to go for extended
> tube life, I'd have thought. The maximum power output would be reduced,
> which would be the main mechanism by which dissipation throughout the tube
> would be kept down.
>
> Yes, zeners were available then as were gas regulators, but it seems none
> of the manufacturers deemed this a worthwhile move.
>
> Looking through many schematics from the 60s and 70s both amateur and
> professional I haven't seen any designs that use screen grid regulation,
> so am of the opinion that if the designers didn't see the benefit, chances
> are neither will we.
>
> I do wonder if regulating the plate supply would be an advantage though,
> although we would be dealing with a fair bit of dissipation in the pass
> device.
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

31917. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 17:34:20 UTC
From: Terry Wagoner
Topic: 31878 Message: 31917

Hi Mike-- I am just about out of ideas.

You are right they are looking for max ALC indication (far right end of black bordered box) and not max meter movement indication.

I was able to get good meter indications and adjust for a good match on my back up rig on the test bench just fine once I had read the steps several times and figured out what meter indications they were looking for.

I thought I would check the as-found on my operating rig this morning to validate test procedure on another 830. I found it to be close enough (within needles worth just outside far end of ALC box) until next time I do a complete alignment. I verified that the 1500 hz 10 mv signal was not moving around during the test. I have to have mic gain at No, 4 position for 10mv signal to work.

Originally as I understand it Chris could not get any ALC indication with 10mv injected at mic input. I am not sure what he did to get it other than increase the mic gain setting slightly? I think Chris is now getting meter to peg high. If this is true I would turn mic gain down slightly to get it off peg. Just a slight adjustment of mic gain will result in big change in meter indication.

With meter pegged L27 will have no effect.

I wishing that we could use Skype or some other means to demonstrate some of this stuff in real time. Could do it with Skype one on one, but others couldnt view or share in the discussion. If you and/or Gordon had a lot of time you could make You Tube videos of the entire alignment procedure and show different ways to accomplish using different test equipment. Would be fun but a lot of work.

I am looking for a 40 mhz sweep gen so I can check the PLL filters. Cant really justify buying one for just this test and for use on just my rigs alone.

Sweep gen and spectrum analyzer are about only two pieces of test gear I dont have that would make aligning these hybrids a breeze.

Thanks--Terry - K9TW

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 11:43:32 AM
Subject: [TS-520_820_530_830] Re: Speech Processor alignment

Chris,

Are you adjusting L26 for maximum "ALC" meter scale indication or a maximum "meter" indication?

The first 3 steps in the speech processor adjustment calls for "maximum meter" indication. The only step that clearly states to adjust L27 for maximum ALC "meter scale" indication is the last step, processor ON and OFF.

The only portion of the adjustment where it clearly states to adjust for maximum ALC scale indication is the last step, processor ON and OFF.

Also, how you are determining the 1.5Khz audio signal level? A scope or an audio meter, VTVM?

Also, have you tried taking voltage readings? There could be a failed component in the IF processor circuit that is causing your problem. Use the 830 high resolution schematic (has voltages listed in RED) when taking voltage readings.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--I will give some more thought. Not sure what is going on. I am just
>about
>
> out of ideas.
>
> I just repeated the test on my daily operating TS-830 with the covers on the
> rig. I just unplugged the mic and brought the test equipment to the operating
> position.
>
> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at

> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
>heater
>
> switches. Let it warm up a little.
>
> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave

> Tek generator to exactly 10 mv.
>
> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
>
> and I have not touched mic gain pot.
>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box. It could be adjusted a little to get a match if I had the covers

>
> off, but close enough. I switch the meter from ALC to Comp and it indicates
>just
>
> a little above 20db on the Comp scale.
>
> I repeatedly switched Proc on and off and get the same results. In short my as

> found condition for my daily operator is very close to being right on the same

> indicated level on the ALC meter scale (near max on black border) with Proc on
>
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
>
> rig you may have to be a little higher than position 4 on the mic gain , but I

> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good

> luck Terry
>
>
>
>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
>
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere

>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right
>
> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
>
> Hope this makes sense..
>
> Cheers
> Chris
>
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
>
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> >
> > is your mic gain set at? I would not leave meter pegged to long as it is hard
>
> >on
> >
> > the movement. I would slowly turn down mic gain until I could get meter off
>the
>
> >
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least
>off
>
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back

> > what your ALC reading is. Based on what you are reporting I would expect it
>to
>
>
> > be something less than far right of ALC black box? Assuming it is somewhere
>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >

> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@...m>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without

> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account
>your
>
>
> > >notes, the final situation is that I end up with full on-scale deflection of
>
> >ALC
> >
> > >(ie end of black ALC setting), with processor on and full scale (pegged
>meter)
>
> >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have

> >same
> >

> > >
> > > > ALC reading (max) with Processor on and off. You should not have to
>adjust
>
>
> > > >mic
> > > >
> > > > > gain or input signal level once balanced. You should be able to flip to
> > >Tune
> > >
> > >
> > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > If you initially get no indication (I think that is your problem?) you
>can
>
> > >
> > > >move
> > > >
> > > > > mic gain up slightly until you get an indication. It wont take much and
> > >will
> > >
> > > >be
> > > >
> > > > > very touchy and will want to peg the meter. Only other choice you have is
>
> > >to
> > >
> > > >set
> > > >
> > > > > audio generator output higher as others suggested. I chose to just
>increase
>
> > >
> > > > > mic gain until I got an indication. After I found that point I no longer

> > > >needed
> > > >
> > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > >would
> > >
> > >
> > > > > not be a valid adjustment. As I mentioned I ended up getting pretty good

> > > >matched
> > > >
> > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com

> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Thanks Terry,
> > > > >
> > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
>ON
>
> >
> > >to
> > >
> > > > same point? that's what it states from memory... point of exercise is to

> >have
> > >
> > > >
> > > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--Just repeated adjustments and was able to get pretty good equal

> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
>with
>
> >
> > >the
> > >
> > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
>
> >no
> > >
> > >
> > > > > >longer needed to tweak the mic gain to get an indication. I cant go any

> > >lower on
> > >
> > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > >
> > > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >

> > > > > > Will hopefully get around to confirming all of this later tonight NZ

> > >time.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris -- I forgot to mention it may be easier initially (meter
>switch
>
> >
> > >in
> > >
> > > > >the ALC position) to do your adjustment with the ALC indicated level at

> >20db
> >
> > >on
> > >
> > > > >the Compression scale as opposed to down at the high end of the ALC box.
>
> > >Less
> > >
> > > > >decay time to mess with. Terry
> > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
><wagstw46@>
>
>
> > > > wrote:
> > > > > > > > >
> > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > Step A:
> > > > > > > > > 1. You have the Processor button off and Compression level pot
>max
>
>
> > > > >clockwise.
> > > > > > > > >
> > > > > > > > > You are in USB mode.
> > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
>end
>
> >of

> >
> > >the
> > >
> > > > >ALC
> > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > > > >1000 and
> > > > >
> > > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
>
> > >expect
> > >
> > > > >the ALC
> > > > >
> > > > > > > > > reading to do for the same mic gain setting? Would you expect the
>
> > >meter
> > >
> > > > >to peg
> > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> > >
> > >
> > > > >would you
> > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic
>gain
>
> > >
> > >not
> > >
> > > > >touched
> > > > >
> > > > > > > > > from above you are telling me that you have no ALC indication
>when
>
>
> > >you
> > >

> > > > >flip to
> > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
>
> >ALC
> >
> > >
> > > > >meter
> > > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >sensitive
> > >
> > > > >and
> > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
>
> > >Quickly
> > >
> > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> >box.
> >
> > >Mic
> > >
> > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
>far
>
>
> > >end of
> > >
> > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> >times
> >
> > >
> > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This

> > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends
>to
>

> >
> > >peg
> > >
> > > > >hard
> > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> >around
> >
> > >the
> > >
> > > > >max
> > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch meter
>to
>
> >
> > >Comp
> > >
> > > > >you
> > > > >
> > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > All of that makes sense, and is exactly how I read it to be
>(Heater
>
> >
> > >on
> > >
> > > > >etc), but
> > > > >
> > > > > > > > > none of it explains why I (and evidently others), can not "align"
>
> >the
> > >
> > > >
> > > > >speech
> > > > >

> > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>the
>
> >
> > >AG
> > >
> > > > >output to
> > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
>
> > > > >on-scale ALC
> > > > > >
> > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > >on-scaled).
> > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > Every step up until here works fine. I get to the point where I
> >turn
> >
> > >the
> > >
> > > > >Proc ON
> > > > > >
> > > > > > > > > and
> > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
>at
>
> >
> > >this
> > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
>pages
>
> >

> > > > >40&41. As
> > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> >
> > >and
> > >
> > > > >LEAVE
> > > > >
> > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >heater
> > >
> > > > >off of the
> > > > >
> > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step

> > > > >conditions still
> > > > >
> > > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max

> > >meter
> > >
> > > > >reading on
> > > > >
> > > > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.

> >That
> >
> > >
> > > > >would be on
> > > > >
> > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
>
> >of
> >
> > >20db
> > >
> > > > >and
> > > > >
> > > > > > > > > >that would be on the Compression Scale. So would be better with
>a
>
>
> > > > >multi-scale
> > > > >

> > > > > > > > >meter for them to tell you the expected value and on what meter

> > >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
>mic
>
> >
> > >gain
> > > >
> > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
>
> >and
> > >
> > > >
> > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would

> >say
> > >
> > >
> > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale
>box".
>
> >
> > >Just
> > > >
> > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >heater
> > > >
> > > > >switch on
> > > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
>
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > >

> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> >
> > >to
> > >
> > > > >check
> > > > > >
> > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
>I
>
>
> > >will
> > >
> > > > >give it a
> > > > > >
> > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in

> >the
> >
> > >830
> > >
> > > > >at the
> > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > [Non-text portions of this message have been removed]

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> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
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> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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31918. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 17:46:31 UTC
From: Terry Wagoner
Topic: 31874 Message: 31918

Andy--I dont think we would lose very much output power with regulated screen. Probably not discernable and certainly not on the receiving end. Yes plate supply would be tough to do. Gets involved with main xfmr esr and host of other things over my head and pass device would help keep shack warm!

Yes-- most if not all the rigs of this design and vintage did not include any form of screen grid regulation. It would have increased the price of the rigs.

I know in the old days it was pretty much expected to have a good stiff bias supply and a regulated screen supply. The old VR tubes were the way to go back in the 60s. I still have some old ARRL handbooks from the tube days and they have plenty of circuits that employed regulated screen supplies. It was just expected to ensure linearity. I have two tone generator here but never been very successful at getting any meaningful test from it. I keep waiting for a spectrum analyzer to fall in my lap!

I will just let it go for now and put on back burner.

Thanks for responding and sharing. Terry

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 12:31:27 PM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Terry - using a lower screen grid voltage is the way to go for extended tube life, I'd have thought. The maximum power output would be reduced, which would be the main mechanism by which dissipation throughout the tube would be kept down.

Yes, zeners were available then as were gas regulators, but it seems none of the manufacturers deemed this a worthwhile move.

Looking through many schematics from the 60s and 70s both amateur and professional I haven't seen any designs that use screen grid regulation, so am of the opinion that if the designers didn't see the benefit, chances are neither will we.

I do wonder if regulating the plate supply would be an advantage though, although we would be dealing with a fair bit of dissipation in the pass device.

[Non-text portions of this message have been removed]

31919. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 19:26:08 UTC
From: w5rkl
Topic: 31878 Message: 31919

Hi terry,

Before performing any alignment steps, one should read the alignment steps thoroughly to ensure one understands what the alignment step is suppose to do and what indication one should see. That also is where reading the service manual comes into play. Knowing what each stage does helps one to understand what an alignment step is actually saying.

Most alignment adjustments, excluding oscillator frequency adjustments, are based on setting a level or adjusting for either a maximum or minimum indication on a meter.

The alignment steps listed in the service manuals are how the factory, with all the sophisticated test gear, says it should be and under "ideal" situations. That doesn't always mean one will get the exact same indications. Aging components can affect how an alignment step will produce the desired result. Failed components, leakage diodes, resistors that have increased in resistance which can affect how a transistor or other device works, will affect how the alignment step end result is.

If the meter pegs full scale, I would recommend reducing the signal level at the signal "source" instead of reducing the MIC gain setting. If there is no way to determine the true signal level then one can only "guess" the signal level is correct. That's why I always recommend setting the controls as called for in the alignment steps then start with the RF and/or AF signal level at zero. At that point, the signal source level can be increased until an indication is seen. AT that point, stop increasing the signal level and start the alignment adjustments. You can always increase the signal level if necessary.

If the alignment step can't be performed correctly,even after trying several times, such as in this case, then one should stop performing the alignment step and start troubleshooting the circuit. Take voltage readings and compare them with the factory voltage levels (the TS-830 high resolution schematic has the voltage levels in RED). An incorrect voltage level, for example, at a transistor's Gate, Source, Drain, Emitter, Base, or Collector that is significantly different than what the factory says the voltage should be is a clear indication a problem exits. This problem can be caused by a failed diode, a resistor that has significantly increased in resistance, or a bad/broken foil run/solder connection. Simply redoing the alignment step, even after doing it a number of times, will not result in a different indication.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Mike-- I am just about out of ideas.
>
> You are right they are looking for max ALC indication (far right end of black
> bordered box) and not max meter movement indication.
>

> I was able to get good meter indications and adjust for a good match on my back
> up rig on the test bench just fine once I had read the steps several times and
> figured out what meter indications they were looking for.
>
> I thought I would check the as-found on my operating rig this morning to
> validate test procedure on another 830. I found it to be close enough (within
> needles worth just outside far end of ALC box) until next time I do a complete
> alignment. I verified that the 1500 hz 10 mv signal was not moving around during
> the test. I have to have mic gain at No, 4 position for 10mv signal to work.
>
> Originally as I understand it Chris could not get any ALC indication with 10mv
> injected at mic input. I am not sure what he did to get it other than increase
> the mic gain setting slightly? I think Chris is now getting meter to peg high.
> If this is true I would turn mic gain down slightly to get it off peg. Just a
> slight adjustment of mic gain will result in big change in meter indication.
>
> With meter pegged L27 will have no effect.
>
> I wishing that we could use Skype or some other means to demonstrate some of
> this stuff in real time. Could do it with Skype one on one, but others couldnt
> view or share in the discussion. If you and/or Gordon had a lot of time you
> could make You Tube videos of the entire alignment procedure and show different
> ways to accomplish using different test equipment. Would be fun but a lot of
> work.
>
> I am looking for a 40 mhz sweep gen so I can check the PLL filters. Cant really
> justify buying one for just this test and for use on just my rigs alone.
>
> Sweep gen and spectrum analyzer are about only two pieces of test gear I dont
> have that would make aligning these hybrids a breeze.
>
> Thanks--Terry - K9TW
>
>

31920. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 19:28:57 UTC
From: w5rkl
Topic: 31874 Message: 31920

There is no real reason to regulate the final amplifier supply. The screen voltage varies too often and regulating the supply would be a waste of time and would not produce any added benefit. The supply for the 830's final amplifier is quite stable for what it's designed to do.

Regulated supplies are more important with oscillators such as VFO/LMO/PTO, carrier generators, and the like.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Andy--I dont think we would lose very much output power with regulated screen.
> Probably not discernable and certainly not on the receiving end. Yes plate
> supply would be tough to do. Gets involved with main xfmr esr and host of other
> things over my head and pass device would help keep shack warm!
>
> Yes-- most if not all the rigs of this design and vintage did not include any
> form of screen grid regulation. It would have increased the price of the rigs.
>
> I know in the old days it was pretty much expected to have a good stiff bias
> supply and a regulated screen supply. The old VR tubes were the way to go back
> in the 60s. I still have some old ARRL handbooks from the tube days and they
> have plenty of circuits that employed regulated screen supplies. It was just
> expected to ensure linearity. I have two tone generator here but never been very
> successful at getting any meaningful test from it. I keep waiting for a spectrum
> analyzer to fall in my lap!
>
> I will just let it go for now and put on back burner.
>
>
> Thanks for responding and sharing. Terry
>
>
>
> _____
> From: andy_westcott2004 <andywestcottpublic@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 12:31:27 PM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
>
> Terry - using a lower screen grid voltage is the way to go for extended tube
> life, I'd have thought. The maximum power output would be reduced, which would

> be the main mechanism by which dissipation throughout the tube would be kept
> down.
>
> Yes, zeners were available then as were gas regulators, but it seems none of the
> manufacturers deemed this a worthwhile move.
>
> Looking through many schematics from the 60s and 70s both amateur and
> professional I haven't seen any designs that use screen grid regulation, so am
> of the opinion that if the designers didn't see the benefit, chances are neither
> will we.
>
> I do wonder if regulating the plate supply would be an advantage though,
> although we would be dealing with a fair bit of dissipation in the pass device.
>
>
>
>
> [Non-text portions of this message have been removed]
>

31921. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 20:43:24 UTC
From: Terry Wagoner
Topic: 31878 Message: 31921

The steps in question say to adjust the mic gain for " max meter indication with 50mv and 10mv injected. It does not say to vary the input signal.

When you adjust the mic gain with the specified audio frequency and signal level applied you can complete these steps as written. Until I was certain that Chris was performing the steps as written, I didnt want to direct him to start trouble shooting.

At this point I will ask him to work with you on trouble shooting as you have better understanding of how the circuits work.

These service manuals are pretty well translated, but could be better. I wrote procedures for nuclear power and I am pretty picky about how to write test procedures. On these steps an approximate mic gain setting could have been listed to get you in the ball park. They also could do a much better job through out the manual describing the expected outcome, meter indications etc. Would be very easy to say what position meter switch is to be in and what scale to read on. Just my opinion.

I especially like the circuit description on the top of Page 7 under the Carrier Oscillator heading that talks about two QUARTS crystals! That is a lot of xtals!

Terry

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 3:26:08 PM
Subject: [TS-520_820_530_830] Re: Speech Processor alignment

Hi terry,

Before performing any alignment steps, one should read the alignment steps thoroughly to ensure one understands what the alignment step is suppose to do and what indication one should see. That also is where reading the service manual comes into play. Knowing what each stage does helps one to understand what an alignment step is actually saying.

Most alignment adjustments, excluding oscillator frequency adjustments, are based on setting a level or adjusting for either a maximum or minimum indication on a meter.

The alignment steps listed in the service manuals are how the factory, with all the sophisticated test gear, says it should be and under "ideal" situations. That doesn't always mean one will get the exact same indications. Aging components can affect how an alignment step will produce the desired result.

Failed components, leakage diodes, resistors that have increased in resistance which can affect how a transistor or other device works, will affect how the alignment step end result is.

If the meter pegs full scale, I would recommend reducing the signal level at the signal "source" instead of reducing the MIC gain setting. If there is no way to determine the true signal level then one can only "guess" the signal level is correct. That's why I always recommend setting the controls as called for in the alignment steps then start with the RF and/or AF signal level at zero. At that point, the signal source level can be increased until an indication is seen. AT that point, stop increasing the signal level and start the alignment adjustments. You can always increase the signal level if necessary.

If the alignment step can't be performed correctly,even after trying several times, such as in this case, then one should stop performing the alignment step and start troubleshooting the circuit. Take voltage readings and compare them with the factory voltage levels (the TS-830 high resolution schematic has the voltage levels in RED). An incorrect voltage level, for example, at a transistor's Gate, Source, Drain, Emitter, Base, or Collector that is significantly different than what the factory says the voltage should be is a clear indication a problem exits. This problem can be caused by a failed diode, a resistor that has significantly increased in resistance, or a bad/broken foil run/solder connection. Simply redoing the alignment step, even after doing it a number of times, will not result in a different indication.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Hi Mike-- I am just about out of ideas.
>
> You are right they are looking for max ALC indication (far right end of black

> bordered box) and not max meter movement indication.
>
> I was able to get good meter indications and adjust for a good match on my back
>
> up rig on the test bench just fine once I had read the steps several times and

> figured out what meter indications they were looking for.
>
> I thought I would check the as-found on my operating rig this morning to
> validate test procedure on another 830. I found it to be close enough (within
> needles worth just outside far end of ALC box) until next time I do a complete

> alignment. I verified that the 1500 hz 10 mv signal was not moving around
>during
>
> the test. I have to have mic gain at No, 4 position for 10mv signal to work.
>

> Originally as I understand it Chris could not get any ALC indication with 10mv

> injected at mic input. I am not sure what he did to get it other than increase

> the mic gain setting slightly? I think Chris is now getting meter to peg high.

> If this is true I would turn mic gain down slightly to get it off peg. Just a

> slight adjustment of mic gain will result in big change in meter indication.
>
> With meter pegged L27 will have no effect.
>
> I wishing that we could use Skype or some other means to demonstrate some of
> this stuff in real time. Could do it with Skype one on one, but others couldnt

> view or share in the discussion. If you and/or Gordon had a lot of time you
> could make You Tube videos of the entire alignment procedure and show different
>
> ways to accomplish using different test equipment. Would be fun but a lot of
> work.
>
> I am looking for a 40 mhz sweep gen so I can check the PLL filters. Cant really
>
> justify buying one for just this test and for use on just my rigs alone.
>
> Sweep gen and spectrum analyzer are about only two pieces of test gear I dont
> have that would make aligning these hybrids a breeze.
>
> Thanks--Terry - K9TW
>
>

[Non-text portions of this message have been removed]

31922. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 20:53:29 UTC
From: Terry Wagoner
Topic: 31878 Message: 31922

Chris--If you feel you are literally following the procedure steps as written and cant get the expected outcome then it is time to move on to troubleshooting.

Please work with Mike on troubleshooting your problem. He is much more experienced and understands how these circuits work and can help you shoot trouble down to discrete component level if necessary.

I would like to know what you end up determining the problem is. Best 73s-Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere in
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
>
> Hope this makes sense..
>
> Cheers
> Chris
>
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
> > ALC indication? Why now getting ALC indication? What did you do different? Where
> > is your mic gain set at? I would not leave meter pegged to long as it is hard on
> > the movement. I would slowly turn down mic gain until I could get meter off the
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least off
> > the peg and on the meter scale. Now turn on Proc and key rig and report back
> > what your ALC reading is. Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere in

> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without
> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account your
> > >notes, the final situation is that I end up with full on-scale deflection of ALC
> > >(ie end of black ALC setting), with processor on and full scale (pegged meter)
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have same
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to adjust
> > >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to Tune
> >
> > > > with Proc on and off and see approx the same max ALC indication.
> > > >
> > > > If you initially get no indication (I think that is your problem?) you can
> > >move
> > >
> > > > mic gain up slightly until you get an indication. It wont take much and will

> > >be
> > >
> > > > very touchy and will want to peg the meter. Only other choice you have is to
> > >set
> > >
> > > > audio generator output higher as others suggested. I chose to just increase
> > > > mic gain until I got an indication. After I found that point I no longer
> > >needed
> > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it would
> >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> > >matched
> > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Thanks Terry,
> > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
> > >to
> > >
> > > > same point? that's what it states from memory... point of exercise is to have
> > >
> > > > ALC reading same position with Proc ON and OFF.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > > > >indications at far right of ALC black box or S-9 on the S-meter scale with
> > >the
> > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I no
> >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> > >lower on
> > >
> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >

> > > > >wrote:
> > > > > >
> > > > > > Thanks Terry....
> > > > > >
> > > > > > Will hopefully get around to confirming all of this later tonight NZ
> > >time.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris -- I forgot to mention it may be easier initially (meter switch
> > >in
> > >
> > >the ALC position) to do your adjustment with the ALC indicated level at 20db
> > >on
> > >
> > >the Compression scale as opposed to down at the high end of the ALC box.
> > >Less
> > >
> > >decay time to mess with. Terry
> > > > > >
> > > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> > > > wrote:
> > > > > > > >
> > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > Step A:
> > > > > > > > 1. You have the Processor button off and Compression level pot max
> > > > >clockwise.
> > > > > > > >
> > > > > > > > You are in USB mode.
> > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > 5. You adjust mic gain until meter pointer is at the far right end of
> > >the
> > >
> > >ALC
> > > > > > > >
> > > > > > > > black bordered box.
> > > > > > > > 6. You return to Stand-by.
> > > > > > > >
> > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > >1000 and
> > > > > > >

> > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > > >expect
> > > >
> > > > > >the ALC
> > > > > >
> > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > > >meter
> > > >
> > > > > >to peg
> > > > > >
> > > > > > > > hard upscale far right? If you had a mic connected and whistled what
> > >
> > > > > >would you
> > > > > >
> > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic gain
> > > >not
> > > >
> > > > > >touched
> > > > > >
> > > > > > > > from above you are telling me that you have no ALC indication when
> > > >you
> > > >
> > > > > >flip to
> > > > > >
> > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any ALC
> > > >
> > > > > >meter
> > > > > >
> > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > >sensitive
> > > >
> > > > > >and
> > > > > >
> > > > > > > > you should reach a point where it will drive meter hard up scale.
> > > >Quickly
> > > >
> > > > > >turn
> > > > > >
> > > > > > > > mic gain back down until meter is at far right end of ALC black box.
> > > >Mic
> > > >
> > > > > >gain
> > > > > >

> > > > > > > > pot will be sensitive. Once you have ALC indication staying at far
> > >end of
> > >
> > > > >ALC
> > > > >
> > > > > > > > box you can peak L27. You may have to go back and forth several times
> > >
> > > > >until you
> > > > >
> > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > > > >adjustment is
> > > > >
> > > > > > > > a little difficult due to the ALC time constant. The meter tends to
> > >peg
> > >
> > > > >hard
> > > > >
> > > > > > > > right and then slowly come back down. So it will tend to float around
> > >the
> > >
> > > > >max
> > > > >
> > > > > > > > end of the ALC box until things settle down. If you switch meter to
> > >Comp
> > >
> > > > >you
> > > > >
> > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > >
> > > > > > > > Terry
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > >
> > > > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
> > >on
> > >
> > > > >etc), but
> > > > >
> > > > > > > > > none of it explains why I (and evidently others), can not "align" the
> > >
> > > > >speech

> > > > >
> > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
> > > >AG
> > >
> > > > >output to
> > > > >
> > > > > > > > 10 mV
> > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > > >on-scale ALC
> > > > >
> > > > > > > > reading. Set the PROC to ON.
> > > > > > > > >
> > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > >on-scaled).
> > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > >
> > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > Every step up until here works fine. I get to the point where I turn
> > >the
> > >
> > > > >Proc ON
> > > > >
> > > > > > > > and
> > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
> > >this
> > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> > > > >40&41. As
> > > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG switch
> > >and
> > > >
> > > > >LEAVE
> > > > > >
> > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >heater

> > >
> > > > >off of the
> > > > >
> > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > > >conditions still
> > > > >
> > > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> > >meter
> > >
> > > > >reading on
> > > > >
> > > > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading. That
> > >
> > > > >would be on
> > > > >
> > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication of
> > >20db
> > >
> > > > >and
> > > > >
> > > > > > > > > >that would be on the Compression Scale. So would be better with a
> > > > >multi-scale
> > > > >
> > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
> > >gain
> > >
> > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200 and
> > >
> > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would say
> >
> > > > >something
> > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
> > >Just
> > >
> > > > >make it
> > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave

> > >heater
> > >
> > > > >switch on
> > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much chance
> > >to
> > >
> > > > >check
> > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
> > >will
> > >
> > > > >give it a
> > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in the
> > >830
> > >
> > > > >at the
> > > > >
> > > > > > > > > >weekend?
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > >

> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

31923. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 22:21:55 UTC
From: andy_westcott2004
Topic: 31874 Message: 31923

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> There is no real reason to regulate the final amplifier supply. The screen voltage varies too often and regulating the supply would be a waste of time and would not produce any added benefit. The supply for the 830's final amplifier is quite stable for what it's designed to do.
>
>

Agreed.
Some better hi-fi amps have stabilised supplies for the output stages, presumably this aids linearity, but I would expect it to reduce output device dissipation during quiescent periods when the supply would normally be at a maximum. Presumably the PA in a transmitter would benefit in the same way.

I doubt very much that the small benefit of reduced dissipation would anywhere near compensate for the added expense and complication though - the idea was thrown in for discussion rather than as a practical suggestion.

31924. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 22:35:34 UTC
From: Terry Wagoner
Topic: 31874 Message: 31924

Andy- I just found a real interesting article where a fellow modified his TS-820s with a screen grid shunt regulator circuit. He gives technical basis for why and details on how he selected the components and wiring installation directions taking into account the SG switch.

He also talks about installing a screen grid bleeder which is pretty common in the larger tetrode tube amps. I dont know if you could ever get the SG switch in an in between position or not? Could certainly damage tube quickly. A bleeder would protect against this.

I havent studied this article closely yet, but it appears to be exactly what I was looking for. The article did not identify the author. I am going to see if I can find out who and contact the person. You can find it if you Google "TS-820 mosfet shunt regulator". It comes up under "desert hound" ??? It is cached. Let me know what you think. Thanks Terry K9TW

From: andy_westcott2004 <andywestcottpublic@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 6:21:55 PM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> There is no real reason to regulate the final amplifier supply. The screen
>voltage varies too often and regulating the supply would be a waste of time and
>would not produce any added benefit. The supply for the 830's final amplifier is
>quite stable for what it's designed to do.
>
>

Agreed.
Some better hi-fi amps have stabilised supplies for the output stages, presumably this aids linearity, but I would expect it to reduce output device dissipation during quiescent periods when the supply would normally be at a maximum. Presumably the PA in a transmitter would benefit in the same way.

I doubt very much that the small benefit of reduced dissipation would anywhere near compensate for the added expense and complication though - the idea was thrown in for discussion rather than as a practical suggestion.

[Non-text portions of this message have been removed]

31925. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 23:04:54 UTC
From: Chris Parnell
Topic: 31878 Message: 31925

Hi Terry / Mike.....

I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good piece of kit. Here's what I see when I follow your instructions:

> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins).
>
Exactly the same as me Terry, except my mini clips are connected directly to the Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.

> I have the mic gain set exactly at
> No. 4 position.
>
Same here

> I set SG switch on rear of rig to off and turn on rig and heater
> switches. Let it warm up a little.
>
Same here

> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
> Tek generator to exactly 10 mv
>
Using the above I set it to AF Generator - 1.5Khz 10mV output.

> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>

Same here

>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV and USB mode, I flick to send and I get full scale meter deflection in ALC mode (Full meter deflection, not on-scale ALC meter deflection, so if you look at s-meter scale, it's S9+40dB +).

>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> and I have not touched mic gain pot.
>
With Proc on, and Proc level fully clockwise, not adjusting any gains at either the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB now.. (I am only using the S-Meter scale as it's easier for you to gauge what I'm saying and seeing.

At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum "On-Scale" ALC reading, so now I get an accurate end of scale reading without PROC ON, which on the S-Meter is S-9.
I check where VR-7 is now within it's VR scale and notice it's almost at minimum.

>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box.
>
So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC OFF, I put PROC ON and the reading drops to around the end of the letter C of the word ALC on the meter, which is about S-6 on the S-Meter.

> It could be adjusted a little to get a match if I had the covers
> off, but close enough.
>

I check L27 and find it's at it's peak, so I cannot go any higher and align them with the PROC ON.

> I switch the meter from ALC to Comp and it indicates just
> a little above 20db on the Comp scale.
>
Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I adjust L26 for 20dB reading.

I will need to do some component checking in the circuit around the Processor as Mike and yourself have recommended.

I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.

Thanks
Chris, ZL1CDP

>
> I repeatedly switched Proc on and off and get the same results. In short my as
> found condition for my daily operator is very close to being right on the same
> indicated level on the ALC meter scale (near max on black border) with Proc on
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
> rig you may have to be a little higher than position 4 on the mic gain , but I
> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good
> luck Terry
>

> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere in
>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right
> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
> Hope this makes sense..
>
> Cheers
> Chris
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> > >
> > > is your mic gain set at? I would not leave meter pegged to long as it is hard
> > >on
> > >
> > > the movement. I would slowly turn down mic gain until I could get meter off the
> > >
> > > peg.
> > >
> > > With Proc off key rig and back off mic gain to get ALC at 20db or at least off
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back
> > what your ALC reading is. Based on what you are reporting I would expect it to
>
> > be something less than far right of ALC black box? Assuming it is somewhere in
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >

> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without
> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account your
> >
> > >notes, the final situation is that I end up with full on-scale deflection of
> >ALC
> > >
> > >(ie end of black ALC setting), with processor on and full scale (pegged meter)
> > >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >same
> > >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to adjust
> >
> > >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to
> >Tune
> > >

> >
> > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > If you initially get no indication (I think that is your problem?) you can
> > >
> > >move
> > > >
> > > > mic gain up slightly until you get an indication. It wont take much and
> >will
> > >
> > >be
> > > >
> > > > very touchy and will want to peg the meter. Only other choice you have is
> >to
> > >
> > >set
> > > >
> > > > audio generator output higher as others suggested. I chose to just increase
> > >
> > > > mic gain until I got an indication. After I found that point I no longer
> > >needed
> > > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it
> >would
> > >
> > >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> > >matched
> > > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > Thanks Terry,
> > > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
> > >
> > >to
> > > >
> > > > same point? that's what it states from memory... point of exercise is to
> >have
> > >
> > > >
> > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > Cheers

> > > > Chris
> > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > > > >indications at far right of ALC black box or S-9 on the S-meter scale with
> > >
> > >the
> > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> >no
> > >
> > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> > >lower on
> > > >
> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@...>
> >
> > >
> > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ
> > >time.
> > > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > Chris -- I forgot to mention it may be easier initially (meter switch
> > >
> > >in
> > >
> > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >20db
> > >
> > >on
> > >
> > > > >the Compression scale as opposed to down at the high end of the ALC box.
> > >Less
> > >
> > > > >decay time to mess with. Terry
> > > > > > > > >

> > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
>
> > > > wrote:
> > > > > > > > >
> > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > Step A:
> > > > > > > > > > 1. You have the Processor button off and Compression level pot max
>
> > > > > >clockwise.
> > > > > > >
> > > > > > > > > > You are in USB mode.
> > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right end
> >of
> > >
> > > >the
> > > > >
> > > > > >ALC
> > > > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > >between
> > > > >
> > > > > >1000 and
> > > > > > > >
> > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > > >expect
> > > > >
> > > > > >the ALC
> > > > > > > >
> > > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > > >meter
> > > > >
> > > > > >to peg
> > > > > > > >
> > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> > >
> > >
> > > > > >would you
> > > > > > > >
> > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > >

> > > > > > > > Step B:
> > > > > > > > With Processor on and Comp level set max clockwise and the mic gain
> >
> > >not
> > >
> > > > >touched
> > > > >
> > > > > > > > from above you are telling me that you have no ALC indication when
>
> > >you
> > >
> > > > >flip to
> > > > >
> > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> >ALC
> >
> > >
> > > > >meter
> > > > >
> > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > >
> > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >sensitive
> > >
> > > > >and
> > > > >
> > > > > > > > you should reach a point where it will drive meter hard up scale.
> > >Quickly
> > >
> > > > >turn
> > > > >
> > > > > > > > mic gain back down until meter is at far right end of ALC black
> >box.
> >
> > >Mic
> > >
> > > > >gain
> > > > >
> > > > > > > > pot will be sensitive. Once you have ALC indication staying at far
>
> > >end of
> > >
> > > > >ALC
> > > > >
> > > > > > > > box you can peak L27. You may have to go back and forth several
> >times
> >
> > >
> > > > >until you
> > > > >

> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > > > >adjustment is
> > > > >
> > > > > > > > > > a little difficult due to the ALC time constant. The meter tends to
> >
> > >peg
> > >
> > > > >hard
> > > > >
> > > > > > > > > > right and then slowly come back down. So it will tend to float
> >around
> >
> > >the
> > >
> > > > >max
> > > > >
> > > > > > > > > > end of the ALC box until things settle down. If you switch meter to
> >
> > >Comp
> > >
> > > > >you
> > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
> >
> > >on
> > >
> > > > >etc), but
> > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not "align"
> >the
> >
> > >
> > > > >speech
> > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-

> > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
> >
> > >AG
> > >
> > > > >output to
> > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > > >on-scale ALC
> > > > > >
> > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > >on-scaled).
> > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > Every step up until here works fine. I get to the point where I
> >turn
> >
> > >the
> > >
> > > > >Proc ON
> > > > > >
> > > > > > > > > and
> > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
> >
> > >this
> > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> >
> > > > >40&41. As
> > > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> >
> > >and

> > >
> > > > >LEAVE
> > > > >
> > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >heater
> > >
> > > > >off of the
> > > > >
> > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > > >conditions still
> > > > >
> > > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> > >meter
> > >
> > > > >reading on
> > > > >
> > > > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> >That
> >
> > > >
> > > > >would be on
> > > > >
> > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> >of
> >
> > >20db
> > >
> > > > >and
> > > > >
> > > > > > > > > >that would be on the Compression Scale. So would be better with a
>
> > > > >multi-scale
> > > > >
> > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
> >
> > >gain
> > >
> > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> >and
> >
> > >
> > > > >peaked L27.

> > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >say
> >
> >
> > > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
> >
> > >Just
> > >
> > > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >heater
> > >
> > > > > >switch on
> > > > > >
> > > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > >
> > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> >
> > >to
> > >
> > > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
> >
> > >will
> > >
> > > > > >give it a

> > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
> >the
> > >
> > > >830
> > > >
> > > > > >at the
> > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > >
> > > > > ------------------------------------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >
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> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>
>

On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:

> Chris--I will give some more thought. Not sure what is going on. I am just about
> out of ideas.
>
> I just repeated the test on my daily operating TS-830 with the covers on the
> rig. I just unplugged the mic and brought the test equipment to the operating
> position.
>
> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at
> No. 4 position. I set SG switch on rear of rig to off and turn on rig and heater
> switches. Let it warm up a little.
>
> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave

> Tek generator to exactly 10 mv.
>
> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> and I have not touched mic gain pot.
>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box. It could be adjusted a little to get a match if I had the covers
> off, but close enough. I switch the meter from ALC to Comp and it indicates just
> a little above 20db on the Comp scale.
>
> I repeatedly switched Proc on and off and get the same results. In short my as
> found condition for my daily operator is very close to being right on the same
> indicated level on the ALC meter scale (near max on black border) with Proc on
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
> rig you may have to be a little higher than position 4 on the mic gain , but I
> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good
> luck Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere in

>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right
> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
> Hope this makes sense..
>
> Cheers
> Chris
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> >
> > is your mic gain set at? I would not leave meter pegged to long as it is hard
> >on
> >
> > the movement. I would slowly turn down mic gain until I could get meter off the
> >
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least off
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back
> > what your ALC reading is. Based on what you are reporting I would expect it to
>
> > be something less than far right of ALC black box? Assuming it is somewhere in
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without
> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >

> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account your
>
> > >notes, the final situation is that I end up with full on-scale deflection of
> >ALC
> >
> > >(ie end of black ALC setting), with processor on and full scale (pegged meter)
> >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >same
> >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to adjust
>
> > >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to
> >Tune
> >
> > >
> > > > with Proc on and off and see approx the same max ALC indication.
> > > >
> > > > If you initially get no indication (I think that is your problem?) you can
> >
> > >move
> > >
> > > > mic gain up slightly until you get an indication. It wont take much and
> >will
> >
> > >be
> > >
> > > > very touchy and will want to peg the meter. Only other choice you have is
> >to
> >
> > >set

> > >
> > > > audio generator output higher as others suggested. I chose to just increase
> > >
> > > > mic gain until I got an indication. After I found that point I no longer
> > >needed
> > > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it
> >would
> > >
> > >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> > >matched
> > > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@me.com>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > Thanks Terry,
> > > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
> > >
> > >to
> > > >
> > > > same point? that's what it states from memory... point of exercise is to
> >have
> > >
> > > >
> > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > Cheers
> > > > Chris
> > > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > > > >indications at far right of ALC black box or S-9 on the S-meter scale with
> > >
> > >the
> > > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> >no
> > >
> > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> > >lower on
> > > >

> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@...>
> >
> > >
> > > > >wrote:
> > > > > >
> > > > > > Thanks Terry....
> > > > > >
> > > > > > Will hopefully get around to confirming all of this later tonight NZ
> > >time.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > >
> > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris -- I forgot to mention it may be easier initially (meter switch
> > >
> > >in
> > > >
> > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >20db
> > >
> > >on
> > > >
> > > > >the Compression scale as opposed to down at the high end of the ALC box.
> > >Less
> > > >
> > > > >decay time to mess with. Terry
> > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> >
> > > > wrote:
> > > > > > > > > >
> > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > Step A:
> > > > > > > > > 1. You have the Processor button off and Compression level pot max
> >
> > > > >clockwise.
> > > > > >
> > > > > > > > > You are in USB mode.
> > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right end

> >of
> >
> > >the
> > >
> > > > >ALC
> > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > > > >1000 and
> > > > >
> > > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > >expect
> > >
> > > > >the ALC
> > > > >
> > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > >meter
> > >
> > > > >to peg
> > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> >
> >
> > > > >would you
> > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic gain
> >
> > >not
> > >
> > > > >touched
> > > > >
> > > > > > > > > from above you are telling me that you have no ALC indication when
>
> > >you
> > >
> > > > >flip to
> > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> >ALC
> >

> > >
> > > > >meter
> > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >sensitive
> > >
> > > > >and
> > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
> > >Quickly
> > >
> > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> >box.
> >
> > >Mic
> > >
> > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at far
>
> > >end of
> > >
> > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> >times
> >
> > >
> > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends to
> >
> > >peg
> > >
> > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> >around
> >
> > >the
> > >
> > > > >max
> > > > > >

> > > > > > > > > end of the ALC box until things settle down. If you switch meter to
> > >
> > >Comp
> > >
> > > > >you
> > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > _____
> > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > >
> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be (Heater
> > >
> > >on
> > > >
> > > > >etc), but
> > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not "align"
> >the
> > >
> > > >
> > > > >speech
> > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
> > >
> > >AG
> > > >
> > > > >output to
> > > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > > > > >on-scale ALC
> > > > > > >
> > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > >
> > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > >on-scaled).
> > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......

> > > > > > > >
> > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > Every step up until here works fine. I get to the point where I
> >turn
> >
> > >the
> > >
> > > > >Proc ON
> > > > > >
> > > > > > > > > and
> > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter at
> >
> > >this
> > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on pages
> >
> > > > >40&41. As
> > > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> >
> > >and
> > > >
> > > > >LEAVE
> > > > > >
> > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >heater
> > > >
> > > > >off of the
> > > > > >
> > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > > > >conditions still
> > > > > >
> > > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> > >meter
> > > >

> > > > >reading on
> > > > >
> > > > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> >That
> >
> > >
> > > > >would be on
> > > > > >
> > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> >of
> >
> > >20db
> > >
> > > > >and
> > > > > >
> > > > > > > > > > >that would be on the Compression Scale. So would be better with a
>
> > > > >multi-scale
> > > > > >
> > > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >scale.
> > > > > > > > > > >
> > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set mic
> >
> > >gain
> > > >
> > > > >
> > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> >and
> >
> > > >
> > > > > >peaked L27.
> > > > > > > > > > >
> > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >say
> >
> >
> > > > >something
> > > > > >
> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale box".
> >
> > >Just
> > > >
> > > > >make it
> > > > > >
> > > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave

> > >heater
> > >
> > > > >switch on
> > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> > >
> > >to
> > > >
> > > > >check
> > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so I
> >
> > >will
> > > >
> > > > > >give it a
> > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
> >the
> > >
> > >830
> > > >
> > > > > >at the
> > > > > >
> > > > > > > > > >weekend?

> > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ---------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
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> > > > > > > > > > > >
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> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > ----------------------------------
> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > >
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> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]

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> > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

31926. Fwd: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 23:13:20 UTC
From: Chris Parnell
Topic: 31926 Message: 31926

Sorry gents,

Last statement should have read, I adjust VR-5 for 20dB (not L26).

Cheers
Chris

Begin forwarded message:

> From: Chris Parnell <cparnell1001@...>
> Date: 18 June 2011 11:04:54 AM NZST
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> Reply-To: TS-520_820_530_830@yahoogroups.com
>
> Hi Terry / Mike.....
>
> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good piece of kit.
> Here's what I see when I follow your instructions:
>
>> I use a spare mic connector and clipped the generator output to it with
>> mini-clips to pins 1 and 2 (bottom 2 pins).
>>
> Exactly the same as me Terry, except my mini clips are connected directly to the Mic
Socket on the Rig not a 4 pin Mic connector, but no differemce.
>
>
>> I have the mic gain set exactly at
>> No. 4 position.
>>
> Same here
>
>
>> I set SG switch on rear of rig to off and turn on rig and heater
>> switches. Let it warm up a little.
>>
> Same here
>
>
>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
>> Tek generator to exactly 10 mv
>>
> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>
>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>> place meter switch in ALC position.

>>
>
> Same here
>
>
>>
>> I then flip to Send and get ALC meter indication that is just outside the max
>> end of the black ALC box. Maybe a needles worth.
>>
> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV and USB mode, I flick to send and I get full scale meter deflection in ALC mode (Full meter deflection, not on-scale ALC meter deflection, so if you look at s-meter scale, it's S9+40dB +).
>
>>
>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
>> and I have not touched mic gain pot.
>>
> With Proc on, and Proc level fully clockwise, not adjusting any gains at either the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB now.. (I am only using the S-Meter scale as it's easier for you to gauge what I'm saying and seeing.
>
> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum "On-Scale" ALC reading, so now I get an accurate end of scale reading without PROC ON, which on the S-Meter is S-9.
> I check where VR-7 is now within it's VR scale and notice it's almost at minimum.
>
>>
>> I flip to Send and the ALC meter indication is a little bit more outside the
>> black ALC box.
>>
> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC OFF, I put PROC ON and the reading drops to around the end of the letter C of the word ALC on the meter, which is about S-6 on the S-Meter.
>
>
>> It could be adjusted a little to get a match if I had the covers
>> off, but close enough.
>>
>
> I check L27 and find it's at it's peak, so I cannot go any higher and align them with the PROC ON.
>
>> I switch the meter from ALC to Comp and it indicates just
>> a little above 20db on the Comp scale.
>>
> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I adjust L26 for 20dB reading.
>
> I will need to do some component checking in the circuit around the Processor as Mike and

yourself have recommended.
>
> I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
>
> Thanks
> Chris, ZL1CDP
>
>
>
>
>>
>> I repeatedly switched Proc on and off and get the same results. In short my as
>> found condition for my daily operator is very close to being right on the same
>> indicated level on the ALC meter scale (near max on black border) with Proc on
>> and off.
>>
>> At this point Chris not sure I can be of any more help? I will think about it
>> some more and if I come up with something will write.
>>
>> Whatever you do you should not have to increase mic gain position or increase
>> audio generator output level above 10 mv. Depending on the pre-amp gain in your
>> rig you may have to be a little higher than position 4 on the mic gain , but I
>> wouldnt think much higher.
>>
>> Also, you might want to measure the sig gen level at your mic connection when
>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>> Stand-by to Send. Other than that I think I have exhausted my experience. Good
>> luck Terry
>>
>> _____
>> From: Chris Parnell <cparnell1001@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Fri, June 17, 2011 10:08:00 AM
>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>
>> Hi Terry,
>>
>> The only difference from my original post is that I increased the "gain" on the
>> input (Mic gain), therefore got an ALC reading.
>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>>
>> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>>
>>> Based on what you are reporting I would expect it to
>>> be something less than far right of ALC black box? Assuming it is somewhere in
>>
>>> the ALC box window can you adjust L27 and bring the reading up?
>>>
>>
>> Once I have done the initial adjustment Terry, and get the ALC to the far right
>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.

>>
>> Hope this makes sense..
>>
>> Cheers
>> Chris
>>
>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>
>>> Chris--This appears different than what you originally reported of getting no
>>> ALC indication? Why now getting ALC indication? What did you do different?
>>> Where
>>>
>>> is your mic gain set at? I would not leave meter pegged to long as it is hard
>>> on
>>>
>>> the movement. I would slowly turn down mic gain until I could get meter off the
>>>
>>> peg.
>>>
>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least off
>>
>>> the peg and on the meter scale. Now turn on Proc and key rig and report back
>>> what your ALC reading is. Based on what you are reporting I would expect it to
>>
>>> be something less than far right of ALC black box? Assuming it is somewhere in
>>
>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>
>>> _____
>>> From: Chris Parnell <cparnell1001@...>
>>> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>>> Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>
>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>> setting), with processor on and full scale (pegged meter) deflection without
>>> PROC NOT engaged, just Mic.
>>>
>>> Chris
>>> Sent from my iPhone
>>>
>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
>>>
>>>> Hi Terry, in a nutshell,
>>>>
>>>> It doesn't weigh up here.
>>>>
>>>> Following to the letter the service manual and then taking into account your
>>

>>>> notes, the final situation is that I end up with full on-scale deflection of
>>> ALC
>>>
>>>> (ie end of black ALC setting), with processor on and full scale (pegged meter)
>>>
>>>> deflection without PROC engaged, just Mic.
>>>>
>>>>
>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>>
>>>> Thanks
>>>> Chris
>>>>
>>>> Sent from my iPhone
>>>>
>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
>>>>
>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to have
>>> same
>>>
>>>>
>>>>> ALC reading (max) with Processor on and off. You should not have to adjust
>>
>>>> mic
>>>>
>>>>> gain or input signal level once balanced. You should be able to flip to
>>> Tune
>>>
>>>
>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>
>>>>> If you initially get no indication (I think that is your problem?) you can
>>>
>>>> move
>>>>
>>>>> mic gain up slightly until you get an indication. It wont take much and
>>> will
>>>
>>>> be
>>>>
>>>>> very touchy and will want to peg the meter. Only other choice you have is
>>> to
>>>
>>>> set
>>>>
>>>>> audio generator output higher as others suggested. I chose to just increase
>>>
>>>>> mic gain until I got an indication. After I found that point I no longer
>>>> needed
>>>>

>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>> would
>>>
>>>
>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty good
>>>> matched
>>>>
>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>
>>>>> _____
>>>>> From: Chris Parnell <cparnell1001@...>
>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>
>>>>> Thanks Terry,
>>>>>
>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
>>>
>>>> to
>>>>
>>>>> same point? that's what it states from memory... point of exercise is to
>>> have
>>>
>>>>
>>>>> ALC reading same position with Proc ON and OFF.
>>>>>
>>>>> Cheers
>>>>> Chris
>>>>>
>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>
>>>>>> Chris--Just repeated adjustments and was able to get pretty good equal
>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale with
>>>
>>>> the
>>>>
>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
>>> no
>>>
>>>
>>>>>> longer needed to tweak the mic gain to get an indication. I cant go any
>>>> lower on
>>>>
>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>
>>>>>>
>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>> <cparnell1001@...>
>>>

>>>>
>>>>>> wrote:
>>>>>>>
>>>>>>> Thanks Terry....
>>>>>>>
>>>>>>> Will hopefully get around to confirming all of this later tonight NZ
>>>> time.
>>>>>>>
>>>>>>> Cheers
>>>>>>> Chris
>>>>>>>
>>>>>>>
>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>
>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter switch
>>>
>>>> in
>>>>
>>>>>> the ALC position) to do your adjustment with the ALC indicated level at
>>> 20db
>>>
>>>> on
>>>>
>>>>>> the Compression scale as opposed to down at the high end of the ALC box.
>>>> Less
>>>>
>>>>>> decay time to mess with. Terry
>>>>>>
>>>>>>>
>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
>>
>>>>> wrote:
>>>>>>>>>
>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>> Step A:
>>>>>>>>> 1. You have the Processor button off and Compression level pot max
>>
>>>>>> clockwise.
>>>>>>
>>>>>>>>> You are in USB mode.
>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right end
>>> of
>>>
>>>> the
>>>>
>>>>>> ALC
>>>>>>

>>>>>>>>> black bordered box.
>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>
>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>> between
>>>>
>>>>>> 1000 and
>>>>>>
>>>>>>>>> 1100.
>>>>>>>>>
>>>>>>>>> You then turn Processor on with Comp Level max cw. What would you
>>>> expect
>>>>
>>>>>> the ALC
>>>>>>
>>>>>>>>> reading to do for the same mic gain setting? Would you expect the
>>>> meter
>>>>
>>>>>> to peg
>>>>>>
>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
>>> what
>>>
>>>
>>>>>> would you
>>>>>>
>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>
>>>>>>>>> Step B:
>>>>>>>>> With Processor on and Comp level set max clockwise and the mic gain
>>>
>>>> not
>>>>
>>>>>> touched
>>>>>>
>>>>>>>>> from above you are telling me that you have no ALC indication when
>>
>>>> you
>>>>
>>>>>> flip to
>>>>>>
>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain any
>>> ALC
>>>
>>>>
>>>>>> meter
>>>>>>
>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>
>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very

>>>> sensitive
>>>>
>>>>>> and
>>>>>>
>>>>>>>>> you should reach a point where it will drive meter hard up scale.
>>>> Quickly
>>>>
>>>>>> turn
>>>>>>
>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>> box.
>>>
>>>> Mic
>>>>
>>>>>> gain
>>>>>>
>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at far
>>
>>>> end of
>>>>
>>>>>> ALC
>>>>>>
>>>>>>>>> box you can peak L27. You may have to go back and forth several
>>> times
>>>
>>>>
>>>>>> until you
>>>>>>
>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A. This
>>>>>> adjustment is
>>>>>>
>>>>>>>>> a little difficult due to the ALC time constant. The meter tends to
>>>
>>>> peg
>>>>
>>>>>> hard
>>>>>>
>>>>>>>>> right and then slowly come back down. So it will tend to float
>>> around
>>>
>>>> the
>>>>
>>>>>> max
>>>>>>
>>>>>>>>> end of the ALC box until things settle down. If you switch meter to
>>>
>>>> Comp
>>>>
>>>>>> you
>>>>>>

>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>
>>>>>>>>> Terry
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>
>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>
>>>>>>>>> All of that makes sense, and is exactly how I read it to be (Heater
>>>
>>>> on
>>>>
>>>>>> etc), but
>>>>>>
>>>>>>>>> none of it explains why I (and evidently others), can not "align"
>>> the
>>>
>>>>
>>>>>> speech
>>>>>>
>>>>>>>>> processor based on this step at the top of page 41:-
>>>>>>>>>
>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
>>>
>>>> AG
>>>>
>>>>>> output to
>>>>>>
>>>>>>>>> 10 mV
>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the maximum
>>>>>> on-scale ALC
>>>>>>
>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>
>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
>>>> on-scaled).
>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>
>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>> Every step up until here works fine. I get to the point where I
>>> turn
>>>
>>>> the

>>>>
>>>>>> Proc ON
>>>>>>
>>>>>>>>> and
>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the meter at
>>>
>>>> this
>>>>>>>>> point, and therefore cannot obtain the same ALC maximum reading.
>>>>>>>>>
>>>>>>>>> Cheers
>>>>>>>>> Chris
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>
>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on pages
>>>
>>>>>> 40&41. As
>>>>>>
>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>
>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
>>> switch
>>>
>>>> and
>>>>
>>>>>> LEAVE
>>>>>>
>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
>>>> heater
>>>>
>>>>>> off of the
>>>>>>
>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous step
>>>>>> conditions still
>>>>>>
>>>>>>>>>>> being in force?
>>>>>>>>>>>
>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say "max
>>>> meter
>>>>
>>>>>> reading on
>>>>>>
>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>
>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1 reading.
>>> That

>>>
>>>>
>>>>>> would be on
>>>>>>
>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter indication
>>> of
>>>
>>>> 20db
>>>>
>>>>>> and
>>>>>>
>>>>>>>>>> that would be on the Compression Scale. So would be better with a
>>
>>>>>> multi-scale
>>>>>>
>>>>>>>>>> meter for them to tell you the expected value and on what meter
>>>> scale.
>>>>>>>>>>
>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set mic
>>>
>>>> gain
>>>>
>>>>>
>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at 1200
>>> and
>>>
>>>>
>>>>>> peaked L27.
>>>>>>>>>>
>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they would
>>> say
>>>
>>>
>>>>>> something
>>>>>>
>>>>>>>>>> like "top or far right end of black bordered ALC meter scale box".
>>>
>>>> Just
>>>>
>>>>>> make it
>>>>>>
>>>>>>>>>> very clear what meter position and what scale you are to read.
>>>>>>>>>>
>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>> heater
>>>>
>>>>>> switch on
>>>>>>
>>>>>>>>>> you will be able to complete this Item. Let me know. Terry -K9TW
>>>>>>>>>>

>>>>>>>>>>
>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>> <cparnell1001@>
>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>
>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>
>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>> chance
>>>
>>>> to
>>>>
>>>>>> check
>>>>>>
>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>
>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day so I
>>
>>>> will
>>>>
>>>>>> give it a
>>>>>>
>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>
>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>> <cparnell1001@>
>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>>>
>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment in
>>> the
>>>
>>>> 830
>>>>
>>>>>> at the
>>>>>>
>>>>>>>>>> weekend?
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> Cheers
>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>
>>>>>>>>>>>>

>>>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>
>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> ------------------------------------
>>>>>>>>>
>>>>>>>>> Yahoo! Groups Links
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>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>
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>>>>>
>>>>> ----------------------------------
>>>>>
>>>>> Yahoo! Groups Links
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>>>>> [Non-text portions of this message have been removed]
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>> [Non-text portions of this message have been removed]
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>> ------------------------------------
>>
>> Yahoo! Groups Links
>>
>> [Non-text portions of this message have been removed]
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>
>
>
> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
>
>> Chris--I will give some more thought. Not sure what is going on. I am just about
>> out of ideas.
>>
>> I just repeated the test on my daily operating TS-830 with the covers on the
>> rig. I just unplugged the mic and brought the test equipment to the operating
>> position.
>>
>> I use a spare mic connector and clipped the generator output to it with
>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at
>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and heater
>> switches. Let it warm up a little.
>>
>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
>> Tek generator to exactly 10 mv.
>>
>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>> place meter switch in ALC position.
>>
>> I then flip to Send and get ALC meter indication that is just outside the max
>> end of the black ALC box. Maybe a needles worth.
>>
>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
>> and I have not touched mic gain pot.
>>
>> I flip to Send and the ALC meter indication is a little bit more outside the

>> black ALC box. It could be adjusted a little to get a match if I had the covers
>> off, but close enough. I switch the meter from ALC to Comp and it indicates just
>> a little above 20db on the Comp scale.
>>
>> I repeatedly switched Proc on and off and get the same results. In short my as
>> found condition for my daily operator is very close to being right on the same
>> indicated level on the ALC meter scale (near max on black border) with Proc on
>> and off.
>>
>> At this point Chris not sure I can be of any more help? I will think about it
>> some more and if I come up with something will write.
>>
>> Whatever you do you should not have to increase mic gain position or increase
>> audio generator output level above 10 mv. Depending on the pre-amp gain in your
>> rig you may have to be a little higher than position 4 on the mic gain , but I
>> wouldnt think much higher.
>>
>> Also, you might want to measure the sig gen level at your mic connection when
>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>> Stand-by to Send. Other than that I think I have exhausted my experience. Good
>> luck Terry
>>
>> _____
>> From: Chris Parnell <cparnell1001@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Fri, June 17, 2011 10:08:00 AM
>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>
>> Hi Terry,
>>
>> The only difference from my original post is that I increased the "gain" on the
>> input (Mic gain), therefore got an ALC reading.
>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>>
>> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>>
>>> Based on what you are reporting I would expect it to
>>> be something less than far right of ALC black box? Assuming it is somewhere in
>>
>>> the ALC box window can you adjust L27 and bring the reading up?
>>>
>>
>> Once I have done the initial adjustment Terry, and get the ALC to the far right
>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>>
>> Hope this makes sense..
>>
>> Cheers
>> Chris
>>

>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>
>>> Chris--This appears different than what you originally reported of getting no
>>> ALC indication? Why now getting ALC indication? What did you do different?
>>> Where
>>>
>>> is your mic gain set at? I would not leave meter pegged to long as it is hard
>>> on
>>>
>>> the movement. I would slowly turn down mic gain until I could get meter off the
>>>
>>> peg.
>>>
>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least off
>>
>>> the peg and on the meter scale. Now turn on Proc and key rig and report back
>>> what your ALC reading is. Based on what you are reporting I would expect it to
>>
>>> be something less than far right of ALC black box? Assuming it is somewhere in
>>
>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>
>>> _____
>>> From: Chris Parnell <cparnell1001@...>
>>> To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>>> Cc: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>
>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>> setting), with processor on and full scale (pegged meter) deflection without
>>> PROC NOT engaged, just Mic.
>>>
>>> Chris
>>> Sent from my iPhone
>>>
>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
>>>
>>>> Hi Terry, in a nutshell,
>>>>
>>>> It doesn't weigh up here.
>>>>
>>>> Following to the letter the service manual and then taking into account your
>>
>>>> notes, the final situation is that I end up with full on-scale deflection of
>>> ALC
>>>
>>>> (ie end of black ALC setting), with processor on and full scale (pegged meter)
>>>
>>>> deflection without PROC engaged, just Mic.

>>>>
>>>>
>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>>
>>>> Thanks
>>>> Chris
>>>>
>>>> Sent from my iPhone
>>>>
>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
>>>>
>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to have
>>> same
>>>
>>>>
>>>>> ALC reading (max) with Processor on and off. You should not have to adjust
>>
>>>> mic
>>>>
>>>>> gain or input signal level once balanced. You should be able to flip to
>>> Tune
>>>
>>>
>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>
>>>>> If you initially get no indication (I think that is your problem?) you can
>>>
>>>> move
>>>>
>>>>> mic gain up slightly until you get an indication. It wont take much and
>>> will
>>>
>>>> be
>>>>
>>>>> very touchy and will want to peg the meter. Only other choice you have is
>>> to
>>>
>>>> set
>>>>
>>>>> audio generator output higher as others suggested. I chose to just increase
>>>
>>>>> mic gain until I got an indication. After I found that point I no longer
>>>> needed
>>>>
>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>> would
>>>
>>>
>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty good
>>>> matched

>>>>
>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>
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>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
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>>>>> Thanks Terry,
>>>>>
>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then ON
>>>
>>>> to
>>>>
>>>>> same point? that's what it states from memory... point of exercise is to
>>> have
>>>
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>>>>>>> Thanks Terry....
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>>>>>>> Will hopefully get around to confirming all of this later tonight NZ

>>>> time.
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>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>
>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter switch
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>>> 20db
>>>
>>>> on
>>>>
>>>>> the Compression scale as opposed to down at the high end of the ALC box.
>>>> Less
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>>>>> decay time to mess with. Terry
>>>>>>
>>>>>>>
>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
>>
>>>>> wrote:
>>>>>>>>
>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>> Step A:
>>>>>>>> 1. You have the Processor button off and Compression level pot max
>>
>>>>> clockwise.
>>>>>>
>>>>>>>> You are in USB mode.
>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>> 4. You flip Stand-by switch to Tune.
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>>> of
>>>
>>>> the
>>>>
>>>>> ALC
>>>>>>
>>>>>>>> black bordered box.
>>>>>>>> 6. You return to Stand-by.
>>>>>>>>
>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>> between
>>>>

>>>>>> 1000 and
>>>>>>
>>>>>>>>> 1100.
>>>>>>>>>
>>>>>>>>> You then turn Processor on with Comp Level max cw. What would you
>>>> expect
>>>>
>>>>>> the ALC
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>>>>>>>>> reading to do for the same mic gain setting? Would you expect the
>>>> meter
>>>>
>>>>>> to peg
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>>>>>>>>> Step B:
>>>>>>>>> With Processor on and Comp level set max clockwise and the mic gain
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>>>>>>>>> from above you are telling me that you have no ALC indication when
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>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
>>>> sensitive
>>>>
>>>>>> and
>>>>>>
>>>>>>>>> you should reach a point where it will drive meter hard up scale.
>>>> Quickly

>>>>
>>>>>> turn
>>>>>>
>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>> box.
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>>>
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>>>
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>>>>>>>>>
>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set the
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>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>> Every step up until here works fine. I get to the point where I
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>>>
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>>>
>>>> 20db
>>>>
>>>>>> and
>>>>>>
>>>>>>>>>> that would be on the Compression Scale. So would be better with a
>>
>>>>>> multi-scale
>>>>>>
>>>>>>>>>> meter for them to tell you the expected value and on what meter
>>>> scale.
>>>>>>>>>>
>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set mic
>>>
>>>> gain
>>>>
>>>>>
>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at 1200
>>> and
>>>
>>>>
>>>>>> peaked L27.
>>>>>>>>>>
>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they would
>>> say
>>>
>>>
>>>>>> something
>>>>>>
>>>>>>>>>> like "top or far right end of black bordered ALC meter scale box".
>>>
>>>> Just
>>>>
>>>>>> make it
>>>>>>
>>>>>>>>>> very clear what meter position and what scale you are to read.
>>>>>>>>>>
>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>> heater
>>>>
>>>>>> switch on
>>>>>>
>>>>>>>>>> you will be able to complete this Item. Let me know. Terry -K9TW
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>> <cparnell1001@>
>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>

>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>
>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>> chance
>>>
>>>> to
>>>>
>>>>>> check
>>>>>>
>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day so I
>>
>>>> will
>>>>
>>>>>> give it a
>>>>>>
>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>>
>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>> <cparnell1001@>
>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>>>>
>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment in
>>> the
>>>
>>>> 830
>>>>
>>>>>> at the
>>>>>>
>>>>>>>>>> weekend?
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>> Cheers
>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>

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>>>>>>>>> Yahoo! Groups Links
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>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>
>>>>>>>>> ------------------------------------

>>
>> Yahoo! Groups Links
>>
>> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

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31927. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-17 23:32:12 UTC
From: Terry Wagoner
Topic: 31878 Message: 31927

Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz test signals.

With your mic gain at No. 4 it appears you have much more gain than I do in my mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just where I can get a good match at far right end of ALC black box.

With Proc off and 10mv injected it doesnt take much adjustment right around the No. 4 setting of the mic gain to peg the meter or to have it fall back and have no meter indication. I do know with both of my rigs I end up at very close to No.4 on the mic gain to get a meter indication at the end of ALC box.

I assume you have tried adjusting the mic gain down while leaving required 10mv signal injected? I found it a little touchy. When you first reported no meter indication that is why I suggested turning mic gain up a little. Maybe I am starting to get confused regards what your problem is.

If turning mic gain down a little doesnt help then I would say it is on to troubleshooting with Mike.

Terry

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 7:04:54 PM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry / Mike.....

I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good piece of kit.
Here's what I see when I follow your instructions:

> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins).
>
Exactly the same as me Terry, except my mini clips are connected directly to the Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.

> I have the mic gain set exactly at
> No. 4 position.
>
Same here

> I set SG switch on rear of rig to off and turn on rig and heater
> switches. Let it warm up a little.
>

Same here

> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave

> Tek generator to exactly 10 mv
>
Using the above I set it to AF Generator - 1.5Khz 10mV output.

> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>

Same here

>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
and USB mode, I flick to send and I get full scale meter deflection in ALC mode
(Full meter deflection, not on-scale ALC meter deflection, so if you look at
s-meter scale, it's S9+40dB +).

>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
>
> and I have not touched mic gain pot.
>
With Proc on, and Proc level fully clockwise, not adjusting any gains at either
the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
now.. (I am only using the S-Meter scale as it's easier for you to gauge what
I'm saying and seeing.

At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
"On-Scale" ALC reading, so now I get an accurate end of scale reading without
PROC ON, which on the S-Meter is S-9.
I check where VR-7 is now within it's VR scale and notice it's almost at
minimum.

>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box.
>
So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
OFF, I put PROC ON and the reading drops to around the end of the letter C of
the word ALC on the meter, which is about S-6 on the S-Meter.

> It could be adjusted a little to get a match if I had the covers
> off, but close enough.
>

I check L27 and find it's at it's peak, so I cannot go any higher and align them
with the PROC ON.

> I switch the meter from ALC to Comp and it indicates just
> a little above 20db on the Comp scale.
>
Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
adjust L26 for 20dB reading.

I will need to do some component checking in the circuit around the Processor as
Mike and yourself have recommended.

I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.

Thanks
Chris, ZL1CDP

>
> I repeatedly switched Proc on and off and get the same results. In short my as

> found condition for my daily operator is very close to being right on the same

> indicated level on the ALC meter scale (near max on black border) with Proc on
>
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
>
> rig you may have to be a little higher than position 4 on the mic gain , but I

> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good

> luck Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
>
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.

>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere
>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right
>
> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>
> Hope this makes sense..
>
> Cheers
> Chris
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
>
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> >
> > is your mic gain set at? I would not leave meter pegged to long as it is hard
>
> >on
> >
> > the movement. I would slowly turn down mic gain until I could get meter off
>the
>
> >
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least
>off
>
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back

> > what your ALC reading is. Based on what you are reporting I would expect it
>to
>
>
> > be something less than far right of ALC black box? Assuming it is somewhere
>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry

> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without

> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account
>your
>
>
> > >notes, the final situation is that I end up with full on-scale deflection of
>
> >ALC
> >
> > >(ie end of black ALC setting), with processor on and full scale (pegged
>meter)
>
> >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have

> >same
> >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to
>adjust
>
>
> > >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to
> >Tune
> >
> >
> > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > If you initially get no indication (I think that is your problem?) you
>can
>
> >
> > >move
> > >
> > > > mic gain up slightly until you get an indication. It wont take much and
> >will
> >
> > >be
> > >
> > > > very touchy and will want to peg the meter. Only other choice you have is
>
> >to
> >
> > >set
> > >
> > > > audio generator output higher as others suggested. I chose to just
>increase
>
> >
> > > > mic gain until I got an indication. After I found that point I no longer

> > >needed
> > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it
> >would
> >
> >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good

> > >matched
> > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>

> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Thanks Terry,
> > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
>ON
>
> >
> > >to
> > >
> > > > same point? that's what it states from memory... point of exercise is to

> >have
> > >
> > > >
> > > > ALC reading same position with Proc ON and OFF.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good equal

> > > > >indications at far right of ALC black box or S-9 on the S-meter scale
>with
>
> >
> > >the
> > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
>
> >no
> > >
> > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any

> > >lower on
> > >
> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@...>
> > >
> > >
> > > > > > wrote:
> > > > > > >
> > > > > > > Thanks Terry....

> > > > > >
> > > > > > Will hopefully get around to confirming all of this later tonight NZ

> > >time.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > > >
> > > > > > >
> > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > Chris -- I forgot to mention it may be easier initially (meter
>switch
>
> >
> > >in
> > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level at

> >20db
> >
> > >on
> > >
> > > > > >the Compression scale as opposed to down at the high end of the ALC box.
>
> > >Less
> > >
> > > > > >decay time to mess with. Terry
> > > > > >
> > > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
><wagstw46@>
>
>
> > > > wrote:
> > > > > > > > >
> > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > Step A:
> > > > > > > > 1. You have the Processor button off and Compression level pot
>max
>
>
> > > > >clockwise.
> > > > > > >
> > > > > > > > You are in USB mode.
> > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
>end
>

> >of
> >
> > >the
> > >
> > > > >ALC
> > > > >
> > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > > > >1000 and
> > > > > >
> > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
>
> > >expect
> > >
> > > > >the ALC
> > > > > >
> > > > > > > > reading to do for the same mic gain setting? Would you expect the
>
> > >meter
> > >
> > > > >to peg
> > > > > >
> > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> > >
> > >
> > > > >would you
> > > > > >
> > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic
>gain
>
> > >
> > >not
> > >
> > > > >touched
> > > > > >
> > > > > > > > from above you are telling me that you have no ALC indication
>when
>
>
> > >you

> > >
> > > > >flip to
> > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
>
> >ALC
> >
> > >
> > > > >meter
> > > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >sensitive
> > >
> > > > >and
> > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
>
> > >Quickly
> > >
> > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> >box.
> >
> > >Mic
> > >
> > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
>far
>
>
> > >end of
> > >
> > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> >times
> >
> > >
> > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This

> > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends
>to

>
> >
> > >peg
> > >
> > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> >around
> > >
> > >the
> > > >
> > > > > >max
> > > > > >
> > > > > > > > > > end of the ALC box until things settle down. If you switch meter
>to
>
> >
> > >Comp
> > > >
> > > > > >you
> > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > >
> > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > All of that makes sense, and is exactly how I read it to be
>(Heater
>
> >
> > >on
> > > >
> > > > > >etc), but
> > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not "align"
>
> >the
> > >
> > > >
> > > > > >speech

> > > > >
> > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>the
>
> >
> > >AG
> > >
> > > > >output to
> > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
>
> > > > >on-scale ALC
> > > > > >
> > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > >on-scaled).
> > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > Every step up until here works fine. I get to the point where I
> >turn
> >
> > >the
> > >
> > > > >Proc ON
> > > > > >
> > > > > > > > > and
> > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
>at
>
> >
> > >this
> > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
>pages
>

> >
> > > > >40&41. As
> > > > >
> > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> >
> > >and
> > >
> > > > > >LEAVE
> > > > > >
> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >heater
> > >
> > > > >off of the
> > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step

> > > > >conditions still
> > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > > >
> > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max

> > >meter
> > >
> > > > >reading on
> > > > > >
> > > > > > > > > > >the Compression Scale".
> > > > > > > > > > >
> > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.

> >That
> >
> > >
> > > > >would be on
> > > > > >
> > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
>
> >of
> >
> > >20db
> > >
> > > > >and
> > > > > >
> > > > > > > > > > >that would be on the Compression Scale. So would be better with
>a
>
>
> > > > >multi-scale

> > > > >
> > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
>mic
>
> >
> > >gain
> > >
> > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
>
> >and
> > >
> > > >
> > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >say
> > >
> > >
> > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale
>box".
>
> >
> > >Just
> > >
> > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >heater
> > >
> > > > >switch on
> > > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
>
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.

> > > > > > > > > >
> > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> >
> > >to
> > >
> > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
>I
>
>
> > >will
> > >
> > > > >give it a
> > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in

> >the
> >
> > >830
> > >
> > > > >at the
> > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >

> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > >
> > > > > > > > > ----------
> > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > [Non-text portions of this message have been removed]
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> > >
> > >
> > > [Non-text portions of this message have been removed]

>
> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>
>

On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:

> Chris--I will give some more thought. Not sure what is going on. I am just
>about
>
> out of ideas.
>
> I just repeated the test on my daily operating TS-830 with the covers on the
> rig. I just unplugged the mic and brought the test equipment to the operating
> position.
>
> I use a spare mic connector and clipped the generator output to it with
> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at

> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
>heater
>
> switches. Let it warm up a little.
>
> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave

> Tek generator to exactly 10 mv.
>
> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> place meter switch in ALC position.
>
> I then flip to Send and get ALC meter indication that is just outside the max
> end of the black ALC box. Maybe a needles worth.
>
> I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
>
> and I have not touched mic gain pot.
>
> I flip to Send and the ALC meter indication is a little bit more outside the
> black ALC box. It could be adjusted a little to get a match if I had the covers
>
> off, but close enough. I switch the meter from ALC to Comp and it indicates
>just
>
> a little above 20db on the Comp scale.
>

> I repeatedly switched Proc on and off and get the same results. In short my as

> found condition for my daily operator is very close to being right on the same

> indicated level on the ALC meter scale (near max on black border) with Proc on
>
> and off.
>
> At this point Chris not sure I can be of any more help? I will think about it
> some more and if I come up with something will write.
>
> Whatever you do you should not have to increase mic gain position or increase
> audio generator output level above 10 mv. Depending on the pre-amp gain in your
>
> rig you may have to be a little higher than position 4 on the mic gain , but I

> wouldnt think much higher.
>
> Also, you might want to measure the sig gen level at your mic connection when
> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> Stand-by to Send. Other than that I think I have exhausted my experience. Good

> luck Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 10:08:00 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> The only difference from my original post is that I increased the "gain" on the
>
> input (Mic gain), therefore got an ALC reading.
> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
>
> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>
> > Based on what you are reporting I would expect it to
> > be something less than far right of ALC black box? Assuming it is somewhere
>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up?
> >
>
> Once I have done the initial adjustment Terry, and get the ALC to the far right
>
> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>

> Hope this makes sense..
>
> Cheers
> Chris
>
> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>
> > Chris--This appears different than what you originally reported of getting no
>
> > ALC indication? Why now getting ALC indication? What did you do different?
> >Where
> >
> > is your mic gain set at? I would not leave meter pegged to long as it is hard
>
> >on
> >
> > the movement. I would slowly turn down mic gain until I could get meter off
>the
>
> >
> > peg.
> >
> > With Proc off key rig and back off mic gain to get ALC at 20db or at least
>off
>
>
> > the peg and on the meter scale. Now turn on Proc and key rig and report back

> > what your ALC reading is. Based on what you are reporting I would expect it
>to
>
>
> > be something less than far right of ALC black box? Assuming it is somewhere
>in
>
>
> > the ALC box window can you adjust L27 and bring the reading up? Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Cc: "TS-520_820_530_830@yahoogroups.com"
<TS-520_820_530_830@yahoogroups.com>
> > Sent: Fri, June 17, 2011 8:36:35 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > setting), with processor on and full scale (pegged meter) deflection without

> > PROC NOT engaged, just Mic.
> >
> > Chris
> > Sent from my iPhone
> >
> > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> >
> > > Hi Terry, in a nutshell,
> > >
> > > It doesn't weigh up here.
> > >
> > > Following to the letter the service manual and then taking into account
>your
>
>
> > >notes, the final situation is that I end up with full on-scale deflection of
>
> >ALC
> >
> > >(ie end of black ALC setting), with processor on and full scale (pegged
>meter)
>
> >
> > >deflection without PROC engaged, just Mic.
> > >
> > >
> > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > Thanks
> > > Chris
> > >
> > > Sent from my iPhone
> > >
> > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > >
> > > > Yes--Objective is for a given mic gain setting with 10mv applied to have

> >same
> >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to
>adjust
>
>
> >mic
> > >
> > > > gain or input signal level once balanced. You should be able to flip to
> >Tune
> >
> >
> > > > with Proc on and off and see approx the same max ALC indication.

> > > >
> > > > If you initially get no indication (I think that is your problem?) you
>can
>
> >
> > >move
> > >
> > > > mic gain up slightly until you get an indication. It wont take much and
> >will
> >
> > >be
> > >
> > > > very touchy and will want to peg the meter. Only other choice you have is
>
> >to
> >
> > >set
> > >
> > > > audio generator output higher as others suggested. I chose to just
>increase
>
> >
> > > > mic gain until I got an indication. After I found that point I no longer

> > >needed
> > >
> > > > to touch the mic gain. If I had to increase mic gain each time then it
> >would
> >
> >
> > > > not be a valid adjustment. As I mentioned I ended up getting pretty good

> > >matched
> > >
> > > > ALC indication with mic gain just a hair past No.4. Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Thanks Terry,
> > > >
> > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
>ON
>
> >
> > >to
> > >
> > > > same point? that's what it states from memory... point of exercise is to

> >have
> >
> > >
> > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--Just repeated adjustments and was able to get pretty good equal

> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
>with
>
> >
> > >the
> > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
>
> >no
> > >
> > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go any

> > >lower on
> > >
> > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@...>
> >
> > >
> > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ

> > >time.
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > >
> > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
>switch
>
> >

> > >in
> > >
> > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >20db
> >
> > >on
> > >
> > > > >the Compression scale as opposed to down at the high end of the ALC box.
>
> > >Less
> > >
> > > > >decay time to mess with. Terry
> > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
><wagstw46@>
>
>
> > > > wrote:
> > > > > > > >
> > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > Step A:
> > > > > > > > 1. You have the Processor button off and Compression level pot
>max
>
>
> > > > >clockwise.
> > > > > >
> > > > > > > > You are in USB mode.
> > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
>end
>
> >of
> >
> > >the
> > >
> > > > >ALC
> > > > > >
> > > > > > > > black bordered box.
> > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >between
> > >
> > > > >1000 and
> > > > > >

> > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
>
> > >expect
> > >
> > > > >the ALC
> > > > >
> > > > > > > > > reading to do for the same mic gain setting? Would you expect the
>
> > >meter
> > >
> > > > >to peg
> > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >what
> >
> >
> > > > >would you
> > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic
>gain
>
> >
> > >not
> > >
> > > > >touched
> > > > >
> > > > > > > > > from above you are telling me that you have no ALC indication
>when
>
>
> > >you
> > >
> > > > >flip to
> > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
>
> >ALC
> >
> > >
> > > > >meter
> > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >sensitive

> > >
> > > > >and
> > > > >
> > > > > > > > you should reach a point where it will drive meter hard up scale.
>
> > >Quickly
> > >
> > > > >turn
> > > > >
> > > > > > > > mic gain back down until meter is at far right end of ALC black
> >box.
> >
> > >Mic
> > >
> > > > >gain
> > > > >
> > > > > > > > pot will be sensitive. Once you have ALC indication staying at
>far
>
>
> > >end of
> > >
> > > > >ALC
> > > > >
> > > > > > > > box you can peak L27. You may have to go back and forth several
> >times
> >
> > >
> > > > >until you
> > > > >
> > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This

> > > > >adjustment is
> > > > >
> > > > > > > > a little difficult due to the ALC time constant. The meter tends
>to
>
> >
> > >peg
> > >
> > > > >hard
> > > > >
> > > > > > > > right and then slowly come back down. So it will tend to float
> >around
> >
> > >the
> > >
> > > > >max
> > > > >
> > > > > > > > end of the ALC box until things settle down. If you switch meter

>to
>
> >
> > >Comp
> > >
> > > > >you
> > > > >
> > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > > All of that makes sense, and is exactly how I read it to be
>(Heater
>
> >
> > >on
> > >
> > > > >etc), but
> > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not "align"
>
> >the
> > >
> > > >
> > > > >speech
> > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > >
> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>the
>
> >
> > >AG
> > >
> > > > >output to
> > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
>

> > > > >on-scale ALC
> > > > >
> > > > > > > > reading. Set the PROC to ON.
> > > > > > > > >
> > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > >on-scaled).
> > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > >
> > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > Every step up until here works fine. I get to the point where I
> >turn
> > >
> > >the
> > > >
> > > > >Proc ON
> > > > > >
> > > > > > > > and
> > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
>at
>
> >
> > >this
> > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
>pages
>
> >
> > > > >40&41. As
> > > > > >
> > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > >
> > > > > > > > They should tell you to load up normally. Then switch off SG
> >switch
> > >
> > >and
> > > >
> > > > >LEAVE
> > > > > >
> > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >heater

> > >
> > > > >off of the
> > > > >
> > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step

> > > > >conditions still
> > > > >
> > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max

> > >meter
> > >
> > > > >reading on
> > > > >
> > > > > > > > >the Compression Scale".
> > > > > > > > > >
> > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.

> >That
> >
> > >
> > > > >would be on
> > > > >
> > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
>
> >of
> >
> > >20db
> > >
> > > > >and
> > > > >
> > > > > > > > >that would be on the Compression Scale. So would be better with
>a
>
>
> > > > >multi-scale
> > > > >
> > > > > > > > >meter for them to tell you the expected value and on what meter

> > >scale.
> > > > > > > > > >
> > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
>mic
>
> >
> > >gain
> > >
> > > >
> > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
>

> >and
> >
> > >
> > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >say
> >
> >
> > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale
>box".
>
> >
> > >Just
> > >
> > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >heater
> > >
> > > > >switch on
> > > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
>
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >chance
> >
> > >to
> > >
> > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > > >

> > > > > > > > > >
> > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
>I
>
>
> > > >will
> > > >
> > > > > >give it a
> > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in

> >the
> > >
> > > >830
> > > >
> > > > > >at the
> > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
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> > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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Yahoo! Groups Links

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31928. inverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 01:32:57 UTC
From: CRAIG
Topic: 31928 Message: 31928

I have a whistler 500 watt/800 watt peak inverter.I am asking if anyone in the group knows if this unit has the right kind of output for a Ts-520s ,like wave form.The generator we were going to use for feild day
did not have stable enough output.Going to use two 55 amp and a 33 amp
battery with the inverter.

31929. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 01:55:30 UTC
From: Chris Parnell
Topic: 31878 Message: 31929

Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I have no attenuation in there)...

So I got some test reference dBmA numbers against my calibrated probe and wrote down the numbers for 5mV, 10mV and 50mV before I started again.
So... re-did the whole thing and of course, its more in line with your "Mic Gain 4" setting now, but still a huge difference when going from PROC OFF to PROC ON with regards to ALC readings.

When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn the PROC OFF, the ALC shoots right over to the right hand side of the meter.

I may record a small video and send it to you... easier to see what I mean and what i'm doing.

Turning the Mic gain up and down of course makes a difference, but the point is, I still cannot get PROC OFF and PROC ON to align with the ALC readings.

Cheers
Chris

On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:

> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> test signals.
>
> With your mic gain at No. 4 it appears you have much more gain than I do in my
> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> where I can get a good match at far right end of ALC black box.
>
> With Proc off and 10mv injected it doesnt take much adjustment right around the
> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> no meter indication. I do know with both of my rigs I end up at very close to
> No.4 on the mic gain to get a meter indication at the end of ALC box.
>
> I assume you have tried adjusting the mic gain down while leaving required 10mv
> signal injected? I found it a little touchy. When you first reported no meter
> indication that is why I suggested turning mic gain up a little. Maybe I am
> starting to get confused regards what your problem is.
>
> If turning mic gain down a little doesnt help then I would say it is on to
> troubleshooting with Mike.
>
> Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>

> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 7:04:54 PM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry / Mike.....
>
> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> piece of kit.
> Here's what I see when I follow your instructions:
>
> > I use a spare mic connector and clipped the generator output to it with
> > mini-clips to pins 1 and 2 (bottom 2 pins).
> >
> Exactly the same as me Terry, except my mini clips are connected directly to the
> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
>
> > I have the mic gain set exactly at
> > No. 4 position.
> >
> Same here
>
> > I set SG switch on rear of rig to off and turn on rig and heater
> > switches. Let it warm up a little.
> >
> Same here
>
> > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
>
> > Tek generator to exactly 10 mv
> >
> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>
> > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > place meter switch in ALC position.
> >
>
> Same here
>
> >
> > I then flip to Send and get ALC meter indication that is just outside the max
> > end of the black ALC box. Maybe a needles worth.
> >
> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> s-meter scale, it's S9+40dB +).
>
> >
> > I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> >

> > and I have not touched mic gain pot.
> >
> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> I'm saying and seeing.
>
> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> PROC ON, which on the S-Meter is S-9.
> I check where VR-7 is now within it's VR scale and notice it's almost at
> minimum.
>
> >
> > I flip to Send and the ALC meter indication is a little bit more outside the
> > black ALC box.
> >
> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> the word ALC on the meter, which is about S-6 on the S-Meter.
>
> > It could be adjusted a little to get a match if I had the covers
> > off, but close enough.
> >
>
> I check L27 and find it's at it's peak, so I cannot go any higher and align them
> with the PROC ON.
>
> > I switch the meter from ALC to Comp and it indicates just
> > a little above 20db on the Comp scale.
> >
> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> adjust L26 for 20dB reading.
>
> I will need to do some component checking in the circuit around the Processor as
> Mike and yourself have recommended.
>
> I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
>
> Thanks
> Chris, ZL1CDP
>
> >
> > I repeatedly switched Proc on and off and get the same results. In short my as
>
> > found condition for my daily operator is very close to being right on the same
>
> > indicated level on the ALC meter scale (near max on black border) with Proc on
> >
> > and off.

> >
> > At this point Chris not sure I can be of any more help? I will think about it
> > some more and if I come up with something will write.
> >
> > Whatever you do you should not have to increase mic gain position or increase
> > audio generator output level above 10 mv. Depending on the pre-amp gain in your
> >
> > rig you may have to be a little higher than position 4 on the mic gain , but I
>
> > wouldnt think much higher.
> >
> > Also, you might want to measure the sig gen level at your mic connection when
> > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > Stand-by to Send. Other than that I think I have exhausted my experience. Good
>
> > luck Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 10:08:00 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry,
> >
> > The only difference from my original post is that I increased the "gain" on the
> >
> > input (Mic gain), therefore got an ALC reading.
> > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
> >
> > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> >
> > > Based on what you are reporting I would expect it to
> > > be something less than far right of ALC black box? Assuming it is somewhere
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up?
> > >
> >
> > Once I have done the initial adjustment Terry, and get the ALC to the far right
> >
> > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >
> > Hope this makes sense..
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:

> >
> > > Chris--This appears different than what you originally reported of getting no
> >
> > > ALC indication? Why now getting ALC indication? What did you do different?
> > >Where
> > >
> > > is your mic gain set at? I would not leave meter pegged to long as it is hard
> >
> > >on
> > >
> > > the movement. I would slowly turn down mic gain until I could get meter off
> >the
> >
> > >
> > > peg.
> > >
> > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >off
> >
> >
> > > the peg and on the meter scale. Now turn on Proc and key rig and report back
> >
> > > what your ALC reading is. Based on what you are reporting I would expect it
> >to
> >
> >
> > > be something less than far right of ALC black box? Assuming it is somewhere
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Cc: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@...m>
> > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > setting), with processor on and full scale (pegged meter) deflection without
> >
> > > PROC NOT engaged, just Mic.
> > >
> > > Chris
> > > Sent from my iPhone
> > >
> > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:

> > >
> > > > Hi Terry, in a nutshell,
> > > >
> > > > It doesn't weigh up here.
> > > >
> > > > Following to the letter the service manual and then taking into account
> >your
> >
> >
> > > > >notes, the final situation is that I end up with full on-scale deflection of
> >
> > > >ALC
> > >
> > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> >meter)
> >
> > >
> > > > >deflection without PROC engaged, just Mic.
> > > >
> > > >
> > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >
> > > > Thanks
> > > > Chris
> > > >
> > > > Sent from my iPhone
> > > >
> > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > >
> > > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >
> > >same
> > >
> > > >
> > > > > ALC reading (max) with Processor on and off. You should not have to
> >adjust
> >
> >
> > > > >mic
> > > >
> > > > > gain or input signal level once balanced. You should be able to flip to
> > >Tune
> > >
> > >
> > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > If you initially get no indication (I think that is your problem?) you
> >can
> >
> > > >

> > > >move
> > > >
> > > > > mic gain up slightly until you get an indication. It wont take much and
> > >will
> > >
> > > >be
> > > >
> > > > > very touchy and will want to peg the meter. Only other choice you have is
> >
> > >to
> > >
> > > >set
> > > >
> > > > > audio generator output higher as others suggested. I chose to just
> >increase
> >
> > >
> > > > > mic gain until I got an indication. After I found that point I no longer
>
> > > >needed
> > > >
> > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > >would
> > >
> > >
> > > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
>
> > > >matched
> > > >
> > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Thanks Terry,
> > > > >
> > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
> >ON
> >
> > >
> > > >to
> > > >
> > > > > same point? that's what it states from memory... point of exercise is to
>
> > >have
> > >
> > > >

> > > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--Just repeated adjustments and was able to get pretty good equal
>
> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> >with
> >
> > >
> > > >the
> > > >
> > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> >
> > >no
> > >
> > >
> > > > > >longer needed to tweak the mic gain to get an indication. I cant go any
>
> > > >lower on
> > > >
> > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@...>
> > >
> > > >
> > > > >wrote:
> > > > > > > >
> > > > > > > > Thanks Terry....
> > > > > > > >
> > > > > > > > Will hopefully get around to confirming all of this later tonight NZ
>
> > > >time.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> >switch
> >
> > >
> > > >in

> > > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level at
>
> > >20db
> > >
> > > >on
> > > >
> > > > > >the Compression scale as opposed to down at the high end of the ALC box.
> >
> > > >Less
> > > >
> > > > > >decay time to mess with. Terry
> > > > > >
> > > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> ><wagstw46@>
> >
> >
> > > > > wrote:
> > > > > > > > >
> > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > Step A:
> > > > > > > > > 1. You have the Processor button off and Compression level pot
> >max
> >
> >
> > > > > >clockwise.
> > > > > > > >
> > > > > > > > > You are in USB mode.
> > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >end
> >
> > >of
> > >
> > > >the
> > > >
> > > > > >ALC
> > > > > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > >between
> > > >
> > > > > >1000 and
> > > > > > > >
> > > > > > > > > 1100.

> > > > > > > > >
> > > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> >
> > > >expect
> > > > >
> > > > > > >the ALC
> > > > > > >
> > > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> >
> > > >meter
> > > > >
> > > > > > >to peg
> > > > > > >
> > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > >what
> > > >
> > > >
> > > > > > >would you
> > > > > > >
> > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > >
> > > > > > > > > > Step B:
> > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> >gain
> >
> > > >
> > > >not
> > > > >
> > > > > > >touched
> > > > > > >
> > > > > > > > > > from above you are telling me that you have no ALC indication
> >when
> >
> >
> > > >you
> > > > >
> > > > > > >flip to
> > > > > > >
> > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> >
> > >ALC
> > > >
> > > >
> > > > > > >meter
> > > > > > >
> > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > >
> > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > >sensitive
> > > > >

> > > > > >and
> > > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
> >
> > > >Quickly
> > > > >
> > > > > > >turn
> > > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >box.
> > > >
> > > >Mic
> > > > >
> > > > > > >gain
> > > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >far
> > >
> > >
> > > >end of
> > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >times
> > > >
> > > > >
> > > > > > >until you
> > > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> >
> > > > > > >adjustment is
> > > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends
> >to
> > >
> > > >
> > > > >peg
> > > > > >
> > > > > > >hard
> > > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> > >around
> > > >
> > > > >the
> > > > > >
> > > > > > >max
> > > > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch meter
> >to

> >
> > >
> > > >Comp
> > > >
> > > > > >you
> > > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > _____
> > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > >
> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> >(Heater
> > >
> > > >
> > > > >on
> > > > >
> > > > > >etc), but
> > > > > >
> > > > > > > > > > > > none of it explains why I (and evidently others), can not "align"
> > >
> > > >the
> > > > >
> > > > > >
> > > > > > >speech
> > > > > >
> > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > >
> > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >the
> > >
> > > >
> > > > >AG
> > > > >
> > > > > >output to
> > > > > >
> > > > > > > > > > > > 10 mV
> > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > >
> > > > > > >on-scale ALC

> > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > >turn
> > >
> > > >the
> > > >
> > > > > >Proc ON
> > > > > > >
> > > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
> >at
> > >
> > >
> > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> >pages
> > >
> > > >
> > > > > > >40&41. As
> > > > > > > > > > >
> > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > >switch
> > > >
> > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > >LEAVE
> > > > > > > > > > > >
> > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >heater
> > > > > > >

> > > > > >off of the
> > > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> >
> > > > > >conditions still
> > > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > > > >
> > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> >
> > > >meter
> > > > >
> > > > > >reading on
> > > > > > >
> > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > >
> > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> >
> > >That
> > > >
> > > > >
> > > > > >would be on
> > > > > > >
> > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> > >
> > > >of
> > > > >
> > > > > >20db
> > > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > > > >that would be on the Compression Scale. So would be better with
> >a
> > >
> > >
> > > > > > >multi-scale
> > > > > > > >
> > > > > > > > > > >meter for them to tell you the expected value and on what meter
> >
> > > >scale.
> > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> >mic
> > >
> > > >
> > > > >gain
> > > > > >
> > > > > > >
> > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> >

> > >and
> > >
> > > >
> > > > > >peaked L27.
> > > > > > > > > > >
> > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
>
> > >say
> > >
> > >
> > > > >something
> > > > > >
> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> >box".
> >
> > >
> > > >Just
> > > >
> > > > > >make it
> > > > > >
> > > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > >heater
> > > >
> > > > > >switch on
> > > > > >
> > > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > >
> > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > >chance
> > > >
> > > >to
> > > > >
> > > > > >check
> > > > > >
> > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > >

> > > > > > > > > > >
> > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
> >I
> > >
> > >
> > > > >will
> > > > >
> > > > > > >give it a
> > > > > > >
> > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
> >
> > >the
> > > > >
> > > > > >830
> > > > > >
> > > > > > > >at the
> > > > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > >

> > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > ----------
> > > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > ----------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > > >
> > > >
> > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--I will give some more thought. Not sure what is going on. I am just

> >about
> >
> > out of ideas.
> >
> > I just repeated the test on my daily operating TS-830 with the covers on the
> > rig. I just unplugged the mic and brought the test equipment to the operating
> > position.
> >
> > I use a spare mic connector and clipped the generator output to it with
> > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at
>
> > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> >heater
> >
> > switches. Let it warm up a little.
> >
> > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
>
> > Tek generator to exactly 10 mv.
> >
> > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > place meter switch in ALC position.
> >
> > I then flip to Send and get ALC meter indication that is just outside the max
> > end of the black ALC box. Maybe a needles worth.
> >
> > I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> >
> > and I have not touched mic gain pot.
> >
> > I flip to Send and the ALC meter indication is a little bit more outside the
> > black ALC box. It could be adjusted a little to get a match if I had the covers
> >
> > off, but close enough. I switch the meter from ALC to Comp and it indicates
> >just
> >
> > a little above 20db on the Comp scale.
> >
> > I repeatedly switched Proc on and off and get the same results. In short my as
>
> > found condition for my daily operator is very close to being right on the same
>
> > indicated level on the ALC meter scale (near max on black border) with Proc on
> >
> > and off.
> >
> > At this point Chris not sure I can be of any more help? I will think about it
> > some more and if I come up with something will write.
> >
> > Whatever you do you should not have to increase mic gain position or increase

> > audio generator output level above 10 mv. Depending on the pre-amp gain in your
> >
> > rig you may have to be a little higher than position 4 on the mic gain , but I
>
> > wouldnt think much higher.
> >
> > Also, you might want to measure the sig gen level at your mic connection when
> > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > Stand-by to Send. Other than that I think I have exhausted my experience. Good
>
> > luck Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 10:08:00 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry,
> >
> > The only difference from my original post is that I increased the "gain" on the
> >
> > input (Mic gain), therefore got an ALC reading.
> > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
> >
> > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> >
> > > Based on what you are reporting I would expect it to
> > > be something less than far right of ALC black box? Assuming it is somewhere
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up?
> > >
> >
> > Once I have done the initial adjustment Terry, and get the ALC to the far right
> >
> > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >
> > Hope this makes sense..
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >
> > > Chris--This appears different than what you originally reported of getting no
> >
> > > ALC indication? Why now getting ALC indication? What did you do different?
> > >Where

> > >
> > > is your mic gain set at? I would not leave meter pegged to long as it is hard
> > >
> > > >on
> > > >
> > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >the
> > > >
> > > > >
> > > > > peg.
> > > > >
> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report back
> > > >
> > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > > setting), with processor on and full scale (pegged meter) deflection without
> > >
> > > > > PROC NOT engaged, just Mic.
> > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >

> > > > Following to the letter the service manual and then taking into account
> >your
> >
> >
> > > >notes, the final situation is that I end up with full on-scale deflection of
> >
> > >ALC
> > >
> > > >(ie end of black ALC setting), with processor on and full scale (pegged
> >meter)
> >
> > >
> > > >deflection without PROC engaged, just Mic.
> > > >
> > > >
> > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >
> > > > Thanks
> > > > Chris
> > > >
> > > > Sent from my iPhone
> > > >
> > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > >
> > > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >
> > >same
> > >
> > > >
> > > > > ALC reading (max) with Processor on and off. You should not have to
> >adjust
> >
> >
> > > >mic
> > > >
> > > > > gain or input signal level once balanced. You should be able to flip to
> > >Tune
> > >
> > >
> > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > If you initially get no indication (I think that is your problem?) you
> >can
> >
> > >
> > > >move
> > > >
> > > > > mic gain up slightly until you get an indication. It wont take much and
> > >will
> > >

> > > >be
> > > >
> > > > > very touchy and will want to peg the meter. Only other choice you have is
> >
> > >to
> > >
> > > >set
> > > >
> > > > > audio generator output higher as others suggested. I chose to just
> >increase
> >
> > >
> > > > > mic gain until I got an indication. After I found that point I no longer
>
> > > >needed
> > > >
> > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > >would
> > >
> > >
> > > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
>
> > > >matched
> > > >
> > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Thanks Terry,
> > > > >
> > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
> >ON
> >
> > >
> > > >to
> > > >
> > > > > same point? that's what it states from memory... point of exercise is to
>
> > >have
> > >
> > > >
> > > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >

> > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--Just repeated adjustments and was able to get pretty good equal
>
> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> >with
> >
> > >
> > > >the
> > > >
> > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> >
> > >no
> > >
> > >
> > > > > >longer needed to tweak the mic gain to get an indication. I cant go any
>
> > > >lower on
> > > >
> > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > >
> > > > > >
> > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@...>
> > >
> > > >
> > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ
>
> > >time.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > >
> > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> >switch
> >
> > >
> > > >in
> > > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level at
>
> > >20db
> > >

> > > >on
> > > >
> > > > > >the Compression scale as opposed to down at the high end of the ALC box.
> >
> > > >Less
> > > >
> > > > > >decay time to mess with. Terry
> > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> ><wagstw46@>
> >
> >
> > > > > wrote:
> > > > > > > > >
> > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > Step A:
> > > > > > > > > 1. You have the Processor button off and Compression level pot
> >max
> >
> >
> > > > > >clockwise.
> > > > > > >
> > > > > > > > > You are in USB mode.
> > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >end
> >
> > > >of
> > > >
> > > >the
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > >between
> > > >
> > > > > >1000 and
> > > > > >
> > > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> >
> > > >expect
> > > >

> > > > > >the ALC
> > > > > > >
> > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > >
> > > >meter
> > > > >
> > > > > >to peg
> > > > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > >what
> > > >
> > > >
> > > > > >would you
> > > > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> >gain
> > >
> > > >
> > > >not
> > > > >
> > > > > >touched
> > > > > > >
> > > > > > > > > from above you are telling me that you have no ALC indication
> >when
> > >
> > >
> > > >you
> > > > >
> > > > > >flip to
> > > > > > >
> > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> > >
> > >ALC
> > > >
> > > > >
> > > > > >meter
> > > > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > >sensitive
> > > > >
> > > > > >and
> > > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up scale.
> > >
> > > >Quickly

> > > >
> > > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >box.
> > >
> > > >Mic
> > > >
> > > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >far
> >
> >
> > > >end of
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >times
> > >
> > > >
> > > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
>
> > > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter tends
> >to
> >
> > >
> > > >peg
> > > >
> > > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> > >around
> > >
> > > >the
> > > >
> > > > > >max
> > > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch meter
> >to
> >
> > >
> > > >Comp
> > > >
> > > > > >you

> > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> >(Heater
> >
> > >
> > > >on
> > > >
> > > > >etc), but
> > > > >
> > > > > none of it explains why I (and evidently others), can not "align"
> >
> > >the
> > > >
> > > >
> > > > >speech
> > > > >
> > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >the
> >
> > > >
> > > > >AG
> > > > >
> > > > > >output to
> > > > > > > > > > >
> > > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> >
> > > > >on-scale ALC
> > > > > > > > > > >
> > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > >on-scaled).

> > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > >turn
> > > >
> > > > >the
> > > > >
> > > > > >Proc ON
> > > > > > >
> > > > > > > > > > and
> > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
> >at
> > >
> > > >
> > > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> >pages
> > >
> > > >
> > > > > >40&41. As
> > > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > >switch
> > > >
> > > > >and
> > > > >
> > > > > >LEAVE
> > > > > > >
> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >heater
> > > > >
> > > > > >off of the
> > > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> >
> > > > > > >conditions still

> > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
>
> > > >meter
> > > > >
> > > > > > >reading on
> > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
>
> > >That
> > > >
> > > > >
> > > > > > >would be on
> > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> >
> > >of
> > > >
> > > > >20db
> > > > >
> > > > > > >and
> > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better with
> >a
> > >
> > >
> > > > > > >multi-scale
> > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what meter
>
> > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> >mic
> > >
> > > >
> > > > >gain
> > > > > >
> > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> >
> > >and
> > > >
> > > > >
> > > > > > >peaked L27.
> > > > > > > > > > > > >

> > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
>
> > >say
> > >
> > >
> > > > > >something
> > > > > >
> > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> >box".
> >
> > >
> > > > >Just
> > > > >
> > > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > >heater
> > > > >
> > > > > >switch on
> > > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@...m, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > >chance
> > > >
> > > > >to
> > > > >
> > > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
> >I

> >
> >
> > > >will
> > > >
> > > > > >give it a
> > > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
>
> > >the
> > > >
> > > >830
> > > > >
> > > > > >at the
> > > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
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> > > > > > > > > > > > > >
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> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > ----------
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]

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> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > >

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31930. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 03:04:04 UTC
From: Terry Wagoner
Topic: 31878 Message: 31930

Chris--

Do you have Skype? Maybe we could connect on Skype and perform each step together on our rigs and see at what step we differ. Not sure if we could have clear enough real time video or not for this to work. Not sure about our time difference, but could schedule it Zulu/GMT just as we would a QSO.

Maybe Mike or Gordon would be better to do this with you as they repair these rigs for a living? As you know I had never performed this step until you asked about it. In fact I have never completed a full alignment as I dont have sweep generator. I have just done selected steps.

Terry

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Fri, June 17, 2011 9:55:30 PM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I have no attenuation in there)...

So I got some test reference dBmA numbers against my calibrated probe and wrote down the numbers for 5mV, 10mV and 50mV before I started again.
So... re-did the whole thing and of course, its more in line with your "Mic Gain 4" setting now, but still a huge difference when going from PROC OFF to PROC ON with regards to ALC readings.

When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn the PROC OFF, the ALC shoots right over to the right hand side of the meter.

I may record a small video and send it to you... easier to see what I mean and what i'm doing.

Turning the Mic gain up and down of course makes a difference, but the point is, I still cannot get PROC OFF and PROC ON to align with the ALC readings.

Cheers
Chris

On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:

> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> test signals.
>
> With your mic gain at No. 4 it appears you have much more gain than I do in my

> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> where I can get a good match at far right end of ALC black box.
>
> With Proc off and 10mv injected it doesnt take much adjustment right around the
>
> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
>
> no meter indication. I do know with both of my rigs I end up at very close to
> No.4 on the mic gain to get a meter indication at the end of ALC box.
>
> I assume you have tried adjusting the mic gain down while leaving required 10mv
>
> signal injected? I found it a little touchy. When you first reported no meter
> indication that is why I suggested turning mic gain up a little. Maybe I am
> starting to get confused regards what your problem is.
>
> If turning mic gain down a little doesnt help then I would say it is on to
> troubleshooting with Mike.
>
> Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 7:04:54 PM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry / Mike.....
>
> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> piece of kit.
> Here's what I see when I follow your instructions:
>
> > I use a spare mic connector and clipped the generator output to it with
> > mini-clips to pins 1 and 2 (bottom 2 pins).
> >
> Exactly the same as me Terry, except my mini clips are connected directly to
>the
>
> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
>
> > I have the mic gain set exactly at
> > No. 4 position.
> >
> Same here
>
> > I set SG switch on rear of rig to off and turn on rig and heater
> > switches. Let it warm up a little.
> >
> Same here
>

> > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>Wave
>
>
> > Tek generator to exactly 10 mv
> >
> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>
> > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > place meter switch in ALC position.
> >
>
> Same here
>
> >
> > I then flip to Send and get ALC meter indication that is just outside the max
>
> > end of the black ALC box. Maybe a needles worth.
> >
> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
>
> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> s-meter scale, it's S9+40dB +).
>
> >
> > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>position
>
> >
> > and I have not touched mic gain pot.
> >
> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
>
> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> I'm saying and seeing.
>
> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> PROC ON, which on the S-Meter is S-9.
> I check where VR-7 is now within it's VR scale and notice it's almost at
> minimum.
>
> >
> > I flip to Send and the ALC meter indication is a little bit more outside the

> > black ALC box.
> >
> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC

>
> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> the word ALC on the meter, which is about S-6 on the S-Meter.
>
> > It could be adjusted a little to get a match if I had the covers
> > off, but close enough.
> >
>
> I check L27 and find it's at it's peak, so I cannot go any higher and align
>them
>
> with the PROC ON.
>
> > I switch the meter from ALC to Comp and it indicates just
> > a little above 20db on the Comp scale.
> >
> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> adjust L26 for 20dB reading.
>
> I will need to do some component checking in the circuit around the Processor
>as
>
> Mike and yourself have recommended.
>
> I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
>
> Thanks
> Chris, ZL1CDP
>
> >
> > I repeatedly switched Proc on and off and get the same results. In short my
>as
>
>
> > found condition for my daily operator is very close to being right on the
>same
>
>
> > indicated level on the ALC meter scale (near max on black border) with Proc
>on
>
> >
> > and off.
> >
> > At this point Chris not sure I can be of any more help? I will think about it
>
> > some more and if I come up with something will write.
> >
> > Whatever you do you should not have to increase mic gain position or increase
>

> > audio generator output level above 10 mv. Depending on the pre-amp gain in
>your
>
> >
> > rig you may have to be a little higher than position 4 on the mic gain , but
>I
>
>
> > wouldnt think much higher.
> >
> > Also, you might want to measure the sig gen level at your mic connection when
>
> > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from

> > Stand-by to Send. Other than that I think I have exhausted my experience.
>Good
>
>
> > luck Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 10:08:00 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry,
> >
> > The only difference from my original post is that I increased the "gain" on
>the
>
> >
> > input (Mic gain), therefore got an ALC reading.
> > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>why...
> >
> > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> >
> > > Based on what you are reporting I would expect it to
> > > be something less than far right of ALC black box? Assuming it is somewhere
>
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up?
> > >
> >
> > Once I have done the initial adjustment Terry, and get the ALC to the far
>right
>

> >
> > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >
> > Hope this makes sense..
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >
> > > Chris--This appears different than what you originally reported of getting
>no
>
> >
> > > ALC indication? Why now getting ALC indication? What did you do different?

> > >Where
> > >
> > > is your mic gain set at? I would not leave meter pegged to long as it is
>hard
>
> >
> > >on
> > >
> > > the movement. I would slowly turn down mic gain until I could get meter off
>
> >the
> > >
> > > >
> > > peg.
> > >
> > > With Proc off key rig and back off mic gain to get ALC at 20db or at least

> >off
> > >
> > >
> > > the peg and on the meter scale. Now turn on Proc and key rig and report
>back
>
>
> > > what your ALC reading is. Based on what you are reporting I would expect it
>
> >to
> > >
> > >
> > > be something less than far right of ALC black box? Assuming it is somewhere
>
> >in
> > >
> > >
> > > the ALC box window can you adjust L27 and bring the reading up? Terry

> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Cc: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC

> > > setting), with processor on and full scale (pegged meter) deflection
>without
>
>
> > > PROC NOT engaged, just Mic.
> > >
> > > Chris
> > > Sent from my iPhone
> > >
> > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > >
> > > > Hi Terry, in a nutshell,
> > > >
> > > > It doesn't weigh up here.
> > > >
> > > > Following to the letter the service manual and then taking into account
> >your
> >
> >
> > >notes, the final situation is that I end up with full on-scale deflection
>of
>
>
> >ALC
> > >
> > > >(ie end of black ALC setting), with processor on and full scale (pegged
> >meter)
> >
> > >
> > > >deflection without PROC engaged, just Mic.
> > > >
> > > >
> > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.

> > > >
> > > > Thanks
> > > > Chris
> > > >
> > > > Sent from my iPhone

> > > >
> > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > >
> > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
>have
>
>
> > >same
> > >
> > > >
> > > > > ALC reading (max) with Processor on and off. You should not have to
> >adjust
> >
> >
> > > >mic
> > > >
> > > > > gain or input signal level once balanced. You should be able to flip to
>
> > >Tune
> > >
> > >
> > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > If you initially get no indication (I think that is your problem?) you
>
> >can
> >
> > >
> > > >move
> > > >
> > > > > mic gain up slightly until you get an indication. It wont take much and
>
> > >will
> > >
> > > >be
> > > >
> > > > > very touchy and will want to peg the meter. Only other choice you have
>is
>
> >
> > >to
> > >
> > > >set
> > > >
> > > > > audio generator output higher as others suggested. I chose to just
> >increase
> >
> > >
> > > > > mic gain until I got an indication. After I found that point I no
>longer

>
>
> > > >needed
> > > >
> > > > > to touch the mic gain. If I had to increase mic gain each time then it

> > >would
> > >
> > >
> > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
>good
>
>
> > > >matched
> > > >
> > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Thanks Terry,
> > > > >
> > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>then
>
> >ON
> >
> > >
> > > >to
> > > >
> > > > > same point? that's what it states from memory... point of exercise is
>to
>
>
> > >have
> > >
> > >
> > > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--Just repeated adjustments and was able to get pretty good
>equal
>

>
> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale

> >with
> >
> > >
> > > >the
> > > >
> > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>I
>
> >
> > >no
> > >
> > >
> > > > > >longer needed to tweak the mic gain to get an indication. I cant go
>any
>
>
> > > >lower on
> > > >
> > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@...>
> > >
> > > >
> > > > > >wrote:
> > > > > > >
> > > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > > Will hopefully get around to confirming all of this later tonight
>NZ
>
>
> > > >time.
> > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > >
> > > > > > >
> > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> >switch
> > >
> > > >
> > > > > >in
> > > > >

> > > > > >the ALC position) to do your adjustment with the ALC indicated level
>at
>
>
> > >20db
> > >
> > > >on
> > > >
> > > > > >the Compression scale as opposed to down at the high end of the ALC
>box.
>
> >
> > > >Less
> > > >
> > > > > >decay time to mess with. Terry
> > > > > >
> > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> ><wagstw46@>
> >
> >
> > > > > wrote:
> > > > > > > > >
> > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > Step A:
> > > > > > > > > 1. You have the Processor button off and Compression level pot

> >max
> >
> >
> > > > > >clockwise.
> > > > > >
> > > > > > > > > You are in USB mode.
> > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right

> >end
> >
> > >of
> > >
> > > >the
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > black bordered box.
> > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > >
> > > > > > > > > Is the above correct? Where is your mic gain at? You should be

> > > >between
> > > >
> > > > > >1000 and
> > > > > > >
> > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
>you
>
> >
> > > >expect
> > > > >
> > > > > >the ALC
> > > > > > >
> > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
>the
>
> >
> > > >meter
> > > > >
> > > > > >to peg
> > > > > > >
> > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
>
> > >what
> > > >
> > > >
> > > > > >would you
> > > > > > >
> > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > Step B:
> > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic

> >gain
> >
> > >
> > > >not
> > > > >
> > > > > >touched
> > > > > > >
> > > > > > > > > > > from above you are telling me that you have no ALC indication
> >when
> >
> >
> > > >you
> > > > >
> > > > > >flip to
> > > > > > >
> > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
>any

>
> >
> > >ALC
> > >
> > > >
> > > > > >meter
> > > > > >
> > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
>
> > > >sensitive
> > > >
> > > > > >and
> > > > > >
> > > > > > > > > you should reach a point where it will drive meter hard up
>scale.
>
> >
> > > >Quickly
> > > >
> > > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
>
> > >box.
> > >
> > > >Mic
> > > >
> > > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at

> >far
> >
> >
> > > >end of
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
>
> > >times
> > >
> > > >
> > > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
>This
>

>
> > > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter
>tends
>
> >to
> >
> > >
> > > >peg
> > > >
> > > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float

> > >around
> > >
> > > >the
> > > >
> > > > > >max
> > > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch
>meter
>
> >to
> >
> > >
> > > >Comp
> > > >
> > > > > >you
> > > > > >
> > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > > > > > > > >
> > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > All of that makes sense, and is exactly how I read it to be
> >(Heater
> >

> > >
> > > >on
> > > >
> > > > > >etc), but
> > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not
>"align"
>
> >
> > >the
> > >
> > > >
> > > > > >speech
> > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > >
> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>
> >the
> >
> > >
> > > >AG
> > > >
> > > > > >output to
> > > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
>maximum
>
> >
> > > > > >on-scale ALC
> > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >on-scaled).
> > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I
>
> > >turn
> > >
> > > >the
> > > >
> > > > > >Proc ON
> > > > > >
> > > > > > > > > > and
> > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the

>meter
>
> >at
> >
> > >
> > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
>reading.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> >pages
> >
> > >
> > > > > >40&41. As
> > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > >
> > > > > > > > > > They should tell you to load up normally. Then switch off SG

> > >switch
> > >
> > > >and
> > > > >
> > > > > >LEAVE
> > > > > >
> > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
>
> > > >heater
> > > > >
> > > > > > >off of the
> > > > > > >
> > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
>step
>
>
> > > > > >conditions still
> > > > > >
> > > > > > > > > > > >being in force?
> > > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
>"max
>

>
> > > >meter
> > > >
> > > > > >reading on
> > > > > >
> > > > > > > > > > >the Compression Scale".
> > > > > > > > > > >
> > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
>reading.
>
>
> > >That
> > >
> > > >
> > > > > >would be on
> > > > > >
> > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
>indication
>
> >
> > >of
> > >
> > > >20db
> > > >
> > > > > >and
> > > > > >
> > > > > > > > > > >that would be on the Compression Scale. So would be better
>with
>
> >a
> >
> >
> > > > > >multi-scale
> > > > > >
> > > > > > > > > > >meter for them to tell you the expected value and on what
>meter
>
>
> > > >scale.
> > > > > > > > > >
> > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
>
> >mic
> >
> > >
> > > >gain
> > > >
> > > > >
> > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
>1200

>
> >
> > >and
> > >
> > > >
> > > > > >peaked L27.
> > > > > > > > > >
> > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
>would
>
>
> > >say
> > >
> > >
> > > > > >something
> > > > > > >
> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> >box".
> >
> > >
> > > >Just
> > > > >
> > > > > >make it
> > > > > > >
> > > > > > > > > > > >very clear what meter position and what scale you are to
read.
> > > > > > > > > > >
> > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
>
> > > >heater
> > > > >
> > > > > >switch on
> > > > > > >
> > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
>-K9TW
>
> >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > >
> > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much

> > >chance
> > >

> > > >to
> > > >
> > > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
>so
>
> >I
> >
> >
> > > >will
> > > >
> > > > > >give it a
> > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
>in
>
>
> > >the
> > >
> > > >830
> > > >
> > > > > >at the
> > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >

> > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
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> > > > > > > > > >
> > > > > > > > > > ----------
> > > > > > > > > >
> > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
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> > [Non-text portions of this message have been removed]
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> > [Non-text portions of this message have been removed]
> >
> >
> >
>
> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
>
> > Chris--I will give some more thought. Not sure what is going on. I am just
> >about
> >
> > out of ideas.
> >
> > I just repeated the test on my daily operating TS-830 with the covers on the

> > rig. I just unplugged the mic and brought the test equipment to the operating
>
> > position.
> >
> > I use a spare mic connector and clipped the generator output to it with
> > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
>at
>
>
> > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> >heater
> >
> > switches. Let it warm up a little.
> >
> > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>Wave
>
>
> > Tek generator to exactly 10 mv.
> >
> > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > place meter switch in ALC position.
> >
> > I then flip to Send and get ALC meter indication that is just outside the max
>
> > end of the black ALC box. Maybe a needles worth.
> >
> > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>position
>

> >
> > and I have not touched mic gain pot.
> >
> > I flip to Send and the ALC meter indication is a little bit more outside the

> > black ALC box. It could be adjusted a little to get a match if I had the
>covers
>
> >
> > off, but close enough. I switch the meter from ALC to Comp and it indicates
> >just
> >
> > a little above 20db on the Comp scale.
> >
> > I repeatedly switched Proc on and off and get the same results. In short my
>as
>
>
> > found condition for my daily operator is very close to being right on the
>same
>
>
> > indicated level on the ALC meter scale (near max on black border) with Proc
>on
>
> >
> > and off.
> >
> > At this point Chris not sure I can be of any more help? I will think about it
>
> > some more and if I come up with something will write.
> >
> > Whatever you do you should not have to increase mic gain position or increase
>
> > audio generator output level above 10 mv. Depending on the pre-amp gain in
>your
>
> >
> > rig you may have to be a little higher than position 4 on the mic gain , but
>I
>
>
> > wouldnt think much higher.
> >
> > Also, you might want to measure the sig gen level at your mic connection when
>
> > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from

> > Stand-by to Send. Other than that I think I have exhausted my experience.
>Good
>

>
> > luck Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 10:08:00 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry,
> >
> > The only difference from my original post is that I increased the "gain" on
>the
>
> >
> > input (Mic gain), therefore got an ALC reading.
> > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>why...
> >
> > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> >
> > > Based on what you are reporting I would expect it to
> > > be something less than far right of ALC black box? Assuming it is somewhere
>
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up?
> > >
> >
> > Once I have done the initial adjustment Terry, and get the ALC to the far
>right
>
> >
> > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >
> > Hope this makes sense..
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >
> > > Chris--This appears different than what you originally reported of getting
>no
>
> >
> > > ALC indication? Why now getting ALC indication? What did you do different?

> > >Where
> > >
> > > is your mic gain set at? I would not leave meter pegged to long as it is
>hard
>
> >
> > >on
> > >
> > > the movement. I would slowly turn down mic gain until I could get meter off
>
> >the
> >
> > >
> > > peg.
> > >
> > > With Proc off key rig and back off mic gain to get ALC at 20db or at least

> >off
> >
> >
> > > the peg and on the meter scale. Now turn on Proc and key rig and report
>back
>
>
> > > what your ALC reading is. Based on what you are reporting I would expect it
>
> >to
> >
> >
> > > be something less than far right of ALC black box? Assuming it is somewhere
>
> >in
> >
> >
> > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Cc: "TS-520_820_530_830@yahoogroups.com"
> <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC

> > > setting), with processor on and full scale (pegged meter) deflection
>without
>
>
> > > PROC NOT engaged, just Mic.

> > >
> > > Chris
> > > Sent from my iPhone
> > >
> > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > >
> > > > Hi Terry, in a nutshell,
> > > >
> > > > It doesn't weigh up here.
> > > >
> > > > Following to the letter the service manual and then taking into account
> >your
> >
> >
> > >notes, the final situation is that I end up with full on-scale deflection
>of
>
> >
> > >ALC
> > >
> > > >(ie end of black ALC setting), with processor on and full scale (pegged
> >meter)
> >
> > >
> > > >deflection without PROC engaged, just Mic.
> > > >
> > > >
> > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.

> > > >
> > > > Thanks
> > > > Chris
> > > >
> > > > Sent from my iPhone
> > > >
> > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > >
> > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
>have
>
>
> > >same
> > >
> > >
> > > > ALC reading (max) with Processor on and off. You should not have to
> >adjust
> >
> >
> > > >mic
> > > >

> > > > > gain or input signal level once balanced. You should be able to flip to
>
> > >Tune
> > >
> > >
> > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > >
> > > > > If you initially get no indication (I think that is your problem?) you
>
> >can
> > >
> > > >
> > > >move
> > > > >
> > > > > mic gain up slightly until you get an indication. It wont take much and
>
> > >will
> > > >
> > > >be
> > > > >
> > > > > very touchy and will want to peg the meter. Only other choice you have
>is
>
> > >
> > >to
> > > >
> > > >set
> > > > >
> > > > > audio generator output higher as others suggested. I chose to just
> >increase
> > >
> > > >
> > > > > mic gain until I got an indication. After I found that point I no
>longer
>
>
> > > >needed
> > > > >
> > > > > to touch the mic gain. If I had to increase mic gain each time then it

> > >would
> > > >
> > > >
> > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
>good
>
>
> > > >matched
> > > > >
> > > > > ALC indication with mic gain just a hair past No.4. Terry

> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > Thanks Terry,
> > > > > >
> > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>then
>
> >ON
> >
> > >
> > > >to
> > > >
> > > > same point? that's what it states from memory... point of exercise is
>to
>
>
> > >have
> > > >
> > > >
> > > > ALC reading same position with Proc ON and OFF.
> > > > >
> > > > Cheers
> > > > Chris
> > > > >
> > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >
> > > > > Chris--Just repeated adjustments and was able to get pretty good
>equal
>
>
> > > > >indications at far right of ALC black box or S-9 on the S-meter scale

> >with
> > >
> > > >
> > > >the
> > > >
> > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>I
>
> > >
> > > >no
> > > >
> > > >
> > > > >longer needed to tweak the mic gain to get an indication. I cant go

>any
>
>
> > > >lower on
> > > >
> > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@...>
> > > >
> > > > >
> > > > > > >wrote:
> > > > > > > >
> > > > > > > > Thanks Terry....
> > > > > > > > >
> > > > > > > > Will hopefully get around to confirming all of this later tonight
>NZ
>
>
> > > >time.
> > > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> >switch
> >
> > >
> > > >in
> > > > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level
>at
>
>
> > >20db
> > > >
> > > > >on
> > > > >
> > > > > > >the Compression scale as opposed to down at the high end of the ALC
>box.
>
> > >
> > > >Less
> > > > >
> > > > > > >decay time to mess with. Terry
> > > > > > > >

> > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> ><wagstw46@>
> >
> >
> > > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > Step A:
> > > > > > > > > > > 1. You have the Processor button off and Compression level pot

> >max
> >
> >
> > > > > > >clockwise.
> > > > > > > >
> > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right

> >end
> >
> > >of
> > >
> > > >the
> > > >
> > > > >ALC
> > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be

> > > >between
> > > >
> > > > > >1000 and
> > > > > > >
> > > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
>you
>
> >
> > > >expect
> > > >
> > > > > >the ALC
> > > > > > >
> > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
>the

>
> >
> > > >meter
> > > >
> > > > > >to peg
> > > > > > >
> > > > > > > > > hard upscale far right? If you had a mic connected and whistled
>
> > >what
> > >
> > >
> > > > > >would you
> > > > > > >
> > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > Step B:
> > > > > > > > > With Processor on and Comp level set max clockwise and the mic

> >gain
> >
> > >
> > > >not
> > > >
> > > > >touched
> > > > > >
> > > > > > > > from above you are telling me that you have no ALC indication
> >when
> >
> >
> > > >you
> > > >
> > > > >flip to
> > > > > >
> > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
>any
>
> >
> > >ALC
> > >
> > >
> > > > >meter
> > > > > >
> > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
>
> > >sensitive
> > > >
> > > > >and
> > > > > >

> > > > > > > > > you should reach a point where it will drive meter hard up
>scale.
>
> >
> > > >Quickly
> > > >
> > > > > >turn
> > > > > >
> > > > > > > > > mic gain back down until meter is at far right end of ALC black
>
> > >box.
> > >
> > > >Mic
> > > >
> > > > > >gain
> > > > > >
> > > > > > > > > pot will be sensitive. Once you have ALC indication staying at

> >far
> >
> >
> > > >end of
> > > >
> > > > > >ALC
> > > > > >
> > > > > > > > > box you can peak L27. You may have to go back and forth several
>
> > >times
> > >
> > > >
> > > > > >until you
> > > > > >
> > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
>This
>
>
> > > > > >adjustment is
> > > > > >
> > > > > > > > > a little difficult due to the ALC time constant. The meter
>tends
>
> >to
> >
> > >
> > > >peg
> > > >
> > > > > >hard
> > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float

> > >around
> > >
> > > >the
> > > >
> > > > > >max
> > > > > >
> > > > > > > > > end of the ALC box until things settle down. If you switch
>meter
>
> >to
> >
> > >
> > > >Comp
> > > >
> > > > > >you
> > > > > >
> > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > > > > > > >
> > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > >
> > > > > > > > > All of that makes sense, and is exactly how I read it to be
> >(Heater
> >
> > >
> > > >on
> > > >
> > > > > >etc), but
> > > > > >
> > > > > > > > > none of it explains why I (and evidently others), can not
>"align"
>
> >
> > >the
> > >
> > > >
> > > > > >speech
> > > > > >
> > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >

> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>
> >the
> >
> > >
> > > >AG
> > > >
> > > > > >output to
> > > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
>maximum
>
> >
> > > > > >on-scale ALC
> > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >on-scaled).
> > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I
>
> > >turn
> > >
> > > >the
> > > >
> > > > > >Proc ON
> > > > > >
> > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
>meter
>
> >at
> >
> > >
> > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
>reading.
> > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:

> > > > > > > > >
> > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> >pages
> >
> > >
> > > > > >40&41. As
> > > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > >
> > > > > > > > > > > They should tell you to load up normally. Then switch off SG

> > >switch
> > >
> > > >and
> > > > >
> > > > > >LEAVE
> > > > > > >
> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
>
> > > >heater
> > > > >
> > > > > >off of the
> > > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
>step
>
>
> > > > > >conditions still
> > > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > > >
> > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
>"max
>
>
> > > >meter
> > > > >
> > > > > >reading on
> > > > > > >
> > > > > > > > > > >the Compression Scale".
> > > > > > > > > > >
> > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
>reading.
>
>
> > >That
> > > >
> > > > >
> > > > > >would be on
> > > > > > >

> > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
>indication
>
> >
> > >of
> > >
> > > >20db
> > > >
> > > > > >and
> > > > > >
> > > > > > > > > >that would be on the Compression Scale. So would be better
>with
>
> >a
> >
> >
> > > > > >multi-scale
> > > > > > >
> > > > > > > > > >meter for them to tell you the expected value and on what
>meter
>
>
> > > >scale.
> > > > > > > > > > >
> > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
>
> >mic
> >
> > >
> > > >gain
> > > > >
> > > > > >
> > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
>1200
>
> >
> > >and
> > > >
> > > > >
> > > > > > >peaked L27.
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
>would
>
>
> > >say
> > > >
> > > >
> > > > > > >something
> > > > > > >

> > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> >box".
> >
> > >
> > > >Just
> > > >
> > > > > >make it
> > > > > >
> > > > > > > > > >very clear what meter position and what scale you are to
read.
> > > > > > > > > >
> > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
>
> > > >heater
> > > >
> > > > > >switch on
> > > > > >
> > > > > > > > > >you will be able to complete this Item. Let me know. Terry
>-K9TW
>
> >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > >
> > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much

> > >chance
> > >
> > > >to
> > > >
> > > > > >check
> > > > > >
> > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
>so
>
> >I

> >
> >
> > > >will
> > > >
> > > > > >give it a
> > > > > > >
> > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
>in
>
>
> > >the
> > >
> > > >830
> > > >
> > > > > >at the
> > > > > > >
> > > > > > > > > >weekend?
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >

> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > > ----------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > >
> > > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > > ----------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > >
> > [Non-text portions of this message have been removed]
> >
> > ----------
> >
> > Yahoo! Groups Links
> >

> [Non-text portions of this message have been removed]
>
>

[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

31931. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 03:07:37 UTC
From: Chris Parnell
Topic: 31878 Message: 31931

Hi Terry,

Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.

Cheers
Chris

On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:

> Chris--
>
> Do you have Skype? Maybe we could connect on Skype and perform each step
> together on our rigs and see at what step we differ. Not sure if we could have
> clear enough real time video or not for this to work. Not sure about our time
> difference, but could schedule it Zulu/GMT just as we would a QSO.
>
> Maybe Mike or Gordon would be better to do this with you as they repair these
> rigs for a living? As you know I had never performed this step until you asked
> about it. In fact I have never completed a full alignment as I dont have sweep
> generator. I have just done selected steps.
>
> Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Fri, June 17, 2011 9:55:30 PM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> have no attenuation in there)...
>
> So I got some test reference dBmA numbers against my calibrated probe and wrote
> down the numbers for 5mV, 10mV and 50mV before I started again.
> So... re-did the whole thing and of course, its more in line with your "Mic Gain
> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> with regards to ALC readings.
>
> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> the PROC OFF, the ALC shoots right over to the right hand side of the meter.
>
> I may record a small video and send it to you... easier to see what I mean and
> what i'm doing.
>
> Turning the Mic gain up and down of course makes a difference, but the point is,

> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
>
> Cheers
> Chris
>
> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
>
> > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > test signals.
> >
> > With your mic gain at No. 4 it appears you have much more gain than I do in my
>
> > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > where I can get a good match at far right end of ALC black box.
> >
> > With Proc off and 10mv injected it doesnt take much adjustment right around the
> >
> > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> >
> > no meter indication. I do know with both of my rigs I end up at very close to
> > No.4 on the mic gain to get a meter indication at the end of ALC box.
> >
> > I assume you have tried adjusting the mic gain down while leaving required 10mv
> >
> > signal injected? I found it a little touchy. When you first reported no meter
> > indication that is why I suggested turning mic gain up a little. Maybe I am
> > starting to get confused regards what your problem is.
> >
> > If turning mic gain down a little doesnt help then I would say it is on to
> > troubleshooting with Mike.
> >
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 7:04:54 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry / Mike.....
> >
> > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > piece of kit.
> > Here's what I see when I follow your instructions:
> >
> > > I use a spare mic connector and clipped the generator output to it with
> > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > >
> > Exactly the same as me Terry, except my mini clips are connected directly to
> >the

> >
> > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> >
> > > I have the mic gain set exactly at
> > > No. 4 position.
> > >
> > Same here
> >
> > > I set SG switch on rear of rig to off and turn on rig and heater
> > > switches. Let it warm up a little.
> > >
> > Same here
> >
> > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >Wave
> >
> >
> > > Tek generator to exactly 10 mv
> > >
> > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> >
> > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > place meter switch in ALC position.
> > >
> >
> > Same here
> >
> > >
> > > I then flip to Send and get ALC meter indication that is just outside the max
> >
> > > end of the black ALC box. Maybe a needles worth.
> > >
> > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> >
> > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > s-meter scale, it's S9+40dB +).
> >
> > >
> > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >position
> >
> > >
> > > and I have not touched mic gain pot.
> > >
> > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> >
> > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > I'm saying and seeing.

> >
> > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > PROC ON, which on the S-Meter is S-9.
> > I check where VR-7 is now within it's VR scale and notice it's almost at
> > minimum.
> >
> > >
> > > I flip to Send and the ALC meter indication is a little bit more outside the
> >
> > > black ALC box.
> > >
> > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> >
> > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > the word ALC on the meter, which is about S-6 on the S-Meter.
> >
> > > It could be adjusted a little to get a match if I had the covers
> > > off, but close enough.
> > >
> >
> > I check L27 and find it's at it's peak, so I cannot go any higher and align
> >them
> >
> > with the PROC ON.
> >
> > > I switch the meter from ALC to Comp and it indicates just
> > > a little above 20db on the Comp scale.
> > >
> > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > adjust L26 for 20dB reading.
> >
> > I will need to do some component checking in the circuit around the Processor
> >as
> >
> > Mike and yourself have recommended.
> >
> > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > >
> > > I repeatedly switched Proc on and off and get the same results. In short my
> >as
> >
> >
> > > found condition for my daily operator is very close to being right on the
> >same
> >

> >
> > > indicated level on the ALC meter scale (near max on black border) with Proc
> >on
> >
> > >
> > > and off.
> > >
> > > At this point Chris not sure I can be of any more help? I will think about it
> >
> > > some more and if I come up with something will write.
> > >
> > > Whatever you do you should not have to increase mic gain position or increase
> >
> > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> >your
> >
> > >
> > > rig you may have to be a little higher than position 4 on the mic gain , but
> >I
> >
> >
> > > wouldnt think much higher.
> > >
> > > Also, you might want to measure the sig gen level at your mic connection when
> >
> > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>
> > > Stand-by to Send. Other than that I think I have exhausted my experience.
> >Good
> >
> >
> > > luck Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry,
> > >
> > > The only difference from my original post is that I increased the "gain" on
> >the
> >
> > >
> > > input (Mic gain), therefore got an ALC reading.
> > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> >why...
> > >
> > > I don't leave it pegged, I immediately back down the Mic gain to compensate.

> > >
> > > > Based on what you are reporting I would expect it to
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > >in
> > > >
> > > >
> > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > >
> > > >
> > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> >right
> > >
> > > >
> > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >
> > > > Hope this makes sense..
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--This appears different than what you originally reported of getting
> >no
> > >
> > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> >
> > > > >Where
> > > > >
> > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> >hard
> > >
> > > >
> > > > >on
> > > > >
> > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > >the
> > > >
> > > > >
> > > > > peg.
> > > > >
> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >
> > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report

> >back
> >
> >
> > > > what your ALC reading is. Based on what you are reporting I would expect it
> >
> > >to
> > >
> > >
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> >
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>
> > > > setting), with processor on and full scale (pegged meter) deflection
> >without
> >
> >
> > > > PROC NOT engaged, just Mic.
> > > >
> > > > Chris
> > > > Sent from my iPhone
> > > >
> > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > >
> > > > > Hi Terry, in a nutshell,
> > > > >
> > > > > It doesn't weigh up here.
> > > > >
> > > > > Following to the letter the service manual and then taking into account
> > >your
> > >
> > >
> > > > >notes, the final situation is that I end up with full on-scale deflection
> >of
> >
> >
> > > >ALC

> > > >
> > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > >meter)
> > >
> > > >
> > > > >deflection without PROC engaged, just Mic.
> > > > >
> > > > >
> > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>
> > > > >
> > > > > Thanks
> > > > > Chris
> > > > >
> > > > > Sent from my iPhone
> > > > >
> > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@yahoo.com> wrote:
> > > > >
> > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> >have
> > >
> > >
> > > >same
> > > >
> > > > >
> > > > > > ALC reading (max) with Processor on and off. You should not have to
> > >adjust
> > > >
> > > >
> > > > >mic
> > > > >
> > > > > > gain or input signal level once balanced. You should be able to flip to
> > >
> > > >Tune
> > > >
> > > >
> > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > > If you initially get no indication (I think that is your problem?) you
> > >
> > >>can
> > > >
> > > >
> > > > >move
> > > > >
> > > > > > mic gain up slightly until you get an indication. It wont take much and
> > >
> > > >will
> > > >
> > > > >be

> > > > >
> > > > > > very touchy and will want to peg the meter. Only other choice you have
> >is
> >
> > >
> > > >to
> > > >
> > > > >set
> > > > >
> > > > > > audio generator output higher as others suggested. I chose to just
> > >increase
> > >
> > > >
> > > > > > mic gain until I got an indication. After I found that point I no
> >longer
> >
> >
> > > > >needed
> > > > >
> > > > > > to touch the mic gain. If I had to increase mic gain each time then it
>
> > > >would
> > > >
> > > >
> > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> >good
> >
> >
> > > > >matched
> > > > >
> > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Thanks Terry,
> > > > > >
> > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >then
> >
> > >ON
> > >
> > > >
> > > > >to
> > > > >
> > > > > > same point? that's what it states from memory... point of exercise is
> >to

> >
> >
> > > >have
> > > >
> > > > >
> > > > > > ALC reading same position with Proc ON and OFF.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> >equal
> >
> >
> > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
>
> > >with
> > >
> > > >
> > > > > >the
> > > > > >
> > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >I
> >
> > >
> > > >no
> > > >
> > > > >
> > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> >any
> >
> >
> > > > >lower on
> > > > > >
> > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > >
> > > > > > > >
> > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@...>
> > > > >
> > > > > >
> > > > > > >wrote:
> > > > > > > >
> > > > > > > > Thanks Terry....
> > > > > > > >
> > > > > > > > Will hopefully get around to confirming all of this later tonight
> >NZ
> >

> >
> > > > >time.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > >switch
> > > >
> > > > >
> > > > >in
> > > > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level
> >at
> > >
> > >20db
> > > >
> > > > >on
> > > > >
> > > > > >the Compression scale as opposed to down at the high end of the ALC
> >box.
> > >
> > > >
> > > > >Less
> > > > >
> > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > ><wagstw46@>
> > > >
> > > > > wrote:
> > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > Step A:
> > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
>
> > >max
> > > >
> > > >
> > > > > > > > >clockwise.
> > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.

> > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
>
> > >end
> > >
> > > >of
> > > >
> > > > >the
> > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
>
> > > > >between
> > > > >
> > > > > > >1000 and
> > > > > > >
> > > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> >you
> > >
> > > >
> > > > >expect
> > > > >
> > > > > > >the ALC
> > > > > > >
> > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> >the
> > >
> > > >
> > > > >meter
> > > > >
> > > > > > >to peg
> > > > > > >
> > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >
> > > >what
> > > > >
> > > > >
> > > > > > >would you
> > > > > > >
> > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > > > Step B:
> > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
>

> > >gain
> > >
> > > >
> > > > >not
> > > > > >
> > > > > > > >touched
> > > > > > > > >
> > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > >when
> > > >
> > > >
> > > > > >you
> > > > > > >
> > > > > > > > >flip to
> > > > > > > > > >
> > > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> >any
> > >
> > > >
> > > > >ALC
> > > > > >
> > > > > > > >
> > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >
> > > > >sensitive
> > > > > >
> > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> >scale.
> > >
> > > >
> > > > >Quickly
> > > > > >
> > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >
> > > >box.
> > > > > >
> > > > > > > >Mic
> > > > > > > > >
> > > > > > > > > > >gain
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >

> > >far
> > >
> > >
> > > > >end of
> > > > > >
> > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >
> > > >times
> > > > >
> > > > > >
> > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> >This
> > >
> > >
> > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> >tends
> > >
> > > >to
> > > > >
> > > > > >
> > > > > > >peg
> > > > > > > >
> > > > > > > > > >hard
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> >
> > > >around
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > >max
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> >meter
> > >
> > > >to
> > > > >
> > > > > >
> > > > > > >Comp
> > > > > > > >
> > > > > > > > > >you
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > > > > >

> > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >alignment
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > >(Heater
> > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > >etc), but
> > > > > > >
> > > > > > > > none of it explains why I (and evidently others), can not
> >"align"
> >
> > > >
> > > > >the
> > > > >
> > > > > >speech
> > > > > >
> > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >
> > >the
> > >
> > > > >
> > > > > >AG
> > > > > >
> > > > > > >output to
> > > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> >maximum
> >
> > >
> > > > >on-scale ALC
> > > > > >
> > > > > > > > reading. Set the PROC to ON.

> > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> >
> > > >turn
> > > > >
> > > > >the
> > > > > >
> > > > > > >Proc ON
> > > > > > > > >
> > > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> >meter
> >
> > >at
> > > >
> > > > >
> > > > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >pages
> > > > >
> > > > > > >
> > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >
> > > >switch
> > > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > >LEAVE
> > > > > > > > > >

> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> >
> > > > >heater
> > > > > >
> > > > > > >off of the
> > > > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> >step
> > >
> > >
> > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > > >being in force?
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> >"max
> > >
> > >
> > > > > >meter
> > > > > > >
> > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> >reading.
> > >
> > >
> > > > >That
> > > > > >
> > > > > > >
> > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> >indication
> > >
> > > > >
> > > > > >of
> > > > > > >
> > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > > >
> > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> >with
> > >
> > > >a
> > > > >
> > > > >
> > > > > > > > >multi-scale

> > > > > > >
> > > > > > > > > > > >meter for them to tell you the expected value and on what
> >meter
> >
> >
> > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> >
> > >mic
> > >
> > > > >
> > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> >1200
> >
> > >
> > > > >and
> > > > > >
> > > > > > >
> > > > > > > > >peaked L27.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> >would
> >
> >
> > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > >box".
> > >
> > > > >
> > > > > >Just
> > > > > > >
> > > > > > > > >make it
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >very clear what meter position and what scale you are to
> read.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> >
> > > > > >heater
> > > > > > >
> > > > > > > > >switch on
> > > > > > > > > > >

> > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> >-K9TW
> >
> > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
>
> > > > >chance
> > > > >
> > > > > >to
> > > > > >
> > > > > > >check
> > > > > > > >
> > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> >so
> >
> > >I
> > > >
> > > >
> > > > > >will
> > > > > >
> > > > > > >give it a
> > > > > > > >
> > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
> > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> >in
> >

> >
> > > >the
> > > >
> > > > >830
> > > > >
> > > > > > >at the
> > > > > > >
> > > > > > > > > > >weekend?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > ------------------------------------

> > > > > >
> > > > > > Yahoo! Groups Links
> > > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > > >
> > >
> > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > >about
> > > >
> > > > out of ideas.
> > > >
> > > > I just repeated the test on my daily operating TS-830 with the covers on the
> >
> > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > >
> > > > position.
> > > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > >at
> > >
> > >
> > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > >heater
> > > >
> > > > switches. Let it warm up a little.

> > >
> > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >Wave
> >
> >
> > > Tek generator to exactly 10 mv.
> > >
> > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > place meter switch in ALC position.
> > >
> > > I then flip to Send and get ALC meter indication that is just outside the max
> >
> > > end of the black ALC box. Maybe a needles worth.
> > >
> > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >position
> >
> > >
> > > and I have not touched mic gain pot.
> > >
> > > I flip to Send and the ALC meter indication is a little bit more outside the
>
> > > black ALC box. It could be adjusted a little to get a match if I had the
> >covers
> >
> > >
> > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > >just
> > >
> > > a little above 20db on the Comp scale.
> > >
> > > I repeatedly switched Proc on and off and get the same results. In short my
> >as
> >
> >
> > > found condition for my daily operator is very close to being right on the
> >same
> >
> >
> > > indicated level on the ALC meter scale (near max on black border) with Proc
> >on
> >
> > >
> > > and off.
> > >
> > > At this point Chris not sure I can be of any more help? I will think about it
> >
> > > some more and if I come up with something will write.
> > >
> > > Whatever you do you should not have to increase mic gain position or increase

> >
> > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> >your
> >
> > >
> > > rig you may have to be a little higher than position 4 on the mic gain , but
> >I
> >
> >
> > > wouldnt think much higher.
> > >
> > > Also, you might want to measure the sig gen level at your mic connection when
> >
> > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>
> > > Stand-by to Send. Other than that I think I have exhausted my experience.
> >Good
> >
> >
> > > luck Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry,
> > >
> > > The only difference from my original post is that I increased the "gain" on
> >the
> >
> > >
> > > input (Mic gain), therefore got an ALC reading.
> > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> >why...
> > >
> > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > >
> > > > Based on what you are reporting I would expect it to
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> >
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > >
> > >
> > > Once I have done the initial adjustment Terry, and get the ALC to the far
> >right

> >
> > >
> > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >
> > > Hope this makes sense..
> > >
> > > Cheers
> > > Chris
> > >
> > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--This appears different than what you originally reported of getting
> >no
> >
> > >
> > > > ALC indication? Why now getting ALC indication? What did you do different?
> >
> > > > >Where
> > > > >
> > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> >hard
> >
> > >
> > > > >on
> > > > >
> > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > >the
> > > >
> > > > >
> > > > > peg.
> > > > >
> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >
> > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> >back
> >
> >
> > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >
> > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > >in
> > > >

> > >
> > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >
> > > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > > >
> > > >
> > > > > > PROC NOT engaged, just Mic.
> > > > > >
> > > > > > Chris
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > >
> > > > > > > Hi Terry, in a nutshell,
> > > > > > >
> > > > > > > It doesn't weigh up here.
> > > > > > >
> > > > > > > Following to the letter the service manual and then taking into account
> > > >your
> > > > >
> > > > >
> > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > >of
> > > >
> > > >
> > > > >ALC
> > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > >meter)
> > > > >
> > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > >
> > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > > > > >
> > > > > > Thanks

> > > > > Chris
> > > > >
> > > > > Sent from my iPhone
> > > > >
> > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > >
> > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> >have
> > >
> > >
> > > >same
> > > >
> > > > >
> > > > > > ALC reading (max) with Processor on and off. You should not have to
> > >adjust
> > > >
> > > >
> > > > >mic
> > > > >
> > > > > > gain or input signal level once balanced. You should be able to flip to
> > >
> > > >Tune
> > > >
> > > >
> > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > >
> > > > > > If you initially get no indication (I think that is your problem?) you
> > >
> > > >can
> > > >
> > > >
> > > > >move
> > > > >
> > > > > > mic gain up slightly until you get an indication. It wont take much and
> > >
> > > >will
> > > >
> > > > >be
> > > > >
> > > > > > very touchy and will want to peg the meter. Only other choice you have
> >is
> > >
> > > >
> > > > >to
> > > > >
> > > > > >set
> > > > >
> > > > > > audio generator output higher as others suggested. I chose to just
> > >increase
> > > >

> > > >
> > > > > > mic gain until I got an indication. After I found that point I no
> >longer
> >
> >
> > > > > >needed
> > > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
>
> > > >would
> > > > >
> > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> >good
> >
> >
> > > > > >matched
> > > > > >
> > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Thanks Terry,
> > > > > > >
> > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >then
> >
> > >ON
> > > >
> > > > >
> > > > > >to
> > > > >
> > > > > > > same point? that's what it states from memory... point of exercise is
> >to
> >
> >
> > > > >have
> > > > > >
> > > > > >
> > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > >

> > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> >equal
> >
> >
> > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
>
> > >with
> > >
> > > >
> > > > >the
> > > > > >
> > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >I
> >
> > >
> > > >no
> > > > >
> > > > >
> > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> >any
> >
> >
> > > > >lower on
> > > > > >
> > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@...>
> > > > >
> > > > > >
> > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Thanks Terry....
> > > > > > > > >
> > > > > > > > > Will hopefully get around to confirming all of this later tonight
> >NZ
> >
> >
> > > > >time.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > >switch
> > > >

> > > >
> > > > >in
> > > > >
> > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> >at
> >
> >
> > > >20db
> > > >
> > > > >on
> > > > >
> > > > > > >the Compression scale as opposed to down at the high end of the ALC
> >box.
> >
> > >
> > > > >Less
> > > > >
> > > > > > >decay time to mess with. Terry
> > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > ><wagstw46@>
> > >
> > >
> > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > Step A:
> > > > > > > > > > 1. You have the Processor button off and Compression level pot
>
> > >max
> > >
> > >
> > > > > >clockwise.
> > > > > > >
> > > > > > > > > > You are in USB mode.
> > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
>
> > >end
> > >
> > > >of
> > > >
> > > > >the
> > > > >
> > > > > >ALC
> > > > > > >
> > > > > > > > > black bordered box.

> > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
>
> > > > >between
> > > > > >
> > > > > > >1000 and
> > > > > > > >
> > > > > > > > > > > 1100.
> > > > > > > > > > > >
> > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> >you
> >
> > >
> > > > >expect
> > > > > >
> > > > > > >the ALC
> > > > > > > >
> > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> >the
> >
> > >
> > > > >meter
> > > > > >
> > > > > > >to peg
> > > > > > > >
> > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> >
> > > >what
> > > > >
> > > > >
> > > > > > >would you
> > > > > > > >
> > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > Step B:
> > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
>
> > >gain
> > > >
> > > > >
> > > > > >not
> > > > > >
> > > > > > >touched
> > > > > > > >
> > > > > > > > > > > from above you are telling me that you have no ALC indication
> > >when
> > > >
> > > >
> > > > > >you

> > > > >
> > > > > > >flip to
> > > > > > > >
> > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> >any
> > >
> > > >
> > > > >ALC
> > > > >
> > > > > >
> > > > > > >meter
> > > > > > > >
> > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > >
> > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >
> > > > >sensitive
> > > > > >
> > > > > > >and
> > > > > > > >
> > > > > > > > > > > > you should reach a point where it will drive meter hard up
> >scale.
> > >
> > > >
> > > > >Quickly
> > > > > >
> > > > > > >turn
> > > > > > > >
> > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >
> > > >box.
> > > > >
> > > > >Mic
> > > > > >
> > > > > > >gain
> > > > > > > >
> > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >
> > >far
> > > >
> > > >
> > > > >end of
> > > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >
> > > >times
> > > > >
> > > > > >

> > > > > > >until you
> > > > > > > >
> > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> >This
> > >
> > >
> > > > > > >adjustment is
> > > > > > > >
> > > > > > > > > > a little difficult due to the ALC time constant. The meter
> >tends
> > >
> > >to
> > > >
> > > > >
> > > > >peg
> > > > > >
> > > > > > >hard
> > > > > > > >
> > > > > > > > > > right and then slowly come back down. So it will tend to float
> >
> > > >around
> > > > >
> > > > >the
> > > > > >
> > > > > > >max
> > > > > > > >
> > > > > > > > > > end of the ALC box until things settle down. If you switch
> >meter
> > >
> > >to
> > > >
> > > > >
> > > > >Comp
> > > > > >
> > > > > > >you
> > > > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >alignment
> > > > > > > > > >

> > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > >(Heater
> > > >
> > > > >
> > > > > >on
> > > > > > >
> > > > > > > >etc), but
> > > > > > > > > >
> > > > > > > > > > > none of it explains why I (and evidently others), can not
> >"align"
> > >
> > > >
> > > > > >the
> > > > > > >
> > > > > > > >
> > > > > > > > >speech
> > > > > > > > > >
> > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > >
> > > >the
> > > > >
> > > > > >
> > > > > > >AG
> > > > > > > >
> > > > > > > > >output to
> > > > > > > > > >
> > > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> >maximum
> > >
> > > >
> > > > > >on-scale ALC
> > > > > > > >
> > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > >
> > > >turn
> > > > >
> > > > > >the
> > > > > > >

> > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> >meter
> >
> > >at
> > >
> > > >
> > > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> >reading.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >pages
> > > >
> > > > >
> > > > > > >40&41. As
> > > > > > > > > > >
> > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >
> > > >switch
> > > > >
> > > > > >and
> > > > > > >
> > > > > > > > >LEAVE
> > > > > > > > > >
> > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >
> > > > >heater
> > > > > > >
> > > > > > > > >off of the
> > > > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> >step
> > >
> > > > > > > > >conditions still
> > > > > > > > > >

> > > > > > > > > > >being in force?
> > > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> >"max
> >
> >
> > > > > >meter
> > > > > > >
> > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> >reading.
> >
> >
> > > >That
> > > > >
> > > > > >
> > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> >indication
> >
> > >
> > > >of
> > > > >
> > > > > >20db
> > > > > > >
> > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> >with
> >
> > >a
> > > >
> > > >
> > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what
> >meter
> >
> >
> > > > > >scale.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> >
> > >mic
> > > >
> > > > > >

> > > > >gain
> > > > >
> > > > > >
> > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> >1200
> >
> > >
> > > >and
> > > >
> > > > >
> > > > > > >peaked L27.
> > > > > > > > > > >
> > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> >would
> >
> >
> > > >say
> > > >
> > > >
> > > > > > >something
> > > > > > >
> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > >box".
> > >
> > > >
> > > > >Just
> > > > >
> > > > > > >make it
> > > > > > >
> > > > > > > > > > >very clear what meter position and what scale you are to
> read.
> > > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> >
> > > > >heater
> > > > >
> > > > > > >switch on
> > > > > > >
> > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> >-K9TW
> >
> > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Ok Terry, thank you.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
>
> > > >chance
> > > >
> > > > >to
> > > > >
> > > > > > >check
> > > > > > >
> > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> >so
> >
> > >I
> > >
> > >
> > > >will
> > > >
> > > > >give it a
> > > > >
> > > > > > >try today and report back. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> >in
> >
> >
> > > >the
> > > >
> > > > >830
> > > > >
> > > > > > >at the
> > > > > > >
> > > > > > > > > > >weekend?
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris, ZL1CDP

> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > ---------------------------------
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > ---------------------------------
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > >
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> > > Yahoo! Groups Links
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> > Yahoo! Groups Links
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> Yahoo! Groups Links
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31932. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 12:03:04 UTC
From: Terry Wagoner
Topic: 31878 Message: 31932

Chris--Did you record the original positions of L26,L27, and VR-5? Hope you did as it is good practice. If so suggest you return them to as found and assume no previous owner had significantly tweaked them.

I guess I was under impression that you were doing full alignment to give rig a "spring tune-up" and not to correct a operational problem in SSB mode? Or did you think source of your "low power" was an alignment issue?

I assume that before you started to align the rig that you had it on the air and that SSB worked with just the mic and with Processor on and you got good audio reports in both modes?

So, before trouble shooting your mic or pre-amp circuits. Try this:
1. Load into dummy load.
2. Plug in head phones and turn on Moni so you can listen to your audio.
3. Set mic gain to where you would normally run it and use your sideband voice and normal distance from the mic (1-2inches) and then watch ALC indications as you speak. Should just start seeing some upward flicks on the ALC meter. For my rig that is with the mic gain at 1130 to 1200. Others report they get this with mic gain at 1000. Neither of my rigs will do this. Owners manual says to set mic at 1200. Variables include what mic using, your voice and distance from the mic.
4.Leave mic gain. Switch meter to Comp scale. Turn on Processor and increase Compression level to around 4 and speak into mic. On voice peaks suggest you should see around 8% to 10% on Comp scale. I run my Compression level pot between 3 and 4. At that level I get 10% on Comp meter scale and I like the way it sounds in the headphones and more importantly I get good reports and can break those DX pile-ups running barefoot. Some fellows run much more compression, but you can hear fan and other back ground noise in the shack. I dont care for that kind of audio.

The point of all of this is to prove that your mic pre-amp, ALC circuits, and processor circuits are all working and you can modulate the rig properly and get good audio. I thought your original problem was low output but no problem generating a ssb signal.

If this is true then you can go back to your alignment procedure which is just a fine tuning and not trying to correct an operational problem.

If not true then as Mike suggests you have a supply voltage or component problem and can begin your trouble shooting with his help. Terry

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I have no attenuation in there)...
>
> So I got some test reference dBmA numbers against my calibrated probe and wrote down the numbers for 5mV, 10mV and 50mV before I started again.
> So... re-did the whole thing and of course, its more in line with your "Mic Gain 4"

setting now, but still a huge difference when going from PROC OFF to PROC ON with regards to ALC readings.
>
> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn the PROC OFF, the ALC shoots right over to the right hand side of the meter.
>
> I may record a small video and send it to you... easier to see what I mean and what i'm doing.
>
> Turning the Mic gain up and down of course makes a difference, but the point is, I still cannot get PROC OFF and PROC ON to align with the ALC readings.
>
> Cheers
> Chris
>
>
>
>
> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
>
> > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > test signals.
> >
> > With your mic gain at No. 4 it appears you have much more gain than I do in my
> > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > where I can get a good match at far right end of ALC black box.
> >
> > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > no meter indication. I do know with both of my rigs I end up at very close to
> > No.4 on the mic gain to get a meter indication at the end of ALC box.
> >
> > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > signal injected? I found it a little touchy. When you first reported no meter
> > indication that is why I suggested turning mic gain up a little. Maybe I am
> > starting to get confused regards what your problem is.
> >
> > If turning mic gain down a little doesnt help then I would say it is on to
> > troubleshooting with Mike.
> >
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 7:04:54 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry / Mike.....
> >
> > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good

> > piece of kit.
> > Here's what I see when I follow your instructions:
> >
> > > I use a spare mic connector and clipped the generator output to it with
> > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > >
> > Exactly the same as me Terry, except my mini clips are connected directly to the
> > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> >
> > > I have the mic gain set exactly at
> > > No. 4 position.
> > >
> > Same here
> >
> > > I set SG switch on rear of rig to off and turn on rig and heater
> > > switches. Let it warm up a little.
> > >
> > Same here
> >
> > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
> > >
> > > Tek generator to exactly 10 mv
> > >
> > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> >
> > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > place meter switch in ALC position.
> > >
> >
> > Same here
> >
> > >
> > > I then flip to Send and get ALC meter indication that is just outside the max
> > > end of the black ALC box. Maybe a needles worth.
> > >
> > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > s-meter scale, it's S9+40dB +).
> >
> > >
> > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> > >
> > > and I have not touched mic gain pot.
> > >
> > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > I'm saying and seeing.
> >

> > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > PROC ON, which on the S-Meter is S-9.
> > I check where VR-7 is now within it's VR scale and notice it's almost at
> > minimum.
> >
> > >
> > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > black ALC box.
> > >
> > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > the word ALC on the meter, which is about S-6 on the S-Meter.
> >
> > > It could be adjusted a little to get a match if I had the covers
> > > off, but close enough.
> > >
> >
> > I check L27 and find it's at it's peak, so I cannot go any higher and align them
> > with the PROC ON.
> >
> > > I switch the meter from ALC to Comp and it indicates just
> > > a little above 20db on the Comp scale.
> > >
> > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > adjust L26 for 20dB reading.
> >
> > I will need to do some component checking in the circuit around the Processor as
> > Mike and yourself have recommended.
> >
> > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > >
> > > I repeatedly switched Proc on and off and get the same results. In short my as
> > >
> > > found condition for my daily operator is very close to being right on the same
> > >
> > > indicated level on the ALC meter scale (near max on black border) with Proc on
> > > >
> > > and off.
> > >
> > > At this point Chris not sure I can be of any more help? I will think about it
> > > some more and if I come up with something will write.
> > >
> > > Whatever you do you should not have to increase mic gain position or increase
> > > audio generator output level above 10 mv. Depending on the pre-amp gain in your
> > >

> > > rig you may have to be a little higher than position 4 on the mic gain , but I
> > >
> > > wouldnt think much higher.
> > >
> > > Also, you might want to measure the sig gen level at your mic connection when
> > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > Stand-by to Send. Other than that I think I have exhausted my experience. Good
> > >
> > > luck Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry,
> > >
> > > The only difference from my original post is that I increased the "gain" on the
> > >
> > > input (Mic gain), therefore got an ALC reading.
> > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
> > >
> > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > >
> > > > Based on what you are reporting I would expect it to
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up?
> > > >
> > >
> > > Once I have done the initial adjustment Terry, and get the ALC to the far right
> > >
> > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >
> > > Hope this makes sense..
> > >
> > > Cheers
> > > Chris
> > >
> > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--This appears different than what you originally reported of getting no
> > >
> > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > >Where
> > > >
> > > > is your mic gain set at? I would not leave meter pegged to long as it is hard

> > >
> > > >on
> > > >
> > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >the
> > >
> > > >
> > > > peg.
> > > >
> > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >off
> > >
> > >
> > > > the peg and on the meter scale. Now turn on Proc and key rig and report back
> >
> > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >to
> > >
> > >
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > setting), with processor on and full scale (pegged meter) deflection without
> >
> > > > PROC NOT engaged, just Mic.
> > > >
> > > > Chris
> > > > Sent from my iPhone
> > > >
> > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > >
> > > > > Hi Terry, in a nutshell,
> > > > >
> > > > > It doesn't weigh up here.
> > > > >
> > > > > Following to the letter the service manual and then taking into account
> > >your

> > >
> > >
> > > > >notes, the final situation is that I end up with full on-scale deflection of
> > >
> > > >ALC
> > > >
> > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > >meter)
> > >
> > > >
> > > > >deflection without PROC engaged, just Mic.
> > > > >
> > > > >
> > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > >
> > > > > Thanks
> > > > > Chris
> > > > >
> > > > > Sent from my iPhone
> > > > >
> > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > >
> > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >
> > > >same
> > > >
> > > >
> > > > > > ALC reading (max) with Processor on and off. You should not have to
> > >adjust
> > >
> > >
> > > > >mic
> > > > >
> > > > > > gain or input signal level once balanced. You should be able to flip to
> > > >Tune
> > > >
> > > >
> > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > >
> > > > > > If you initially get no indication (I think that is your problem?) you
> > >can
> > >
> > >
> > > > >move
> > > > >
> > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > >will
> > > >
> > > > >be
> > > > >

> > > > > > very touchy and will want to peg the meter. Only other choice you have is
> > >
> > > >to
> > > >
> > > > >set
> > > > >
> > > > > > audio generator output higher as others suggested. I chose to just
> > >increase
> > >
> > > >
> > > > > > mic gain until I got an indication. After I found that point I no longer
> >
> > > > >needed
> > > > >
> > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > >would
> > > >
> > > >
> > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> >
> > > >matched
> > > > >
> > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Thanks Terry,
> > > > > >
> > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
> > >ON
> > >
> > > >
> > > > >to
> > > > >
> > > > > > same point? that's what it states from memory... point of exercise is to
> >
> > >have
> > > >
> > > > >
> > > > > > ALC reading same position with Proc ON and OFF.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > >

> > > > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> >
> > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > >with
> > >
> > > >
> > > > >the
> > > > >
> > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> > >
> > > >no
> > > >
> > > >
> > > > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> >
> > > > >lower on
> > > > >
> > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >
> > > > >
> > > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ
> >
> > > >time.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > >
> > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > >switch
> > >
> > > >
> > > > >in
> > > > >
> > > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >
> > >20db
> > > >
> > > > >on
> > > > >

> > > > > > >the Compression scale as opposed to down at the high end of the ALC box.
> > >
> > > > >Less
> > > > >
> > > > > > >decay time to mess with. Terry
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > ><wagstw46@>
> > >
> > >
> > > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > Step A:
> > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > >max
> > >
> > >
> > > > > > >clockwise.
> > > > > > > > >
> > > > > > > > > > You are in USB mode.
> > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > >end
> > >
> > > >of
> > > > >
> > > > >the
> > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > >between
> > > > >
> > > > > > >1000 and
> > > > > > >
> > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > >
> > > > >expect
> > > > >
> > > > > > >the ALC
> > > > > > >

> > > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > >
> > > > >meter
> > > > >
> > > > > > >to peg
> > > > > > > >
> > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > >what
> > > >
> > > >
> > > > > > >would you
> > > > > > >
> > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > >
> > > > > > > > > > Step B:
> > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > >gain
> > >
> > >
> > > > >not
> > > > >
> > > > > > >touched
> > > > > > >
> > > > > > > > > > from above you are telling me that you have no ALC indication
> > >when
> > >
> > >
> > > > >you
> > > > >
> > > > > > >flip to
> > > > > > >
> > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> > >
> > > >ALC
> > > >
> > > >
> > > > > > >meter
> > > > > > >
> > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > >sensitive
> > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > > > you should reach a point where it will drive meter hard up scale.
> > >
> > > > >Quickly
> > > > >
> > > > > > >turn

> > > > > > >
> > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > >box.
> > > >
> > > > >Mic
> > > > > >
> > > > > > > >gain
> > > > > > > >
> > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > >far
> > >
> > >
> > > > >end of
> > > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > >times
> > > >
> > > > > >
> > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> >
> > > > > > > >adjustment is
> > > > > > > > >
> > > > > > > > > > > a little difficult due to the ALC time constant. The meter tends
> > >to
> > >
> > > > >peg
> > > > > >
> > > > > > >hard
> > > > > > > >
> > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >around
> > > >
> > > > >the
> > > > > >
> > > > > > > >max
> > > > > > > > >
> > > > > > > > > > > end of the ALC box until things settle down. If you switch meter
> > >to
> > >
> > > > >Comp
> > > > > >
> > > > > > >you
> > > > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.

> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > >(Heater
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > >etc), but
> > > > > > >
> > > > > > > none of it explains why I (and evidently others), can not "align"
> > > >
> > > > >the
> > > > > >
> > > > > > >speech
> > > > > > >
> > > > > > > processor based on this step at the top of page 41:-
> > > > > > >
> > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >the
> > > >
> > > > > >AG
> > > > > >
> > > > > > >output to
> > > > > > >
> > > > > > > 10 mV
> > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > >
> > > > > >on-scale ALC
> > > > > >
> > > > > > > reading. Set the PROC to ON.
> > > > > > >
> > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > > > > >

> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > >turn
> > > >
> > > > >the
> > > > >
> > > > > > >Proc ON
> > > > > > >
> > > > > > > > > > and
> > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
> > >at
> > >
> > > >
> > > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > >pages
> > >
> > > >
> > > > > >40&41. As
> > > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > >
> > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > >switch
> > > >
> > > > >and
> > > > > >
> > > > > > >LEAVE
> > > > > > > >
> > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > > >heater
> > > > > >
> > > > > > >off of the
> > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > >
> > > > > > >conditions still
> > > > > > > >
> > > > > > > > > > > > > >being in force?

> > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> >
> > > > >meter
> > > > > >
> > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> >
> > > >That
> > > > >
> > > > > >
> > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> > > >
> > > >of
> > > > >
> > > > > >20db
> > > > > > >
> > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better with
> > >a
> > > >
> > > >
> > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what meter
> >
> > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > >mic
> > > >
> > > > >
> > > > > >gain
> > > > > > >
> > > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> > > >
> > > >and
> > > > >
> > > > > >
> > > > > > > >peaked L27.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> >

> > > >say
> > > >
> > > >
> > > > > > >something
> > > > > > >
> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > >box".
> > >
> > > >
> > > > >Just
> > > > >
> > > > > > >make it
> > > > > > >
> > > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > >
> > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > >heater
> > > > >
> > > > > > >switch on
> > > > > > >
> > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > > >chance
> > > > >
> > > > >to
> > > > > >
> > > > > > >check
> > > > > > >
> > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
> > >I
> > >
> > >

> > > > >will
> > > > >
> > > > > > >give it a
> > > > > > >
> > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > >< cparnell1001@>
> > > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment in
> >
> > > >the
> > > > >
> > > > >830
> > > > >
> > > > > > >at the
> > > > > > >
> > > > > > > > > > >weekend?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > >
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> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > >
> > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > > >about
> > > > > >
> > > > > > > out of ideas.
> > > > > >
> > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > > > > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > > > > > position.

> > >
> > > I use a spare mic connector and clipped the generator output to it with
> > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly at
> > >
> > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > >heater
> > >
> > > switches. Let it warm up a little.
> > >
> > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from Wave
> > >
> > > Tek generator to exactly 10 mv.
> > >
> > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > place meter switch in ALC position.
> > >
> > > I then flip to Send and get ALC meter indication that is just outside the max
> > > end of the black ALC box. Maybe a needles worth.
> > >
> > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC position
> > >
> > > and I have not touched mic gain pot.
> > >
> > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > black ALC box. It could be adjusted a little to get a match if I had the covers
> > >
> > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > >just
> > >
> > > a little above 20db on the Comp scale.
> > >
> > > I repeatedly switched Proc on and off and get the same results. In short my as
> > >
> > > found condition for my daily operator is very close to being right on the same
> > >
> > > indicated level on the ALC meter scale (near max on black border) with Proc on
> > >
> > > and off.
> > >
> > > At this point Chris not sure I can be of any more help? I will think about it
> > > some more and if I come up with something will write.
> > >
> > > Whatever you do you should not have to increase mic gain position or increase
> > > audio generator output level above 10 mv. Depending on the pre-amp gain in your
> > >
> > > rig you may have to be a little higher than position 4 on the mic gain , but I
> > >
> > > wouldnt think much higher.
> > >
> > > Also, you might want to measure the sig gen level at your mic connection when

> > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > Stand-by to Send. Other than that I think I have exhausted my experience. Good
> >
> > > luck Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry,
> > >
> > > The only difference from my original post is that I increased the "gain" on the
> > >
> > > input (Mic gain), therefore got an ALC reading.
> > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure why...
> > >
> > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > >
> > > > Based on what you are reporting I would expect it to
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up?
> > > >
> > >
> > > Once I have done the initial adjustment Terry, and get the ALC to the far right
> > >
> > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >
> > > Hope this makes sense..
> > >
> > > Cheers
> > > Chris
> > >
> > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--This appears different than what you originally reported of getting no
> > >
> > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > >Where
> > > >
> > > > is your mic gain set at? I would not leave meter pegged to long as it is hard
> > >
> > > >on
> > > >
> > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >the

> > >
> > > >
> > > > peg.
> > > >
> > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >off
> > >
> > >
> > > > the peg and on the meter scale. Now turn on Proc and key rig and report back
> >
> > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >to
> > >
> > >
> > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >in
> > >
> > >
> > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > setting), with processor on and full scale (pegged meter) deflection without
> >
> > > > PROC NOT engaged, just Mic.
> > > >
> > > > Chris
> > > > Sent from my iPhone
> > > >
> > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > >
> > > > > Hi Terry, in a nutshell,
> > > > >
> > > > > It doesn't weigh up here.
> > > > >
> > > > > Following to the letter the service manual and then taking into account
> > >your
> > >
> > >
> > > > >notes, the final situation is that I end up with full on-scale deflection of
> > >
> > > > >ALC

> > > >
> > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > >meter)
> > >
> > > >
> > > > >deflection without PROC engaged, just Mic.
> > > > >
> > > > >
> > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > >
> > > > > Thanks
> > > > > Chris
> > > > >
> > > > > Sent from my iPhone
> > > > >
> > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > >
> > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to have
> >
> > > >same
> > > >
> > > > >
> > > > > > ALC reading (max) with Processor on and off. You should not have to
> > >adjust
> > >
> > >
> > > > >mic
> > > > >
> > > > > > gain or input signal level once balanced. You should be able to flip to
> > > >Tune
> > > >
> > > >
> > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > >
> > > > > > If you initially get no indication (I think that is your problem?) you
> > >can
> > >
> > > >
> > > > >move
> > > > >
> > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > >will
> > > >
> > > > >be
> > > > >
> > > > > > very touchy and will want to peg the meter. Only other choice you have is
> > >
> > > >to
> > > >
> > > > >set

> > > > >
> > > > > > audio generator output higher as others suggested. I chose to just
> > >increase
> > >
> > > > >
> > > > > > mic gain until I got an indication. After I found that point I no longer
> > >
> > > > > >needed
> > > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > >would
> > > > >
> > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty good
> > >
> > > > >matched
> > > > > >
> > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Thanks Terry,
> > > > > > >
> > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF then
> > > >ON
> > > > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > > same point? that's what it states from memory... point of exercise is to
> > >
> > > > >have
> > > > > >
> > > > > >
> > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > > Chris--Just repeated adjustments and was able to get pretty good equal
> > >
> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > >with
> > > > >

> > > >
> > > > >the
> > > > >
> > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted I
> > >
> > > >no
> > > >
> > > >
> > > > > > >longer needed to tweak the mic gain to get an indication. I cant go any
> >
> > > > >lower on
> > > > >
> > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > >
> > > > > > >
> > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > ><cparnell1001@>
> > > >
> > > > >
> > > > > > >wrote:
> > > > > > >
> > > > > > > Thanks Terry....
> > > > > > >
> > > > > > > Will hopefully get around to confirming all of this later tonight NZ
> >
> > > > >time.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > >
> > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > >switch
> > >
> > > >
> > > > >in
> > > > >
> > > > > > >the ALC position) to do your adjustment with the ALC indicated level at
> >
> > > >20db
> > > >
> > > > >on
> > > > >
> > > > > > >the Compression scale as opposed to down at the high end of the ALC box.
> > >
> > > >Less
> > > > >
> > > > > > >decay time to mess with. Terry

> > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > ><wagstw46@>
> > >
> > >
> > > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > Step A:
> > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > >max
> > >
> > >
> > > > > > >clockwise.
> > > > > > > > >
> > > > > > > > > > You are in USB mode.
> > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > >end
> > >
> > > >of
> > > >
> > > > >the
> > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > >
> > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > >between
> > > > >
> > > > > > >1000 and
> > > > > > > >
> > > > > > > > > 1100.
> > > > > > > > >
> > > > > > > > > > You then turn Processor on with Comp Level max cw. What would you
> > > >
> > > > >expect
> > > > >
> > > > > > >the ALC
> > > > > > > >
> > > > > > > > > > reading to do for the same mic gain setting? Would you expect the
> > > >
> > > > >meter
> > > > >
> > > > > > >to peg

> > > > > > >
> > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > >what
> > > >
> > > >
> > > > > > >would you
> > > > > > >
> > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > >
> > > > > > > > > > > Step B:
> > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > >gain
> > >
> > > >
> > > > >not
> > > > >
> > > > > > >touched
> > > > > > >
> > > > > > > > > > > from above you are telling me that you have no ALC indication
> > >when
> > >
> > > >
> > > > >you
> > > > >
> > > > > > >flip to
> > > > > > >
> > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain any
> > >
> > > >ALC
> > > > >
> > > > > >
> > > > > > >meter
> > > > > > >
> > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > >
> > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > >sensitive
> > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > > > > you should reach a point where it will drive meter hard up scale.
> > >
> > > >Quickly
> > > > >
> > > > > > >turn
> > > > > > >
> > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > >box.
> > > > >
> > > > > >Mic

> > > > >
> > > > > > >gain
> > > > > > > >
> > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > >far
> > >
> > >
> > > > >end of
> > > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > >times
> > > > >
> > > > > >
> > > > > > >until you
> > > > > > > >
> > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A. This
> >
> > > > > > >adjustment is
> > > > > > > >
> > > > > > > > > > a little difficult due to the ALC time constant. The meter tends
> > >to
> > >
> > > > >peg
> > > > > >
> > > > > > >hard
> > > > > > > >
> > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >around
> > > > >
> > > > > >the
> > > > > > >
> > > > > > > >max
> > > > > > > > >
> > > > > > > > > > end of the ALC box until things settle down. If you switch meter
> > >to
> > >
> > > > >Comp
> > > > > >
> > > > > > >you
> > > > > > > >
> > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > >
> > > > > > > > > > Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >

> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > >(Heater
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > >etc), but
> > > > > > >
> > > > > > > > none of it explains why I (and evidently others), can not "align"
> > > >
> > > > >the
> > > > > >
> > > > > > >speech
> > > > > > >
> > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >the
> > > >
> > > > > >AG
> > > > > >
> > > > > > >output to
> > > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > Adjust the MIC GAIN control until the meter indicates the maximum
> > > >
> > > > > >on-scale ALC
> > > > > > >
> > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > >
> > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > >
> > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > >turn
> > > > > >
> > > > > > >the

> > > > >
> > > > > > >Proc ON
> > > > > > >
> > > > > > > > > > and
> > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the meter
> > >at
> > >
> > > >
> > > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum reading.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > >pages
> > >
> > > >
> > > > > >40&41. As
> > > > > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > >
> > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > >switch
> > > >
> > > > >and
> > > > > > > >
> > > > > > > > >LEAVE
> > > > > > > > >
> > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > >heater
> > > > > > > >
> > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous step
> > >
> > > > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > >being in force?
> > > > > > > > > >
> > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say "max
> > >
> > > > > >meter
> > > > > > > >

> > > > > > >reading on
> > > > > > > >
> > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1 reading.
> > >
> > > >That
> > > > >
> > > > > >
> > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter indication
> > > >
> > > > >of
> > > > > >
> > > > > > >20db
> > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better with
> > >a
> > > >
> > > >
> > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what meter
> > >
> > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > >mic
> > > >
> > > > >
> > > > > > >gain
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at 1200
> > > >
> > > > >and
> > > > > >
> > > > > > > >
> > > > > > > > >peaked L27.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they would
> > >
> > > >say
> > > > > >
> > > > > > >
> > > > > > > > >something
> > > > > > > > > > >

> > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > >box".
> > >
> > > >
> > > > >Just
> > > > >
> > > > > > >make it
> > > > > > > >
> > > > > > > > > > > >very clear what meter position and what scale you are to read.
> > > > > > > > > > > > >
> > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > >heater
> > > > > >
> > > > > > > >switch on
> > > > > > > > >
> > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry -K9TW
> > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > > >chance
> > > > >
> > > > > >to
> > > > > > >
> > > > > > > > >check
> > > > > > > > > >
> > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day so
> > >I
> > > >
> > > > >
> > > > > >will
> > > > > > >
> > > > > > > > >give it a
> > > > > > > > > >
> > > > > > > > > > > >try today and report back. Terry

> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > >
> Hi Terry, did you get chance to test the SP alignment in
> >
> > > >the
> > > > >
> > > > > >830
> > > > > >
> > > > > > > >at the
> > > > > > > > >
> > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > ----------
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]

> > > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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> > > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > > ------------------------------------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >

31933. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 16:24:07 UTC
From: Terry Wagoner
Topic: 31878 Message: 31933

Chris: I cant help you too much with power supply voltages. The only time I have had occasion to measure anything on the PS board was related to 210A and 470 screen dropping resistor.

I have measured all tube voltages. In my own rigs I have new filter caps at 120uf as opposed to factory 100uf. My anode voltage no load is approx 940vdc and approx 820vdc loaded to 225ma. This is with 120 vac line voltage which tends to run high.

Terry

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
>
> Cheers
> Chris
>
>
> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>
> > Chris--
> >
> > Do you have Skype? Maybe we could connect on Skype and perform each step
> > together on our rigs and see at what step we differ. Not sure if we could have
> > clear enough real time video or not for this to work. Not sure about our time
> > difference, but could schedule it Zulu/GMT just as we would a QSO.
> >
> > Maybe Mike or Gordon would be better to do this with you as they repair these
> > rigs for a living? As you know I had never performed this step until you asked
> > about it. In fact I have never completed a full alignment as I dont have sweep
> > generator. I have just done selected steps.
> >
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 9:55:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > have no attenuation in there)...
> >

> > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > down the numbers for 5mV, 10mV and 50mV before I started again.
> > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > with regards to ALC readings.
> >
> > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> >
> > I may record a small video and send it to you... easier to see what I mean and
> > what i'm doing.
> >
> > Turning the Mic gain up and down of course makes a difference, but the point is,
> > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> >
> > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > test signals.
> > >
> > > With your mic gain at No. 4 it appears you have much more gain than I do in my
> >
> > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > where I can get a good match at far right end of ALC black box.
> > >
> > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > >
> > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > >
> > > no meter indication. I do know with both of my rigs I end up at very close to
> > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > >
> > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > >
> > > signal injected? I found it a little touchy. When you first reported no meter
> > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > starting to get confused regards what your problem is.
> > >
> > > If turning mic gain down a little doesnt help then I would say it is on to
> > > troubleshooting with Mike.
> > >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 7:04:54 PM

> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry / Mike.....
> > >
> > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > piece of kit.
> > > Here's what I see when I follow your instructions:
> > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >
> > > Exactly the same as me Terry, except my mini clips are connected directly to
> > >the
> > >
> > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > >
> > > > I have the mic gain set exactly at
> > > > No. 4 position.
> > > >
> > > Same here
> > >
> > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > switches. Let it warm up a little.
> > > >
> > > Same here
> > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >Wave
> > >
> > >
> > > > Tek generator to exactly 10 mv
> > > >
> > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > >
> > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > place meter switch in ALC position.
> > > >
> > >
> > > Same here
> > >
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the max
> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >
> > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > >
> > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > s-meter scale, it's S9+40dB +).

> > >
> > > >
> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.
> > > >
> > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > >
> > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > I'm saying and seeing.
> > >
> > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > PROC ON, which on the S-Meter is S-9.
> > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > minimum.
> > >
> > > >
> > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > >
> > > > black ALC box.
> > > >
> > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > >
> > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > >
> > > > It could be adjusted a little to get a match if I had the covers
> > > > off, but close enough.
> > > >
> > >
> > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > >them
> > >
> > > with the PROC ON.
> > >
> > > > I switch the meter from ALC to Comp and it indicates just
> > > > a little above 20db on the Comp scale.
> > > >
> > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > adjust L26 for 20dB reading.
> > >
> > > I will need to do some component checking in the circuit around the Processor
> > >as
> > >
> > > Mike and yourself have recommended.
> > >

> > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > >
> > > > I repeatedly switched Proc on and off and get the same results. In short my
> > >as
> > >
> > >
> > > > found condition for my daily operator is very close to being right on the
> > >same
> > >
> > >
> > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > >on
> > >
> > > >
> > > > and off.
> > > >
> > > > At this point Chris not sure I can be of any more help? I will think about it
> > >
> > > > some more and if I come up with something will write.
> > > >
> > > > Whatever you do you should not have to increase mic gain position or increase
> > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >your
> > >
> > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > >I
> > >
> > >
> > > > wouldnt think much higher.
> > > >
> > > > Also, you might want to measure the sig gen level at your mic connection when
> > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > >Good
> > >
> > >
> > > > luck Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM

> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry,
> > > >
> > > > The only difference from my original post is that I increased the "gain" on
> > >the
> > >
> > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > >
> > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > >
> > > >
> > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > >right
> > >
> > > >
> > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >
> > > > Hope this makes sense..
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--This appears different than what you originally reported of getting
> > >no
> > >
> > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > >
> > > > >Where
> > > >
> > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > >hard
> > >
> > > >
> > > > >on
> > > >

> > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > > >the
> > > >
> > > > >
> > > > > peg.
> > > > >
> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >
> > > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > >back
> > >
> > >
> > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >
> > > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Cc: "TS-520_820_530_830@...m"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >
> > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > >
> > >
> > > > > PROC NOT engaged, just Mic.
> > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >

> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >
> > > > > > Following to the letter the service manual and then taking into account
> > > >your
> > > >
> > > >
> > > > > >notes, the final situation is that I end up with full on-scale deflection
> > >of
> > >
> > > >
> > > > >ALC
> > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > >meter)
> > > >
> > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > >
> > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > > > > >
> > > > > > Thanks
> > > > > > Chris
> > > > > >
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > >
> > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > >have
> > >
> > >
> > > >same
> > > > >
> > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > >adjust
> > > >
> > > >
> > > > >mic
> > > > > >
> > > > > > > gain or input signal level once balanced. You should be able to flip to
> > >
> > > >Tune
> > > > >
> > > > >
> > > > > > > with Proc on and off and see approx the same max ALC indication.

> > > > > > >
> > > > > > > > If you initially get no indication (I think that is your problem?) you
> > >
> > > >can
> > > >
> > > > >
> > > > > >move
> > > > > >
> > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > >
> > > > >will
> > > > >
> > > > > >be
> > > > > >
> > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > >is
> > >
> > > >
> > > > >to
> > > > >
> > > > > >set
> > > > > >
> > > > > > > audio generator output higher as others suggested. I chose to just
> > > >increase
> > > >
> > > > >
> > > > > > mic gain until I got an indication. After I found that point I no
> > >longer
> > >
> > >
> > > > >needed
> > > > >
> > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> >
> > > >would
> > > > >
> > > > >
> > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > >good
> > >
> > >
> > > > >matched
> > > > >
> > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > > > > > >
> > > > > > > > Thanks Terry,
> > > > > > > >
> > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >then
> > > >
> > > > >ON
> > > > >
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > > same point? that's what it states from memory... point of exercise is
> > > >to
> > > >
> > > >
> > > > >have
> > > > > >
> > > > > > > >
> > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > >equal
> > > >
> > > >
> > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > >
> > > >with
> > > > > >
> > > > > > > >
> > > > > > > >the
> > > > > > > >
> > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >I
> > > >
> > > > > >
> > > > > > >no
> > > > > > > >
> > > > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > >any
> > > >
> > > >
> > > > > > > >lower on
> > > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry

> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Thanks Terry....
> > > > > > > > > > > >
> > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > >NZ
> > > > >
> > > > >
> > > > > > > >time.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > >switch
> > > > > > > >
> > > > > > > > > >in
> > > > > > > > > > >
> > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > >at
> > > > >
> > > > >
> > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > > >
> > > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > >box.
> > > > >
> > > > > > > >
> > > > > > > > > >Less
> > > > > > > > > > >
> > > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > ><wagstw46@>
> > > > > > > >
> > > > > > > > > > wrote:

> > > > > > > > > > >
> > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > Step A:
> > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> >
> > > >max
> > > > >
> > > > >
> > > > > > > > >clockwise.
> > > > > > > > > >
> > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >
> > > >end
> > > > >
> > > > >of
> > > > > >
> > > > > >the
> > > > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > >
> > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> >
> > > > > >between
> > > > > > >
> > > > > > > > >1000 and
> > > > > > > > >
> > > > > > > > > > > > 1100.
> > > > > > > > > > > >
> > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > >you
> > > >
> > > > >
> > > > > > >expect
> > > > > > > >
> > > > > > > > >the ALC
> > > > > > > > >
> > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > >the
> > > >
> > > > >
> > > > > > >meter
> > > > > > > >
> > > > > > > > > >to peg

> > > > > > > >
> > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > >
> > > > >what
> > > > > >
> > > > > >
> > > > > > > > >would you
> > > > > > > > >
> > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > > Step B:
> > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> >
> > > >gain
> > > > >
> > > > > >
> > > > > > >not
> > > > > > > >
> > > > > > > > > >touched
> > > > > > > > >
> > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > >when
> > > > >
> > > > > >
> > > > > > >you
> > > > > > > >
> > > > > > > > > >flip to
> > > > > > > > >
> > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > >any
> > >
> > > > >
> > > > > >ALC
> > > > > > >
> > > > > > > > >
> > > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > >
> > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >
> > > > > >sensitive
> > > > > > >
> > > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > >scale.
> > >
> > > > >
> > > > > > >Quickly

> > > > > >
> > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > >
> > > > > >box.
> > > > > >
> > > > > > >Mic
> > > > > > >
> > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >
> > > > >far
> > > > >
> > > > >
> > > > > > >end of
> > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > >
> > > > > >times
> > > > > >
> > > > > > >
> > > > > > > > > >until you
> > > > > > > > > >
> > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > >This
> > > >
> > > >
> > > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > >tends
> > > >
> > > > > >to
> > > > > >
> > > > > > >
> > > > > > > > > >peg
> > > > > > > > > >
> > > > > > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> >
> > > > > >around
> > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > > >max

> > > > > > > >
> > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > >meter
> > >
> > > >to
> > > >
> > > > >
> > > > > >Comp
> > > > > >
> > > > > > > >you
> > > > > > > >
> > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment
> > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > >(Heater
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >etc), but
> > > > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not
> > >"align"
> > > > >
> > > > > >the
> > > > > > >
> > > > > > > > >speech
> > > > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > >
> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >
> > > > >the
> > > > > >

> > > > >
> > > > > >AG
> > > > > >
> > > > > > > >output to
> > > > > > > > >
> > > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > >maximum
> > >
> > > >
> > > > > > >on-scale ALC
> > > > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > >
> > > > >turn
> > > > > >
> > > > > >the
> > > > > > >
> > > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > and
> > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > >meter
> > >
> > > >at
> > > > >
> > > > > >
> > > > > >this
> > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > >pages
> > > > >

> > > > >
> > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >
> > > > >switch
> > > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > >LEAVE
> > > > > > > > >
> > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >
> > > > > >heater
> > > > > > >
> > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > >step
> > >
> > >
> > > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > > > >being in force?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > >"max
> > >
> > >
> > > > > > >meter
> > > > > > >
> > > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > >reading.
> > >
> > >
> > > > > >That
> > > > > > >
> > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > >indication
> > >
> > > > > >

> > > > >of
> > > > >
> > > > > >20db
> > > > > >
> > > > > > > >and
> > > > > > > >
> > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > >with
> > >
> > > >a
> > > >
> > > >
> > > > > > >multi-scale
> > > > > > > >
> > > > > > > > > > > >meter for them to tell you the expected value and on what
> > >meter
> > >
> > >
> > > > > >scale.
> > > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > >
> > > >mic
> > > >
> > > > >
> > > > > >gain
> > > > > >
> > > > > > >
> > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > >1200
> > >
> > > >
> > > > >and
> > > > >
> > > > > >
> > > > > > > >peaked L27.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > >would
> > >
> > >
> > > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > >
> > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > >box".
> > > > >
> > > > > >

> > > > > >Just
> > > > > >
> > > > > > > >make it
> > > > > > > >
> > > > > > > > > > > >very clear what meter position and what scale you are to
> > read.
> > > > > > > > > > > >
> > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > >
> > > > > >heater
> > > > > > >
> > > > > > > >switch on
> > > > > > > >
> > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > >-K9TW
> > >
> > > >
> > > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >
> > > > > >chance
> > > > > > >
> > > > > > > >to
> > > > > > > >
> > > > > > > > > >check
> > > > > > > > >
> > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > >so
> > > >
> > > > >I
> > > > > >
> > > > > >
> > > > > > > >will
> > > > > > > > >

> > > > > > > >give it a
> > > > > > > > >
> > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > > >
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >
> > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > > > >wrote:
> >
> Hi Terry, did you get chance to test the SP alignment
> > > >in
> > > >
> > > >
> > > > > >the
> > > > > >
> > > > > > >830
> > > > > > > >
> > > > > > > > > >at the
> > > > > > > > > >
> > > > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > > > >
> Cheers
> Chris, ZL1CDP
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> ----------
> >
> Yahoo! Groups Links
> >
> >
> >
> [Non-text portions of this message have been removed]
> >

> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > ----------
> > > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > ----------
> > > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > > > > > >about
> > > > > > > > >
> > > > > > > > > out of ideas.
> > > > > > > > >
> > > > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > >

> > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > >
> > > > position.
> > > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > >at
> > >
> > >
> > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > >heater
> > > >
> > > > switches. Let it warm up a little.
> > > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >Wave
> > >
> > >
> > > > Tek generator to exactly 10 mv.
> > > >
> > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > place meter switch in ALC position.
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the max
> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >
> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.
> > > >
> > > > I flip to Send and the ALC meter indication is a little bit more outside the
> >
> > > > black ALC box. It could be adjusted a little to get a match if I had the
> > >covers
> > >
> > > >
> > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > >just
> > > >
> > > > a little above 20db on the Comp scale.
> > > >
> > > > I repeatedly switched Proc on and off and get the same results. In short my
> > >as
> > >
> > >
> > > > found condition for my daily operator is very close to being right on the
> > >same

> > >
> > >
> > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > >on
> > >
> > > > >
> > > > and off.
> > > > >
> > > > At this point Chris not sure I can be of any more help? I will think about it
> > >
> > > > some more and if I come up with something will write.
> > > > >
> > > > Whatever you do you should not have to increase mic gain position or increase
> > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >your
> > >
> > > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > >I
> > >
> > > > >
> > > > wouldnt think much higher.
> > > > >
> > > > Also, you might want to measure the sig gen level at your mic connection when
> > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > >Good
> > >
> > >
> > > > luck Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > Hi Terry,
> > > > >
> > > > The only difference from my original post is that I increased the "gain" on
> > >the
> > >
> > > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > > >

> > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > >right
> > >
> > > >
> > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >
> > > > > Hope this makes sense..
> > > >
> > > > > Cheers
> > > > > Chris
> > > >
> > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >
> > > > > > Chris--This appears different than what you originally reported of getting
> > >no
> > >
> > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > >
> > > > >Where
> > > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > >hard
> > >
> > > >
> > > > >on
> > > > > >
> > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > > >the
> > > >
> > > > > >
> > > > > > peg.
> > > > > >
> > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >
> > > >off
> > > >
> > > >

> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > >back
> > >
> > >
> > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >
> > > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >
> > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > >
> > >
> > > > > PROC NOT engaged, just Mic.
> > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >
> > > > > > Following to the letter the service manual and then taking into account
> > > >your
> > > > >
> > > > >
> > > > > >notes, the final situation is that I end up with full on-scale deflection
> > >of
> > > >
> > > > >

> > > > >ALC
> > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > >meter)
> > > >
> > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > >
> > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > > > > >
> > > > > > Thanks
> > > > > > Chris
> > > > > >
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > >
> > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > >have
> > > >
> > > >
> > > > >same
> > > > >
> > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > >adjust
> > > > >
> > > > >
> > > > > >mic
> > > > > >
> > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > >
> > > > >Tune
> > > > >
> > > > >
> > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > >
> > > > > > > If you initially get no indication (I think that is your problem?) you
> > > >
> > > >can
> > > > >
> > > > >
> > > > > >move
> > > > > >
> > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > >
> > > > >will
> > > > >

> > > > > >be
> > > > > > >
> > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > >is
> > > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > >set
> > > > > > > >
> > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > >increase
> > > > >
> > > > > >
> > > > > > > > mic gain until I got an indication. After I found that point I no
> > > >longer
> > > >
> > > > >
> > > > > >needed
> > > > > >
> > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > >
> > > > > >would
> > > > > >
> > > > > >
> > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >good
> > > >
> > > > >
> > > > > >matched
> > > > > >
> > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > > Thanks Terry,
> > > > > > > >
> > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >then
> > > >
> > > > >
> > > > > >ON
> > > > > >
> > > > > >
> > > > > > >to
> > > > > >
> > > > > > > > same point? that's what it states from memory... point of exercise is

> > >to
> > >
> > >
> > > > >have
> > > > > >
> > > > > > >
> > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > >equal
> > > >
> > > >
> > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > >
> > > > >with
> > > > >
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >I
> > > >
> > > > >
> > > > > >no
> > > > > >
> > > > > >
> > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > >any
> > > >
> > > >
> > > > > > >lower on
> > > > > > >
> > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > >
> > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Thanks Terry....
> > > > > > > > > >
> > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > >NZ

> > >
> > >
> > > > > >time.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > >switch
> > > > >
> > > > > >
> > > > > >in
> > > > > > >
> > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > >at
> > > >
> > > >
> > > > >20db
> > > > > >
> > > > > >on
> > > > > > >
> > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > >box.
> > > >
> > > > >
> > > > > >Less
> > > > > > >
> > > > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > ><wagstw46@>
> > > > >
> > > > >
> > > > > > > > wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > Step A:
> > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > >
> > > > >max
> > > > >
> > > > >
> > > > > > > > >clockwise.
> > > > > > > > > >
> > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > 2. You have the meter switch to ALC position.

> > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >
> > > >end
> > > > >
> > > > >of
> > > > > >
> > > > > >the
> > > > > > >
> > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > >
> > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> >
> > > > > >between
> > > > > > >
> > > > > > > >1000 and
> > > > > > > > >
> > > > > > > > > > > > 1100.
> > > > > > > > > > > > >
> > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > >you
> > > >
> > > > >
> > > > > >expect
> > > > > > >
> > > > > > > >the ALC
> > > > > > > > >
> > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > >the
> > > >
> > > > >
> > > > > >meter
> > > > > > >
> > > > > > > >to peg
> > > > > > > > >
> > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > >
> > > > >what
> > > > > >
> > > > > >
> > > > > > > >would you
> > > > > > > > >
> > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > >
> > > > > > > > > > > > Step B:
> > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic

> >
> > > >gain
> > > >
> > > > >
> > > > > >not
> > > > > > >
> > > > > > > > >touched
> > > > > > > > > >
> > > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > >when
> > > > >
> > > > >
> > > > > >you
> > > > > > >
> > > > > > > > >flip to
> > > > > > > > > >
> > > > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > >any
> > > >
> > > > >
> > > > > >ALC
> > > > > > >
> > > > > > > > >meter
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > >
> > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > >scale.
> > > >
> > > > >
> > > > > >Quickly
> > > > > > >
> > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > >
> > > > > >box.
> > > > > > >
> > > > > > > > >Mic
> > > > > > > > > >
> > > > > > > > > > > > >gain
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at

> >
> > > >far
> > > >
> > > >
> > > > > >end of
> > > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > >
> > > > >times
> > > > >
> > > > > >
> > > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > >This
> > > >
> > > >
> > > > > > > > >adjustment is
> > > > > > > > >
> > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > >tends
> > > >
> > > > >to
> > > > >
> > > > > >
> > > > > > > >peg
> > > > > > > >
> > > > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > >
> > > > >around
> > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > > >max
> > > > > > > > > >
> > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > >meter
> > > >
> > > > >to
> > > > >
> > > > > > >Comp
> > > > > > > >
> > > > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > should see about 20db on Comp Scale.

> > > > > > > > > > >
> > > > > > > > > > > > Terry
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > _____
> > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >alignment
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > >
> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > >(Heater
> > > > > >
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > >etc), but
> > > > > > > >
> > > > > > > > none of it explains why I (and evidently others), can not
> > > >"align"
> > > > >
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > >
> > > > > > > > >speech
> > > > > > > > >
> > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > >
> > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > >
> > > > > >the
> > > > > > >
> > > > > > >
> > > > > > >AG
> > > > > > >
> > > > > > > >output to
> > > > > > > >
> > > > > > > > > 10 mV
> > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > >maximum
> > > > >
> > > > > >
> > > > > > > >on-scale ALC
> > > > > > > >

> > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > >
> > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > >
> > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > >
> > > > >turn
> > > > >
> > > > > >the
> > > > > >
> > > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > >meter
> > >
> > > >at
> > > >
> > > >
> > > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > >pages
> > > > >
> > > > >
> > > > > > > > >40&41. As
> > > > > > > > >
> > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > >
> > > > >switch
> > > > >
> > > > > >and
> > > > > >
> > > > > > > >LEAVE

> > > > > > > >
> > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >
> > > > > >heater
> > > > > > >
> > > > > > > > >off of the
> > > > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > >step
> > >
> > >
> > > > > > > > >conditions still
> > > > > > > > > >
> > > > > > > > > > > > >being in force?
> > > > > > > > > > > > >
> > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > >"max
> > >
> > >
> > > > > > > >meter
> > > > > > > > >
> > > > > > > > > >reading on
> > > > > > > > > >
> > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > >reading.
> > >
> > >
> > > > > > >That
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >would be on
> > > > > > > > > >
> > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > >indication
> > >
> > > > > >
> > > > > > >of
> > > > > > > >
> > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > >with
> > >
> > > > > >a
> > > > > > >
> > > > > > >

> > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > >meter
> > > >
> > > >
> > > > > >scale.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > >
> > > > >mic
> > > > >
> > > > > >
> > > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > >1200
> > > >
> > > > >
> > > > > >and
> > > > > > >
> > > > > > > >
> > > > > > > > > > >peaked L27.
> > > > > > > > > > > > > > > > >
> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >would
> > > >
> > > >
> > > > > >say
> > > > > > >
> > > > > > > >
> > > > > > > > > > >something
> > > > > > > > > > > > > > >
> >like "top or far right end of black bordered ALC meter scale
> > > >box".
> > > > > >
> > > > > > >
> > > > > > > > > > >Just
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >make it
> > > > > > > > > > > > > > > > >
> >very clear what meter position and what scale you are to
> > read.
> >
> So, I think if you load up, place SG switch to off, and leave
> > > >
> > > > > >heater
> > > > > > >
> > > > > > > > > > > > >switch on

> > > > > > > >
> > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > >-K9TW
> > >
> > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >
> > > > > >chance
> > > > > > >
> > > > > > > >to
> > > > > > > >
> > > > > > > > > >check
> > > > > > > > > > >
> > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > >so
> > > >
> > > >I
> > > > >
> > > > >
> > > > > >will
> > > > > > >
> > > > > > > >give it a
> > > > > > > > >
> > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >
> > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > >in

> > >
> > >
> > > > >the
> > > > > >
> > > > > > >830
> > > > > > > >
> > > > > > > > > >at the
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >weekend?
> >
> >
> Cheers
> Chris, ZL1CDP
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> ------------------------------------
> >
> Yahoo! Groups Links
> >
> >
> >
> [Non-text portions of this message have been removed]
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> >
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> > > > > > > ------------------------------------
> > > > > > > >
> > > > > > > > Yahoo! Groups Links
> > > > > > > >
> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > >
> > > > > > > >
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > [Non-text portions of this message have been removed]
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> > > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > > ------------------------------------
> > > > >
> > > > > Yahoo! Groups Links
> > > > >
> > > > > [Non-text portions of this message have been removed]
> > > > >
> > > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > > [Non-text portions of this message have been removed]
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> > >
> >
> >
> >

> [Non-text portions of this message have been removed]
>

31934. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 20:31:42 UTC
From: Terry Wagoner
Topic: 31878 Message: 31934

Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!

1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?

2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.

3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.

4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.

5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.

6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.

7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.

8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.

Good Luck-Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
>
> Cheers
> Chris
>

>
> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>
> > Chris--
> >
> > Do you have Skype? Maybe we could connect on Skype and perform each step
> > together on our rigs and see at what step we differ. Not sure if we could have
> > clear enough real time video or not for this to work. Not sure about our time
> > difference, but could schedule it Zulu/GMT just as we would a QSO.
> >
> > Maybe Mike or Gordon would be better to do this with you as they repair these
> > rigs for a living? As you know I had never performed this step until you asked
> > about it. In fact I have never completed a full alignment as I dont have sweep
> > generator. I have just done selected steps.
> >
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 9:55:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > have no attenuation in there)...
> >
> > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > down the numbers for 5mV, 10mV and 50mV before I started again.
> > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > with regards to ALC readings.
> >
> > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> >
> > I may record a small video and send it to you... easier to see what I mean and
> > what i'm doing.
> >
> > Turning the Mic gain up and down of course makes a difference, but the point is,
> > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> >
> > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > test signals.
> > >
> > > With your mic gain at No. 4 it appears you have much more gain than I do in my

> >
> > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > where I can get a good match at far right end of ALC black box.
> > >
> > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > >
> > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > >
> > > no meter indication. I do know with both of my rigs I end up at very close to
> > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > >
> > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > >
> > > signal injected? I found it a little touchy. When you first reported no meter
> > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > starting to get confused regards what your problem is.
> > >
> > > If turning mic gain down a little doesnt help then I would say it is on to
> > > troubleshooting with Mike.
> > >
> > > Terry
> > >
> > > _________________________________
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry / Mike.....
> > >
> > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > piece of kit.
> > > Here's what I see when I follow your instructions:
> > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >
> > > Exactly the same as me Terry, except my mini clips are connected directly to
> > >the
> > >
> > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > >
> > > > I have the mic gain set exactly at
> > > > No. 4 position.
> > > >
> > > Same here
> > >
> > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > switches. Let it warm up a little.
> > > >

> > > Same here
> > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >Wave
> > >
> > >
> > > > Tek generator to exactly 10 mv
> > > >
> > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > >
> > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > place meter switch in ALC position.
> > > >
> > >
> > > Same here
> > >
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the max
> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >
> > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > >
> > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > s-meter scale, it's S9+40dB +).
> > >
> > > >
> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.
> > > >
> > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > >
> > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > I'm saying and seeing.
> > >
> > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > PROC ON, which on the S-Meter is S-9.
> > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > minimum.
> > >
> > > >
> > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > >
> > > > black ALC box.

> > > >
> > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > > >
> > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >
> > > > It could be adjusted a little to get a match if I had the covers
> > > > off, but close enough.
> > > > >
> > > >
> > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > >them
> > > >
> > > with the PROC ON.
> > > >
> > > > I switch the meter from ALC to Comp and it indicates just
> > > > a little above 20db on the Comp scale.
> > > > >
> > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > adjust L26 for 20dB reading.
> > > >
> > > I will need to do some component checking in the circuit around the Processor
> > >as
> > > >
> > > Mike and yourself have recommended.
> > > >
> > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > > >
> > > Thanks
> > > Chris, ZL1CDP
> > > >
> > > > >
> > > > I repeatedly switched Proc on and off and get the same results. In short my
> > >as
> > > >
> > > >
> > > > found condition for my daily operator is very close to being right on the
> > >same
> > > >
> > > >
> > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > >on
> > > >
> > > > >
> > > > and off.
> > > > >
> > > > At this point Chris not sure I can be of any more help? I will think about it
> > > >
> > > > some more and if I come up with something will write.
> > > > >

> > > > Whatever you do you should not have to increase mic gain position or increase
> > > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >your
> > > >
> > > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > >I
> > > >
> > > >
> > > > wouldnt think much higher.
> > > > >
> > > > Also, you might want to measure the sig gen level at your mic connection when
> > > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > >Good
> > > >
> > > >
> > > > luck Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > Hi Terry,
> > > > >
> > > > The only difference from my original post is that I increased the "gain" on
> > >the
> > > >
> > > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > > >
> > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > >
> > > >in
> > > > >
> > > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > Once I have done the initial adjustment Terry, and get the ALC to the far

> > >right
> > >
> > > >
> > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >
> > > > Hope this makes sense..
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris--This appears different than what you originally reported of getting
> > >no
> > >
> > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> >
> > > > >Where
> > > > >
> > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > >hard
> > >
> > > >
> > > > >on
> > > > >
> > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > > >the
> > > >
> > > > >
> > > > > peg.
> > > > >
> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >
> > > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > >back
> > >
> > >
> > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >
> > > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > > >in

> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >
> > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > > >
> > > >
> > > > > PROC NOT engaged, just Mic.
> > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >
> > > > > > Following to the letter the service manual and then taking into account
> > > >your
> > > > >
> > > > >
> > > > > >notes, the final situation is that I end up with full on-scale deflection
> > >of
> > > >
> > > > >
> > > > > >ALC
> > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > >meter)
> > > > >
> > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > >
> > > > >
> > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > > >
> > > > >

> > > > > > Thanks
> > > > > > Chris
> > > > > > >
> > > > > > Sent from my iPhone
> > > > > > >
> > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > >
> > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >have
> > > >
> > > >
> > > > >same
> > > > > >
> > > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > >adjust
> > > > > >
> > > > > >
> > > > > > >mic
> > > > > > > >
> > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > >
> > > > >Tune
> > > > > > >
> > > > > > >
> > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > >
> > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > >
> > > > >can
> > > > > > >
> > > > > > > >move
> > > > > > > > >
> > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > >
> > > > >will
> > > > > > >
> > > > > > > >be
> > > > > > > > >
> > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > >is
> > > >
> > > >
> > > > >to
> > > > > > >
> > > > > > > >set
> > > > > > > > >
> > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > >increase

> > > >
> > > > >
> > > > > > > mic gain until I got an indication. After I found that point I no
> > >longer
> > >
> > >
> > > > > >needed
> > > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> >
> > > > >would
> > > > > >
> > > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > >good
> > >
> > >
> > > > > >matched
> > > > > >
> > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Thanks Terry,
> > > > > > >
> > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >then
> > >
> > > > >ON
> > > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > > same point? that's what it states from memory... point of exercise is
> > >to
> > >
> > >
> > > > > >have
> > > > > >
> > > > > >
> > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:

> > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > >equal
> > >
> > >
> > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> >
> > > >with
> > > >
> > > > >
> > > > > >the
> > > > > >
> > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > >I
> > >
> > > >
> > > > >no
> > > > > >
> > > > > >
> > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > >any
> > >
> > >
> > > > > >lower on
> > > > > > >
> > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > > >
> > > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Thanks Terry....
> > > > > > > > >
> > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > >NZ
> > >
> > >
> > > > > >time.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > >switch

> > > >
> > > > >
> > > > > >in
> > > > > >
> > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > >at
> > >
> > >
> > > > >20db
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > >box.
> > >
> > > >
> > > > > >Less
> > > > > > >
> > > > > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > ><wagstw46@>
> > > > >
> > > > >
> > > > > > > wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > Step A:
> > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> >
> > > >max
> > > > >
> > > > >
> > > > > > > >clockwise.
> > > > > > > > >
> > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >
> > > >end
> > > > >
> > > > > >of
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >ALC
> > > > > > > > >

> > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > >
> > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> >
> > > > > >between
> > > > > > >
> > > > > > > > > >1000 and
> > > > > > > > > >
> > > > > > > > > > > > 1100.
> > > > > > > > > > > >
> > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > >you
> > > >
> > > > >
> > > > > >expect
> > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > >the
> > > >
> > > > >
> > > > > >meter
> > > > > > >
> > > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > >
> > > > >what
> > > > > > >
> > > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > > Step B:
> > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> >
> > > >gain
> > > > > >
> > > > > > > > >not
> > > > > > > > >
> > > > > > > > > > >touched
> > > > > > > > > >
> > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > >when
> > > > > >
> > > > > >

> > > > > >you
> > > > > >
> > > > > > > >flip to
> > > > > > > >
> > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > >any
> > >
> > > >
> > > > >ALC
> > > > > >
> > > > > > >
> > > > > > > >meter
> > > > > > > >
> > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > >
> > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >
> > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > >
> > > > > > > > > > > you should reach a point where it will drive meter hard up
> >scale.
> > >
> > > >
> > > > >Quickly
> > > > > >
> > > > > > > >turn
> > > > > > > >
> > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >
> > > > >box.
> > > > > >
> > > > > > >Mic
> > > > > > >
> > > > > > > > >gain
> > > > > > > >
> > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >
> > > >far
> > > > >
> > > > > >
> > > > > > >end of
> > > > > > >
> > > > > > > > >ALC
> > > > > > > >
> > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >
> > > > >times
> > > > > >

> > > > > >
> > > > > > > >until you
> > > > > > > >
> > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > >This
> > >
> > >
> > > > > > > >adjustment is
> > > > > > > >
> > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > >tends
> > >
> > > > >to
> > > >
> > > > >
> > > > > > >peg
> > > > > >
> > > > > > > > >hard
> > > > > > > >
> > > > > > > > > > > right and then slowly come back down. So it will tend to float
> >
> > > > > >around
> > > > >
> > > > > > >the
> > > > > >
> > > > > > > > >max
> > > > > > > >
> > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > >meter
> > >
> > > > >to
> > > >
> > > > >
> > > > > > >Comp
> > > > > >
> > > > > > > > >you
> > > > > > > >
> > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > ________________________________
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment

> > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > >
> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > >(Heater
> > > > >
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >etc), but
> > > > > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not
> > > >"align"
> > > >
> > > > > >
> > > > > > >the
> > > > > >
> > > > > > >
> > > > > > > > >speech
> > > > > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >
> > > > >the
> > > > > >
> > > > > > >AG
> > > > > > >
> > > > > > > > >output to
> > > > > > > > >
> > > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > >maximum
> > > >
> > > > > >
> > > > > > > > >on-scale ALC
> > > > > > > > >
> > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > >
> > > > > >turn
> > > > > > >
> > > > > > > > >the

> > > > > >
> > > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > >meter
> > >
> > > >at
> > > >
> > > > >
> > > > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >pages
> > > >
> > > > >
> > > > > > > >40&41. As
> > > > > > > >
> > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >
> > > > >switch
> > > > >
> > > > > >and
> > > > > >
> > > > > > > >LEAVE
> > > > > > > >
> > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >
> > > > > > >heater
> > > > > >
> > > > > > > >off of the
> > > > > > > >
> > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > >step
> > >
> > >
> > > > > > > >conditions still

> > > > > > > >
> > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > >"max
> > > >
> > > >
> > > > > >meter
> > > > > > >
> > > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > >reading.
> > > >
> > > >
> > > > > >That
> > > > > >
> > > > > > > >
> > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > >indication
> > > >
> > > > > >
> > > > > > > >of
> > > > > > >
> > > > > > > >20db
> > > > > > > >
> > > > > > > > >and
> > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > >with
> > > >
> > > > > >a
> > > > > > >
> > > > > > >
> > > > > > > > >multi-scale
> > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > >meter
> > > >
> > > >
> > > > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > >
> > > > > >mic
> > > > > > >

> > > > >
> > > > > >gain
> > > > > >
> > > > > > >
> > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > >1200
> > >
> > > >
> > > > >and
> > > > >
> > > > > >
> > > > > > > >peaked L27.
> > > > > > > > > > > >
> > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > >would
> > >
> > >
> > > > >say
> > > > >
> > > > >
> > > > > > > >something
> > > > > > > >
> > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > >box".
> > > >
> > > > >
> > > > > >Just
> > > > > >
> > > > > > > >make it
> > > > > > > >
> > > > > > > > > > > >very clear what meter position and what scale you are to
> > read.
> > > > > > > > > > > >
> > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >
> > > > > >heater
> > > > > >
> > > > > > > >switch on
> > > > > > > >
> > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > >-K9TW
> > >
> > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > > >

> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> >
> > > > >chance
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > > >check
> > > > > > > > >
> > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > > >so
> > > >
> > > > >I
> > > > >
> > > > >
> > > > > > >will
> > > > > > >
> > > > > > > > >give it a
> > > > > > > > >
> > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >
> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > >in
> > > >
> > > >
> > > > >the
> > > > >
> > > > > > >830
> > > > > > >
> > > > > > > > >at the
> > > > > > > > >
> > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Cheers

> > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > ----------
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > ----------
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > ----------
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > [Non-text portions of this message have been removed]
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> > > > ------------------------------------
> > > >
> > > > Yahoo! Groups Links
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > > >
> > > >
> > >
> > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > >about
> > > >
> > > > out of ideas.
> > > >
> > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > >
> > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > >
> > > > position.
> > > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > >at
> > > >
> > > >
> > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > > >heater
> > > >
> > > > switches. Let it warm up a little.
> > > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >Wave
> > > >
> > > >
> > > > Tek generator to exactly 10 mv.
> > > >
> > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > place meter switch in ALC position.
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the max

> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >
> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.
> > > >
> > > > I flip to Send and the ALC meter indication is a little bit more outside the
> >
> > > > black ALC box. It could be adjusted a little to get a match if I had the
> > >covers
> > >
> > > >
> > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > >just
> > > >
> > > > a little above 20db on the Comp scale.
> > > >
> > > > I repeatedly switched Proc on and off and get the same results. In short my
> > >as
> > >
> > >
> > > > found condition for my daily operator is very close to being right on the
> > >same
> > >
> > >
> > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > >on
> > >
> > > >
> > > > and off.
> > > >
> > > > At this point Chris not sure I can be of any more help? I will think about it
> > >
> > > > some more and if I come up with something will write.
> > > >
> > > > Whatever you do you should not have to increase mic gain position or increase
> > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >your
> > >
> > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > >I
> > >
> > >
> > > > wouldnt think much higher.
> > > >

> > > > Also, you might want to measure the sig gen level at your mic connection when
> > > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > >Good
> > > >
> > > >
> > > > luck Terry
> > > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > Hi Terry,
> > > > >
> > > > The only difference from my original post is that I increased the "gain" on
> > >the
> > > >
> > > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > > >
> > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > >
> > > >in
> > > > >
> > > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > >right
> > > >
> > > > >
> > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > >
> > > > Hope this makes sense..
> > > > >
> > > > Cheers
> > > > Chris
> > > > >
> > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >

> > > > > Chris--This appears different than what you originally reported of getting
> > >no
> > >
> > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> >
> > > > >Where
> > > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > >hard
> > >
> > > >
> > > > >on
> > > > > >
> > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > >
> > > >the
> > > > >
> > > > > >
> > > > > > peg.
> > > > > >
> > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >
> > > >off
> > > > >
> > > > >
> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > >back
> > >
> > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > >
> > > >to
> > > > >
> > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > >
> > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > > > >
> > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >
> > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > >
> > >
> > > > > PROC NOT engaged, just Mic.
> > > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > > >
> > > > > > It doesn't weigh up here.
> > > > > > >
> > > > > > Following to the letter the service manual and then taking into account
> > > >your
> > > >
> > > >
> > > > >notes, the final situation is that I end up with full on-scale deflection
> > >of
> > >
> > > >
> > > > >ALC
> > > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > >meter)
> > > >
> > > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > > >
> > > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >
> > > > > > >
> > > > > > Thanks
> > > > > > Chris
> > > > > > >
> > > > > > Sent from my iPhone
> > > > > > >
> > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > >
> > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > >have
> > >
> > >
> > > > >same

> > > > >
> > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > >adjust
> > > >
> > > >
> > > > > >mic
> > > > > >
> > > > > > > gain or input signal level once balanced. You should be able to flip to
> > >
> > > >Tune
> > > > >
> > > > >
> > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > >
> > > > > > > If you initially get no indication (I think that is your problem?) you
> > >
> > > >can
> > > >
> > > > >
> > > > > >move
> > > > > >
> > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > >
> > > >will
> > > > >
> > > > > >be
> > > > > >
> > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > >is
> > >
> > > >
> > > > >to
> > > > >
> > > > > >set
> > > > > >
> > > > > > > audio generator output higher as others suggested. I chose to just
> > > >increase
> > > >
> > > > >
> > > > > > > mic gain until I got an indication. After I found that point I no
> > >longer
> > >
> > >
> > > > >needed
> > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> >
> > > >would
> > > > >

> > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > >good
> > >
> > >
> > > > > >matched
> > > > > > >
> > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > > Thanks Terry,
> > > > > > > >
> > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >then
> > >
> > > >ON
> > > > >
> > > > >
> > > > > >to
> > > > >
> > > > > > same point? that's what it states from memory... point of exercise is
> > >to
> > >
> > >
> > > >have
> > > > >
> > > > >
> > > > > > ALC reading same position with Proc ON and OFF.
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > >equal
> > >
> > >
> > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > >
> > > >with
> > > > >
> > > > >
> > > > > >the
> > > > > >

> > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >I
> > > >
> > > > >
> > > > > >no
> > > > > >
> > > > > >
> > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > >any
> > > >
> > > >
> > > > > > >lower on
> > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Thanks Terry....
> > > > > > > > > > >
> > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > >NZ
> > > >
> > > >
> > > > > > > > >time.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > >switch
> > > > > >
> > > > > > > > >
> > > > > > > > > > >in
> > > > > > > > > > >
> > > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > >at
> > > >
> > > >
> > > > > > >20db
> > > > > > >
> > > > > > > > > >on
> > > > > > > > > > >

> > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > >box.
> > > >
> > > > >
> > > > > >Less
> > > > > > >
> > > > > > > > >decay time to mess with. Terry
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > ><wagstw46@>
> > > > > >
> > > > > > >
> > > > > > > > > wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > >
> > > > >max
> > > > > >
> > > > > > >
> > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> >
> > > > >end
> > > > > >
> > > > > > >of
> > > > > > > >
> > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >ALC
> > > > > > > > > > > > >
> > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> >
> > > > > > >between
> > > > > > > > >
> > > > > > > > > > > >1000 and
> > > > > > > > > > > > >
> > > > > > > > > > > > > 1100.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would

> > >you
> > >
> > > >
> > > > > >expect
> > > > > > >
> > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > >the
> > > >
> > > > > >meter
> > > > > > >
> > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > >
> > > > > >what
> > > > > > >
> > > > > > >
> > > > > > > > > >would you
> > > > > > > > > > >
> > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> >
> > > >gain
> > > > > >
> > > > > > > > >not
> > > > > > > > > >
> > > > > > > > > > > > >touched
> > > > > > > > > > >
> > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > >when
> > > > > >
> > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > >flip to
> > > > > > > > > > >
> > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > >any
> > > >
> > > > > >
> > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > >meter

> > > > > > > >
> > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > >
> > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > >
> > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > >scale.
> > >
> > > > >
> > > > > > >Quickly
> > > > > > >
> > > > > > > > >turn
> > > > > > > > >
> > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > >
> > > > >box.
> > > > > >
> > > > > > >Mic
> > > > > > >
> > > > > > > > >gain
> > > > > > > > >
> > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> >
> > > >far
> > > > >
> > > > >
> > > > > > >end of
> > > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > >
> > > > >times
> > > > > >
> > > > > > > >
> > > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > >This
> > >
> > >
> > > > > > > > >adjustment is
> > > > > > > > >
> > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > >tends
> > >

> > > >to
> > > >
> > > > >
> > > > > >peg
> > > > > >
> > > > > > > >hard
> > > > > > > > >
> > > > > > > > > > > right and then slowly come back down. So it will tend to float
> >
> > > > >around
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >max
> > > > > > > > >
> > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > >meter
> > > >
> > > >to
> > > > >
> > > > > >
> > > > > > >Comp
> > > > > > >
> > > > > > > > >you
> > > > > > > > >
> > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > >
> > > > > > > > > > > Terry
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment
> > > > > > > > > > >
> > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > >
> > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > >(Heater
> > > > >
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >etc), but
> > > > > > > > >
> > > > > > > > > > > none of it explains why I (and evidently others), can not

> > >"align"
> > >
> > > >
> > > > >the
> > > > > >
> > > > > > >
> > > > > > > >speech
> > > > > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >
> > > > >the
> > > > > >
> > > > > > >
> > > > > > > >AG
> > > > > > > > >
> > > > > > > > > >output to
> > > > > > > > > > >
> > > > > > > > > > > 10 mV
> > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > >maximum
> > > >
> > > > >
> > > > > > >on-scale ALC
> > > > > > > > >
> > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > >
> > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > >on-scaled).
> > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > >
> > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > >
> > > > >turn
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > >Proc ON
> > > > > > > > > >
> > > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > >meter
> > > >
> > > > >at
> > > > > >
> > > > > > >
> > > > > > > >this

> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >pages
> > > >
> > > > >
> > > > > > > >40&41. As
> > > > > > > >
> > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> >
> > > > >switch
> > > > >
> > > > > >and
> > > > > >
> > > > > > > >LEAVE
> > > > > > > >
> > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >
> > > > > >heater
> > > > > >
> > > > > > > >off of the
> > > > > > > >
> > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > >step
> > >
> > >
> > > > > > > >conditions still
> > > > > > > >
> > > > > > > > > > > >being in force?
> > > > > > > > > > > >
> > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > >"max
> > >
> > >
> > > > > >meter
> > > > > >
> > > > > > > >reading on
> > > > > > > >
> > > > > > > > > > > >the Compression Scale".

> > > > > > > > > > > > >
> > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > >reading.
> > >
> > >
> > > > >That
> > > > > >
> > > > > > >
> > > > > > > > >would be on
> > > > > > > > > > >
> > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > >indication
> > >
> > > > >
> > > > > >of
> > > > > > >
> > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > >with
> > >
> > > >a
> > > > >
> > > > > >
> > > > > > > > >multi-scale
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > >meter
> > >
> > >
> > > > > >scale.
> 3. Step 3 is OK but I would prefer they would tell you to set
> > >
> > > >mic
> > > > > >
> > > > > > >
> > > > > > > >gain
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > >1200
> > >
> > > > >
> > > > > >and
> > > > > > >
> > > > > > > > >
> > > > > > > > > > >peaked L27.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > >would
> > >
> > >
> > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > >box".
> > > > >
> > > > > >
> > > > > > >Just
> > > > > > >
> > > > > > > > >make it
> > > > > > > > > >
> > > > > > > > > > > > > >very clear what meter position and what scale you are to
> > read.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > >
> > > > > >heater
> > > > > > >
> > > > > > > > >switch on
> > > > > > > > > >
> > > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > >-K9TW
> > >
> > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > >
> > > > > >chance
> > > > > > >
> > > > > > > > >to
> > > > > > > > > >
> > > > > > > > > > > > > >check
> > > > > > > > > > >
> > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > > >

> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > > >so
> > > >
> > > >I
> > > >
> > > >
> > > > >will
> > > > >
> > > > > >give it a
> > > > > >
> > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >
> > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > > >in
> > > >
> > > >
> > > > >the
> > > > >
> > > > > >830
> > > > > >
> > > > > > >at the
> > > > > > >
> > > > > > > >weekend?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >

> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
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> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >

> > > > [Non-text portions of this message have been removed]
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> > > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> > > ------------------------------------
> > >
> > > Yahoo! Groups Links
> > >
> > > [Non-text portions of this message have been removed]
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> > >
> >
> > [Non-text portions of this message have been removed]
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links
> >
> > [Non-text portions of this message have been removed]
> >
> >
>
>
>
> [Non-text portions of this message have been removed]
>

31935. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 21:02:11 UTC
From: Terry Wagoner
Topic: 31878 Message: 31935

Chris--I forgot to add as a point of reference my pots and coils are as follows:
VR-5 = 1100
VR-7 = 0930
L26 slug is near the top at 1130
L27 slug is near the top at 1000

I am going back and repeating my Step 31. Terry

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, June 18, 2011 4:31:42 PM
Subject: [TS-520_820_530_830] Re: Speech Processor alignment

Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!

1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?

2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.

3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.

4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.

5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.

6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.

7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.

8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.

Good Luck-Terry K9TW

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> Yes I do have Skype, and am happy to try this... I have just sent you and Mike >an email off list with some voltage measurements.
>
> Cheers
> Chris
>
>
> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>
> > Chris--
> >
> > Do you have Skype? Maybe we could connect on Skype and perform each step
> > together on our rigs and see at what step we differ. Not sure if we could >have
>
> > clear enough real time video or not for this to work. Not sure about our time
>
> > difference, but could schedule it Zulu/GMT just as we would a QSO.
> >
> > Maybe Mike or Gordon would be better to do this with you as they repair these
>
> > rigs for a living? As you know I had never performed this step until you >asked
>
> > about it. In fact I have never completed a full alignment as I dont have >sweep
>
> > generator. I have just done selected steps.
> >
> > Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Fri, June 17, 2011 9:55:30 PM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
>
> > have no attenuation in there)...
> >

> > So I got some test reference dBmA numbers against my calibrated probe and
>wrote
>
> > down the numbers for 5mV, 10mV and 50mV before I started again.
> > So... re-did the whole thing and of course, its more in line with your "Mic
>Gain
>
> > 4" setting now, but still a huge difference when going from PROC OFF to PROC
>ON
>
> > with regards to ALC readings.
> >
> > When the ALC meter is at full ALC gauge reading with PROC ON, the second I
>turn
>
> > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> >
> > I may record a small video and send it to you... easier to see what I mean
>and
>
> > what i'm doing.
> >
> > Turning the Mic gain up and down of course makes a difference, but the point
>is,
>
> > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> >
> > Cheers
> > Chris
> >
> > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> >
> > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv
>1500hz
>
> > > test signals.
> > >
> > > With your mic gain at No. 4 it appears you have much more gain than I do in
>my
>
> >
> > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is
>just
>
> > > where I can get a good match at far right end of ALC black box.
> > >
> > > With Proc off and 10mv injected it doesnt take much adjustment right around
>the
>
> > >

> > > No. 4 setting of the mic gain to peg the meter or to have it fall back and
>have
>
> > >
> > > no meter indication. I do know with both of my rigs I end up at very close
>to
>
> > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > >
> > > I assume you have tried adjusting the mic gain down while leaving required
>10mv
>
> > >
> > > signal injected? I found it a little touchy. When you first reported no
>meter
>
> > > indication that is why I suggested turning mic gain up a little. Maybe I am
>
> > > starting to get confused regards what your problem is.
> > >
> > > If turning mic gain down a little doesnt help then I would say it is on to

> > > troubleshooting with Mike.
> > >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry / Mike.....
> > >
> > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
>
> > > piece of kit.
> > > Here's what I see when I follow your instructions:
> > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >
> > > Exactly the same as me Terry, except my mini clips are connected directly
>to
>
> > >the
> > >
> > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > >
> > > > I have the mic gain set exactly at

> > > > No. 4 position.
> > > >
> > > Same here
> > >
> > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > switches. Let it warm up a little.
> > > >
> > > Same here
> > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>
> > >Wave
> > >
> > >
> > > > Tek generator to exactly 10 mv
> > > >
> > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > >
> > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>
> > > > place meter switch in ALC position.
> > > >
> > >
> > > Same here
> > >
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the
>max
>
> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >
> > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and
>10mV
>
> > > and USB mode, I flick to send and I get full scale meter deflection in ALC
>mode
>
> > >
> > > (Full meter deflection, not on-scale ALC meter deflection, so if you look
>at
>
> > > s-meter scale, it's S9+40dB +).
> > >
> > > >
> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.

> > > >
> > > With Proc on, and Proc level fully clockwise, not adjusting any gains at
>either
>
> > > >
> > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
>
> > > now.. (I am only using the S-Meter scale as it's easier for you to gauge
>what
>
> > > I'm saying and seeing.
> > > >
> > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum

> > > "On-Scale" ALC reading, so now I get an accurate end of scale reading
>without
>
> > > PROC ON, which on the S-Meter is S-9.
> > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > minimum.
> > > >
> > > > >
> > > > I flip to Send and the ALC meter indication is a little bit more outside
>the
>
> > >
> > > > black ALC box.
> > > > >
> > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with
>PROC
>
> > > >
> > > OFF, I put PROC ON and the reading drops to around the end of the letter C
>of
>
> > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >
> > > > It could be adjusted a little to get a match if I had the covers
> > > > off, but close enough.
> > > > >
> > > >
> > > I check L27 and find it's at it's peak, so I cannot go any higher and align
>
> > >them
> > > >
> > > with the PROC ON.
> > > >
> > > > I switch the meter from ALC to Comp and it indicates just
> > > > a little above 20db on the Comp scale.
> > > > >

> > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
>
> > > adjust L26 for 20dB reading.
> > >
> > > I will need to do some component checking in the circuit around the
>Processor
>
> > >as
> > >
> > > Mike and yourself have recommended.
> > >
> > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > >
> > > > I repeatedly switched Proc on and off and get the same results. In short
>my
>
> > >as
> > >
> > >
> > > > found condition for my daily operator is very close to being right on the
>
> > >same
> > >
> > >
> > > > indicated level on the ALC meter scale (near max on black border) with
>Proc
>
> > >on
> > >
> > > >
> > > > and off.
> > > >
> > > > At this point Chris not sure I can be of any more help? I will think
>about it
>
> > >
> > > > some more and if I come up with something will write.
> > > >
> > > > Whatever you do you should not have to increase mic gain position or
>increase
>
> > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain
>in
>
> > >your

> > >
> > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain ,
>but
>
> > >I
> > >
> > >
> > > > wouldnt think much higher.
> > > >
> > > > Also, you might want to measure the sig gen level at your mic connection
>when
>
> > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary
>from
>
> >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
>
> > >Good
> > >
> > >
> > > > luck Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry,
> > > >
> > > > The only difference from my original post is that I increased the "gain"
>on
>
> > >the
> > >
> > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > >
> > > > I don't leave it pegged, I immediately back down the Mic gain to
>compensate.
> > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>

> > >
> > > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
>
> > > >right
> > > >
> > > > >
> > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > >
> > > > > Hope this makes sense..
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--This appears different than what you originally reported of
>getting
>
> > > >no
> > > >
> > > > >
> > > > > > ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > >
> > > > > >Where
> > > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it
>is
>
> > > >hard
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > the movement. I would slowly turn down mic gain until I could get meter
>off
>
> > > >
> > > > >the
> > > > >
> > > > > > >
> > > > > > peg.
> > > > > >
> > > > > >

> > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at
>least
>
> >
> > > >off
> > > >
> > > >
> > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
>
> > >back
> > >
> > >
> > > > > what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > >
> > > >to
> > > >
> > > >
> > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > >
> > > >in
> > > >
> > > >
> > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black
>ALC
>
> >
> > > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > >
> > >
> > > > > > PROC NOT engaged, just Mic.
> > > > > >
> > > > > > Chris
> > > > > > Sent from my iPhone
> > > > > >

> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >
> > > > > > Following to the letter the service manual and then taking into
>account
>
> > > >your
> > > >
> > > >
> > > > >notes, the final situation is that I end up with full on-scale
>deflection
>
> > >of
> > >
> > > >
> > > > >ALC
> > > > >
> > > > >(ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > >meter)
> > > >
> > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > >
> > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC
>OFF.
>
> >
> > > > > > >
> > > > > > > Thanks
> > > > > > > Chris
> > > > > > >
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > >
> > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
>
> > >have
> > >
> > >
> > > >same
> > > >
> > > >
> > > > > > > > ALC reading (max) with Processor on and off. You should not have to

>
> > > >adjust
> > > >
> > > >
> > > > > >mic
> > > > > > >
> > > > > > > > gain or input signal level once balanced. You should be able to
>flip to
>
> > >
> > > > >Tune
> > > > > >
> > > > > >
> > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > >
> > > > > > > > If you initially get no indication (I think that is your problem?)
>you
>
> > >
> > > >can
> > > > >
> > > > > >
> > > > > > >move
> > > > > > >
> > > > > > > > mic gain up slightly until you get an indication. It wont take much
>and
>
> > >
> > > > >will
> > > > > >
> > > > > > >be
> > > > > > >
> > > > > > > > very touchy and will want to peg the meter. Only other choice you
>have
>
> > >is
> > >
> > > > >
> > > > >to
> > > > > >
> > > > > > >set
> > > > > > >
> > > > > > > > audio generator output higher as others suggested. I chose to just

> > > >increase
> > > > >
> > > > > >
> > > > > > > > mic gain until I got an indication. After I found that point I no
> > >longer
> > >

> > >
> > > > > >needed
> > > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then
>it
>
> >
> > > > >would
> > > > > >
> > > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
>
> > >good
> > >
> > >
> > > > > >matched
> > > > > >
> > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Thanks Terry,
> > > > > > >
> > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>
> > >then
> > >
> > > >ON
> > > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > > same point? that's what it states from memory... point of exercise
>is
>
> > >to
> > >
> > >
> > > > >have
> > > > >
> > > > > >
> > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >

> > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good

> > >equal
> > >
> > >
> > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter
>scale
>
> >
> > > >with
> > > >
> > > > >
> > > > > >the
> > > > > >
> > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > >I
> > >
> > > >
> > > > >no
> > > > >
> > > > >
> > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant
>go
>
> > >any
> > >
> > >
> > > > > >lower on
> > > > > >
> > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > ><cparnell1001@>
> > > > > >
> > > > > > >
> > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Thanks Terry....
> > > > > > > > > > >
> > > > > > > > > > > > > Will hopefully get around to confirming all of this later
>tonight
>
> > >NZ
> > >
> > >

> > > > > >time.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >switch
> > > >
> > > > >
> > > > > >in
> > > > > >
> > > > > > > > >the ALC position) to do your adjustment with the ALC indicated
>level
>
> > >at
> > >
> > >
> > > > >20db
> > > > >
> > > > > >on
> > > > > >
> > > > > > > > >the Compression scale as opposed to down at the high end of the
>ALC
>
> > >box.
> > >
> > >
> > > > >Less
> > > > >
> > > > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > ><wagstw46@>
> > > >
> > > >
> > > > > > > wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > Step A:
> > > > > > > > > > > > 1. You have the Processor button off and Compression level
>pot
>
> >
> > >max

> > > >
> > > >
> > > > > > > > >clockwise.
> > > > > > > > >
> > > > > > > > > > > > > > > > You are in USB mode.
> 2. You have the meter switch to ALC position.
> 3. You inject 1500hz @10 mv into mic input.
> 4. You flip Stand-by switch to Tune.
> 5. You adjust mic gain until meter pointer is at the far
>right
>
> >
> > > >end
> > > > >
> > > > > >of
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > > black bordered box.
> 6. You return to Stand-by.
> >
> Is the above correct? Where is your mic gain at? You should
>be
>
> >
> > > > > >between
> > > > > > > >
> > > > > > > > > >1000 and
> > > > > > > > > > >
> 1100.
> >
> You then turn Processor on with Comp Level max cw. What
>would
>
> > >you
> > > >
> > > > >
> > > > > >expect
> > > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > > >
> reading to do for the same mic gain setting? Would you
>expect
>
> > >the
> > > >
> > > > > >
> > > > > > > >meter

> > > > > >
> > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > hard upscale far right? If you had a mic connected and
>whistled
>
> > >
> > > > >what
> > > > > >
> > > > > >
> > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the
>mic
>
> >
> > > >gain
> > > > >
> > > > > >
> > > > > > >not
> > > > > > > >
> > > > > > > > > >touched
> > > > > > > > > > >
> > > > > > > > > > > > > > from above you are telling me that you have no ALC
>indication
>
> > > >when
> > > > >
> > > > > >
> > > > > > > >you
> > > > > > > > >
> > > > > > > > > > >flip to
> > > > > > > > > > >
> > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > >any
> > > >
> > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be

>very
>
> > >
> > > > > >sensitive
> > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > you should reach a point where it will drive meter hard up

> > >scale.
> > >
> > > > >
> > > > > >Quickly
> > > > > >
> > > > > > > > >turn
> > > > > > > > >
> > > > > > > > > > > mic gain back down until meter is at far right end of ALC
>black
>
> > >
> > > > >box.
> > > > > >
> > > > > >Mic
> > > > > >
> > > > > > > > >gain
> > > > > > > > >
> > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying
>at
>
> >
> > > >far
> > > > >
> > > > >
> > > > > >end of
> > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > box you can peak L27. You may have to go back and forth
>several
>
> > >
> > > > >times
> > > > > >
> > > > > >
> > > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
>
> > >This
> > >

> > >
> > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter

> > >tends
> > >
> > > >to
> > > > >
> > > > > >
> > > > > > >peg
> > > > > > > >
> > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > > > > > right and then slowly come back down. So it will tend to
>float
>
> >
> > > > >around
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > >max
> > > > > > > > > >
> > > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch

> > >meter
> > >
> > > >to
> > > > >
> > > > > >
> > > > > > >Comp
> > > > > > > >
> > > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment
> > > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > > >

> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
>
> > > >(Heater
> > > >
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >etc), but
> > > > > > > > > > >
> > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > >"align"
> > > >
> > > > >
> > > > > >the
> > > > > > >
> > > > > > > >
> > > > > > > > >speech
> > > > > > > > > > >
> > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum.
>Set
>
> > >
> > > >the
> > > > > >
> > > > > > >
> > > > > > > >AG
> > > > > > > > >
> > > > > > > > > > >output to
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > >maximum
> > > >
> > > > > >
> > > > > > > > >on-scale ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > > > >on-scaled).
> > > > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > > > Every step up until here works fine. I get to the point
>where I
>

> > >
> > > > >turn
> > > > >
> > > > > >the
> > > > > >
> > > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > and
> > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the

> > >meter
> > >
> > > >at
> > > >
> > > > >
> > > > > >this
> > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment
>on
>
> > > >pages
> > > > >
> > > > > >
> > > > > > > > >40&41. As
> > > > > > > > >
> > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > >
> > > > > > > > > > > They should tell you to load up normally. Then switch off
>SG
>
> > >
> > > > >switch
> > > > > >
> > > > > > >and
> > > > > > >
> > > > > > > > >LEAVE
> > > > > > > > >
> > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with
>the

>
> > >
> > > > > >heater
> > > > > >
> > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
>
> > >step
> > >
> > >
> > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > > > >being in force?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
>
> > >"max
> > >
> > >
> > > > > >meter
> > > > > > >
> > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > >reading.
> > >
> > >
> > > > >That
> > > > > >
> > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > >indication
> > >
> > > > >
> > > > >of
> > > > > >
> > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
>
> > >with
> > >
> > > > >a

> > > >
> > > >
> > > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > > > >meter for them to tell you the expected value and on what

> > >meter
> > >
> > >
> > > > > >scale.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to
>set
>
> > >
> > > >mic
> > > >
> > > > >
> > > > > >gain
> > > > > >
> > > > > > >
> > > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > >1200
> > >
> > > >
> > > > >and
> > > > >
> > > > > >
> > > > > > > > > >peaked L27.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they

> > >would
> > >
> > >
> > > > >say
> > > > >
> > > > > >
> > > > > > > > > >something
> > > > > > > > >
> > > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter
>scale
>
> > > >box".
> > > >
> > > > >
> > > > > >Just
> > > > > >
> > > > > > >
> > > > > > > > > >make it

> > > > > > > >
> > > > > > > > > > > > >very clear what meter position and what scale you are to
> > read.
> > > > > > > > > > > > >
> > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and
>leave
>
> > >
> > > > > >heater
> > > > > > >
> > > > > > > > >switch on
> > > > > > > > >
> > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
>
> > >-K9TW
> > >
> > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had
>much
>
> >
> > > > > >chance
> > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > > > > > >check
> > > > > > > > > > > > >
> > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all
>day
>
> > >so
> > >

> > > >I
> > > >
> > > >
> > > > > >will
> > > > > > >
> > > > > > > > >give it a
> > > > > > > > > >
> > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > > > > >
> --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell
>
> >
> > > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > > >
> Hi Terry, did you get chance to test the SP
>alignment
>
> > >in
> > > >
> > > >
> > > > > >the
> > > > > > >
> > > > > > > > >830
> > > > > > > > > >
> > > > > > > > > > > > > >at the
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >weekend?
> >
> >
> Cheers
> Chris, ZL1CDP
> >
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> >
> >
> >
> >
> >

> > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
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> > > > > > > > > > > Yahoo! Groups Links
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> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >

> > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > >
> > > > Chris--I will give some more thought. Not sure what is going on. I am
>just
>
> > > >about
> > > >
> > > > out of ideas.
> > > >
> > > > I just repeated the test on my daily operating TS-830 with the covers on
>the
>
> > >
> > > > rig. I just unplugged the mic and brought the test equipment to the
>operating
>
> > >
> > > > position.
> > > >
> > > > I use a spare mic connector and clipped the generator output to it with
> > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set
>exactly
>
> > >at
> > >
> > >
> > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
>
> > > >heater
> > > >
> > > > switches. Let it warm up a little.
> > > >
> > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>
> > >Wave
> > >
> > >
> > > > Tek generator to exactly 10 mv.
> > > >
> > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB.
>I
>
> > > > place meter switch in ALC position.
> > > >
> > > > I then flip to Send and get ALC meter indication that is just outside the
>max
>
> > >
> > > > end of the black ALC box. Maybe a needles worth.
> > > >

> > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >position
> > >
> > > >
> > > > and I have not touched mic gain pot.
> > > > >
> > > > > I flip to Send and the ALC meter indication is a little bit more outside
>the
>
> >
> > > > > black ALC box. It could be adjusted a little to get a match if I had the

> > >covers
> > >
> > > >
> > > > off, but close enough. I switch the meter from ALC to Comp and it
>indicates
>
> > > >just
> > > >
> > > > a little above 20db on the Comp scale.
> > > > >
> > > > > I repeatedly switched Proc on and off and get the same results. In short
>my
>
> > >as
> > >
> > >
> > > > found condition for my daily operator is very close to being right on the
>
> > >same
> > >
> > >
> > > > indicated level on the ALC meter scale (near max on black border) with
>Proc
>
> > >on
> > >
> > > >
> > > > and off.
> > > > >
> > > > > At this point Chris not sure I can be of any more help? I will think
>about it
>
> > >
> > > > some more and if I come up with something will write.
> > > > >
> > > > > Whatever you do you should not have to increase mic gain position or
>increase
>

> > >
> > > > audio generator output level above 10 mv. Depending on the pre-amp gain
>in
>
> > >your
> > >
> > > >
> > > > rig you may have to be a little higher than position 4 on the mic gain ,
>but
>
> > >I
> > >
> > >
> > > > wouldnt think much higher.
> > > >
> > > > Also, you might want to measure the sig gen level at your mic connection
>when
>
> > >
> > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary
>from
>
> >
> > > > Stand-by to Send. Other than that I think I have exhausted my experience.
>
> > >Good
> > >
> > >
> > > > luck Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry,
> > > >
> > > > The only difference from my original post is that I increased the "gain"
>on
>
> > >the
> > >
> > > >
> > > > input (Mic gain), therefore got an ALC reading.
> > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >why...
> > > >
> > > > I don't leave it pegged, I immediately back down the Mic gain to
>compensate.

> > > >
> > > > > Based on what you are reporting I would expect it to
> > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
>
> > > >right
> > > >
> > > > >
> > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > >
> > > > > Hope this makes sense..
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--This appears different than what you originally reported of
>getting
>
> > > >no
> > > >
> > > > >
> > > > > > ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > >
> > > > > >Where
> > > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it
>is
>
> > > >hard
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > the movement. I would slowly turn down mic gain until I could get meter
>off
>
> > > >

> > > >the
> > > >
> > > > >
> > > > > peg.
> > > > > >
> > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at
>least
>
> >
> > > >off
> > > > >
> > > > >
> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
>
> > >back
> > > >
> > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > > >
> > > > >to
> > > > >
> > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black
>ALC
>
> >
> > > > > > setting), with processor on and full scale (pegged meter) deflection
> > >without
> > > >
> > > >

> > > > > PROC NOT engaged, just Mic.
> > > > >
> > > > > Chris
> > > > > Sent from my iPhone
> > > > >
> > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > >
> > > > > > Hi Terry, in a nutshell,
> > > > > >
> > > > > > It doesn't weigh up here.
> > > > > >
> > > > > > Following to the letter the service manual and then taking into
>account
>
> > > >your
> > > > >
> > > > >
> > > > > >notes, the final situation is that I end up with full on-scale
>deflection
>
> > >of
> > > >
> > > > >
> > > > >ALC
> > > > >
> > > > > >(ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > >meter)
> > > > >
> > > > > >
> > > > > >deflection without PROC engaged, just Mic.
> > > > > >
> > > > > >
> > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC
>OFF.
>
> >
> > > > > > Thanks
> > > > > > Chris
> > > > > >
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > >
> > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
>
> > >have
> > > >

> > >
> > > > >same
> > > > >
> > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
>
> > > >adjust
> > > > >
> > > > >
> > > > > > >mic
> > > > > > >
> > > > > > > > gain or input signal level once balanced. You should be able to
>flip to
>
> > >
> > > > >Tune
> > > > > >
> > > > > >
> > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > >
> > > > > > > > If you initially get no indication (I think that is your problem?)
>you
>
> > >
> > > >can
> > > > >
> > > > > >
> > > > > > >move
> > > > > > >
> > > > > > > > mic gain up slightly until you get an indication. It wont take much
>and
>
> > >
> > > > >will
> > > > > >
> > > > > > >be
> > > > > > >
> > > > > > > > very touchy and will want to peg the meter. Only other choice you
>have
>
> > >is
> > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > >set
> > > > > > >
> > > > > > > > audio generator output higher as others suggested. I chose to just

> > > >increase
> > > >
> > > > >
> > > > > > > mic gain until I got an indication. After I found that point I no
> > >longer
> > >
> > >
> > > > > >needed
> > > > > >
> > > > > > > to touch the mic gain. If I had to increase mic gain each time then
>it
>
> >
> > > > >would
> > > > > >
> > > > > >
> > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
>
> > >good
> > >
> > >
> > > > > >matched
> > > > > > >
> > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > Thanks Terry,
> > > > > > > >
> > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>
> > >then
> > >
> > > >ON
> > > >
> > > > >
> > > > > >to
> > > > > >
> > > > > > > same point? that's what it states from memory... point of exercise
>is
>
> > >to
> > >
> > >
> > > > > >have
> > > > > >
> > > > > > >

> > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > >equal
> > > >
> > > >
> > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter
>scale
>
> >
> > > >with
> > > >
> > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > >I
> > >
> > > >
> > > > > >no
> > > > > >
> > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant
>go
>
> > >any
> > >
> > >
> > > > > > >lower on
> > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > >
> > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Thanks Terry....
> > > > > > > > > > >
> > > > > > > > > > > Will hopefully get around to confirming all of this later

>tonight
>
> > >NZ
> > >
> > >
> > > > > >time.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >switch
> > > > >
> > > > >
> > > > > >in
> > > > > >
> > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated
>level
>
> > >at
> > > >
> > > >
> > > > > >20db
> > > > > >
> > > > > > >on
> > > > > >
> > > > > > > > > >the Compression scale as opposed to down at the high end of the
>ALC
>
> > >box.
> > > >
> > > > >
> > > > > >Less
> > > > > >
> > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > ><wagstw46@>
> > > > >
> > > > >
> > > > > > > > > > wrote:
> > > > > > > > > >
> > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > Step A:

> > > > > > > > > > > 1. You have the Processor button off and Compression level
>pot
>
> >
> > > >max
> > > >
> > > >
> > > > > > > >clockwise.
> > > > > > > > >
> > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far
>right
>
> >
> > > >end
> > > >
> > > > >of
> > > > >
> > > > > >the
> > > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > > > > black bordered box.
> > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > >
> > > > > > > > > > > Is the above correct? Where is your mic gain at? You should
>be
>
> >
> > > > > >between
> > > > > >
> > > > > > >1000 and
> > > > > > >
> > > > > > > > > > 1100.
> > > > > > > > > > >
> > > > > > > > > > > You then turn Processor on with Comp Level max cw. What
>would
>
> > >you
> > >
> > > >
> > > > > >expect
> > > > > >
> > > > > > >the ALC
> > > > > > >
> > > > > > > > > > reading to do for the same mic gain setting? Would you
>expect

>
> > >the
> > >
> > > >
> > > > > >meter
> > > > > > >
> > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > hard upscale far right? If you had a mic connected and
>whistled
>
> > >
> > > > >what
> > > > > >
> > > > > >
> > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > > Step B:
> > > > > > > > > > > > With Processor on and Comp level set max clockwise and the
>mic
>
> >
> > > >gain
> > > > >
> > > > > >
> > > > > > >not
> > > > > > >
> > > > > > > > >touched
> > > > > > > > >
> > > > > > > > > > > > from above you are telling me that you have no ALC
>indication
>
> > > >when
> > > > >
> > > > > >
> > > > > > >you
> > > > > > >
> > > > > > > > >flip to
> > > > > > > > >
> > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > >any
> > > >
> > > > >
> > > > > >ALC
> > > > > >
> > > > > > >

> > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > >
> > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be
>very
>
> > >
> > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > you should reach a point where it will drive meter hard up

> > >scale.
> > >
> > > > >
> > > > > > >Quickly
> > > > > > >
> > > > > > > > >turn
> > > > > > > > >
> > > > > > > > > > > > mic gain back down until meter is at far right end of ALC
>black
>
> > >
> > > > >box.
> > > > > >
> > > > > > >Mic
> > > > > > >
> > > > > > > > >gain
> > > > > > > > >
> > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying
>at
>
> >
> > > >far
> > > > >
> > > > >
> > > > > > >end of
> > > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > box you can peak L27. You may have to go back and forth
>several
>
> > >
> > > > >times
> > > > > >
> > > > > > > >
> > > > > > > > > >until you

> > > > > > > >
> > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
>
> > >This
> > >
> > >
> > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter

> > >tends
> > >
> > > >to
> > > >
> > > > >
> > > > > >peg
> > > > > > >
> > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > > right and then slowly come back down. So it will tend to
>float
>
> >
> > > > >around
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > >max
> > > > > > > > > >
> > > > > > > > > > > > > end of the ALC box until things settle down. If you switch

> > >meter
> > >
> > > >to
> > > >
> > > > >
> > > > > >Comp
> > > > > > >
> > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > _____
> > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM

> > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment
> > > > > > > > > > > >
> > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > >
> > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
>
> > > >(Heater
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > >etc), but
> > > > > > >
> > > > > > > > none of it explains why I (and evidently others), can not
> > >"align"
> > >
> > > >
> > > > > >the
> > > > > >
> > > > > > >
> > > > > > > > >speech
> > > > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum.
>Set
>
> > >
> > > >the
> > > >
> > > > >
> > > > > >AG
> > > > > >
> > > > > > >output to
> > > > > > >
> > > > > > > > > > > > 10 mV
> > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > >maximum
> > >
> > > >
> > > > > >on-scale ALC
> > > > > >
> > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > >
> > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > > > >on-scaled).
> > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......

> > > > > > > > > > >
> > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > Every step up until here works fine. I get to the point
>where I
>
> > >
> > > > >turn
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > >Proc ON
> > > > > > > > > > >
> > > > > > > > > > > > > and
> > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the

> > >meter
> > >
> > > >at
> > > > >
> > > > > >
> > > > > > >this
> > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment
>on
>
> > > >pages
> > > > > >
> > > > > > >
> > > > > > > > > >40&41. As
> > > > > > > > > > >
> > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > >
> > > > > > > > > > > > They should tell you to load up normally. Then switch off
>SG
>
> > >
> > > > >switch
> > > > > > >
> > > > > > > > >and

> > > > > >
> > > > > > > > >LEAVE
> > > > > > > > >
> > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with
>the
>
> > >
> > > > > >heater
> > > > > > >
> > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
>
> > >step
> > >
> > >
> > > > > > > > >conditions still
> > > > > > > > > >
> > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
>
> > >"max
> > >
> > >
> > > > > > >meter
> > > > > > > >
> > > > > > > > > >reading on
> > > > > > > > > >
> > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > >reading.
> > >
> > >
> > > > > >That
> > > > > > >
> > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > >indication
> > >
> > > > >
> > > > > >of
> > > > > > >
> > > > > > > >20db
> > > > > > > >
> > > > > > > > > >and
> > > > > > > > > >

> > > > > > > > > > > >that would be on the Compression Scale. So would be better
>
> > >with
> > >
> > > >a
> > > >
> > > >
> > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what

> > >meter
> > >
> > >
> > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to
>set
>
> > >
> > > >mic
> > > >
> > > > >
> > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > >1200
> > >
> > > >
> > > > >and
> > > > >
> > > > > >
> > > > > > > >peaked L27.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they

> > >would
> > >
> > >
> > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > >like "top or far right end of black bordered ALC meter
>scale
>
> > > >box".

> > > >
> > > > >
> > > > > >Just
> > > > > >
> > > > > > > >make it
> > > > > > > > >
> > > > > > > > > > > >very clear what meter position and what scale you are to
> > read.
> > > > > > > > > > > >
> > > > > > > > > > > > So, I think if you load up, place SG switch to off, and
>leave
>
> > >
> > > > > >heater
> > > > > >
> > > > > > > >switch on
> > > > > > > >
> > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
>
> > >-K9TW
> > >
> > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > >
> > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > >
> > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had
>much
>
> >
> > > > >chance
> > > > >
> > > > > >to
> > > > > >
> > > > > > > >check
> > > > > > > >
> > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > >

> > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all
>day
>
> > >so
> > >
> > > >I
> > > >
> > > >
> > > > > >will
> > > > > >
> > > > > > > >give it a
> > > > > > > >
> > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell
>
> >
> > > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP
>alignment
>
> > >in
> > >
> > >
> > > > >the
> > > > >
> > > > > >830
> > > > >
> > > > > > > >at the
> > > > > > > >
> > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
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> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
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> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >

> > > > [Non-text portions of this message have been removed]
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> > > ---
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> > > Yahoo! Groups Links
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> > ---
> >
> > Yahoo! Groups Links
> >
> > [Non-text portions of this message have been removed]
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31936. Re: inverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 21:08:02 UTC
From: james27613
Topic: 31928 Message: 31936

hi Craig,

these inverters output a modified sine wave.

http://www.whistlergroup.com/inverter-text2.html

any chance you can find or borrow a full sine wave
ups such as APC SmartUPS, Liebert, Eaton, etc.

I run a Liebert full sine wave ups, removed from
service at point of sale registers years ago.
To keep the ups happy I also use a TrippLite
line conditioner at field day.

you can find them on ebay inexpensive used.

73 james ke4drn

31937. Re: inverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 21:37:29 UTC
From: andy_westcott2004
Topic: 31928 Message: 31937

I'm unsure that your proposed batteries will be enough to operate the radio for very long.

The rig/inverter combination could well pull 30 amps from the battery during transmit, and with the Ah you have suggested you may have just a couple of hours 'key down' time.

Can you run a small and dirty generator at the event simply to run a battery charger to assist the battery capacity? A charger won't keep up with the TX load, but will gain some ground during RX if the charger is of a decent capacity.

31938. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-18 22:02:54 UTC
From: andy_westcott2004
Topic: 31874 Message: 31938

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Andy- I just found a real interesting article where a fellow modified his
> TS-820s with a screen grid shunt regulator circuit.
> Let me know what you think. Thanks Terry K9TW
>

Terry, that made very interesting reading and I have saved the page to my HDD for further reference. His technical arguments make a lot of sense and he was thorough enough to highlight potential issues.

Thanks for pointing it out to me - I must confess I found myself wondering about applying the mod myself, as it is relatively simple to do. :)

31939. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 00:03:24 UTC
From: w5rkl
Topic: 31874 Message: 31939

Linearity of an amplifier depends on 2 things

1. The amplifier class
2. Driver stage signal level

All of the final amplifiers in the Kenwood hybrids operate in Class AB1 just like many other tube type transceivers or hybrid transceivers.

If the driver stage signal level causes the grids of the final tubes to swing positive, grid current flows in the final tubes and power is consumed in the final amplifier's grid circuit. This results in the final amplifier's output signal containing distortion and the final amplifier is no longer operating in its linear state. A regulated screen supply cannot prevent this from happening.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > There is no real reason to regulate the final amplifier supply. The screen voltage varies too often and regulating the supply would be a waste of time and would not produce any added benefit. The supply for the 830's final amplifier is quite stable for what it's designed to do.
> >
> >
>
> Agreed.
> Some better hi-fi amps have stabilised supplies for the output stages, presumably this aids linearity, but I would expect it to reduce output device dissipation during quiescent periods when the supply would normally be at a maximum. Presumably the PA in a transmitter would benefit in the same way.
>
> I doubt very much that the small benefit of reduced dissipation would anywhere near compensate for the added expense and complication though - the idea was thrown in for discussion rather than as a practical suggestion.
>

31940. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 04:16:48 UTC
From: w5rkl
Topic: 31874 Message: 31940

An additional item that determines amplifier linearity is

3. Bias voltage setting.

The amplifier's bias is set so the amplifier tube(s) operate over their characteristic linear curve. See tube manuals for more details on how the characteristic linear curve affects how a tube's output signal will be based on the bias voltage setting.

If at anytime the bias voltage is incorrectly set, either too negative or much less negative, these 2 bias settings can result in the amplifier tube(s) operating outside of the tubes characteristic linear curve leading to the output sine wave signal, whether it's AF or RF, to be distorted.

None of these problems can be prevented by a regulated amplifier screen voltage.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Linearity of an amplifier depends on 2 things
>
> 1. The amplifier class
> 2. Driver stage signal level
>
> All of the final amplifiers in the Kenwood hybrids operate in Class AB1 just like many other tube type transceivers or hybrid transceivers.
>
> If the driver stage signal level causes the grids of the final tubes to swing positive, grid current flows in the final tubes and power is consumed in the final amplifier's grid circuit. This results in the final amplifier's output signal containing distortion and the final amplifier is no longer operating in its linear state. A regulated screen supply cannot prevent this from happening.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@>
wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > There is no real reason to regulate the final amplifier supply. The screen voltage
varies too often and regulating the supply would be a waste of time and would not produce
any added benefit. The supply for the 830's final amplifier is quite stable for what it's
designed to do.
> > >
> > >
> >
> > Agreed.
> > Some better hi-fi amps have stabilised supplies for the output stages, presumably this
aids linearity, but I would expect it to reduce output device dissipation during quiescent
periods when the supply would normally be at a maximum. Presumably the PA in a transmitter
would benefit in the same way.
> >
> > I doubt very much that the small benefit of reduced dissipation would anywhere near
compensate for the added expense and complication though - the idea was thrown in for
discussion rather than as a practical suggestion.
> >
>

31941. Re: [TS-520_820_530_830] Re: inverter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 05:25:54 UTC
From: craig harris
Topic: 31928 Message: 31941

I have an apc 650pro, but seeems to do nothinng.

From: james27613 <james27613@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 18, 2011 5:08 PM
Subject: [TS-520_820_530_830] Re: inverter

hi Craig,

these inverters output a modified sine wave.

http://www.whistlergroup.com/inverter-text2.html

any chance you can find or borrow a full sine wave
ups such as APC SmartUPS, Liebert, Eaton, etc.

I run a Liebert full sine wave ups, removed from
service at point of sale registers years ago.
To keep the ups happy I also use a TrippLite
line conditioner at field day.

you can find them on ebay inexpensive used.

73 james ke4drn

[Non-text portions of this message have been removed]

31942. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 09:28:08 UTC
From: andy_westcott2004
Topic: 31874 Message: 31942

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If at anytime the bias voltage is incorrectly set, either too negative or much less negative, these 2 bias settings can result in the amplifier tube(s) operating outside of the tubes characteristic linear curve leading to the output sine wave signal, whether it's AF or RF, to be distorted.
>
> None of these problems can be prevented by a regulated amplifier screen voltage.
>

No, but the point Terry was making is that variation in screen grid voltage will affect bias current and therefore gain, varying with the envelope. This has to contribute slightly to harmonic distortion so regulating the screen must reduce this to some degree, and reduce dissipation within the tube too, my main interest.

31943. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 10:21:57 UTC
From: Chris Parnell
Topic: 31878 Message: 31943

Hi Terry,

Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.

My 830 was working "OK" originally, although the alignment was miles off.
Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.

I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.
To which I decided to re-align the radio.

On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
I purchased a new front fascia and it looks great.. needs to work great now :-)

Cheers
Chris

On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:

> Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!
>
> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?
>
> 2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.
>
> 3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.
>
> 4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.
>
> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then

this is likely your problem.
>
> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.
>
> 7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.
>
> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.
>
> Good Luck-Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry,
> >
> > Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
> >
> > Cheers
> > Chris
> >
> >
> > On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> >
> > > Chris--
> > >
> > > Do you have Skype? Maybe we could connect on Skype and perform each step
> > > together on our rigs and see at what step we differ. Not sure if we could have
> > > clear enough real time video or not for this to work. Not sure about our time
> > > difference, but could schedule it Zulu/GMT just as we would a QSO.
> > >
> > > Maybe Mike or Gordon would be better to do this with you as they repair these
> > > rigs for a living? As you know I had never performed this step until you asked
> > > about it. In fact I have never completed a full alignment as I dont have sweep
> > > generator. I have just done selected steps.
> > >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 9:55:30 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > have no attenuation in there)...
> > >

> > > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > > down the numbers for 5mV, 10mV and 50mV before I started again.
> > > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > > with regards to ALC readings.
> > >
> > > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> > >
> > > I may record a small video and send it to you... easier to see what I mean and
> > > what i'm doing.
> > >
> > > Turning the Mic gain up and down of course makes a difference, but the point is,
> > > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > >
> > > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > > test signals.
> > > >
> > > > With your mic gain at No. 4 it appears you have much more gain than I do in my
> > >
> > > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > > where I can get a good match at far right end of ALC black box.
> > > >
> > > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > > >
> > > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > > >
> > > > no meter indication. I do know with both of my rigs I end up at very close to
> > > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > >
> > > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > > >
> > > > signal injected? I found it a little touchy. When you first reported no meter
> > > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > > starting to get confused regards what your problem is.
> > > >
> > > > If turning mic gain down a little doesnt help then I would say it is on to
> > > > troubleshooting with Mike.
> > > >
> > > > Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 7:04:54 PM

> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry / Mike.....
> > > >
> > > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > > piece of kit.
> > > > Here's what I see when I follow your instructions:
> > > >
> > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > >
> > > > Exactly the same as me Terry, except my mini clips are connected directly to
> > > >the
> > > >
> > > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > >
> > > > > I have the mic gain set exactly at
> > > > > No. 4 position.
> > > > >
> > > > Same here
> > > >
> > > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > > switches. Let it warm up a little.
> > > > >
> > > > Same here
> > > >
> > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >Wave
> > > >
> > > >
> > > > > Tek generator to exactly 10 mv
> > > > >
> > > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > >
> > > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > place meter switch in ALC position.
> > > > >
> > > >
> > > > Same here
> > > >
> > > >
> > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > >
> > > > > end of the black ALC box. Maybe a needles worth.
> > > > >
> > > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > > >
> > > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > > s-meter scale, it's S9+40dB +).

> > > >
> > > > >
> > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >position
> > > > >
> > > > > >
> > > > > and I have not touched mic gain pot.
> > > > > >
> > > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > > > >
> > > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > > I'm saying and seeing.
> > > > >
> > > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > > PROC ON, which on the S-Meter is S-9.
> > > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > > minimum.
> > > > >
> > > > > >
> > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > >
> > > > > black ALC box.
> > > > > >
> > > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > > > >
> > > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > >
> > > > > It could be adjusted a little to get a match if I had the covers
> > > > > off, but close enough.
> > > > > >
> > > > >
> > > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > >them
> > > > >
> > > > with the PROC ON.
> > > > >
> > > > > I switch the meter from ALC to Comp and it indicates just
> > > > > a little above 20db on the Comp scale.
> > > > > >
> > > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > > adjust L26 for 20dB reading.
> > > > >
> > > > I will need to do some component checking in the circuit around the Processor
> > > >as
> > > > >
> > > > Mike and yourself have recommended.
> > > > >

> > > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > >
> > > > >
> > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > >as
> > > >
> > > >
> > > > > found condition for my daily operator is very close to being right on the
> > > >same
> > > >
> > > >
> > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > >on
> > > >
> > > > >
> > > > > and off.
> > > > >
> > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > >
> > > > > some more and if I come up with something will write.
> > > > >
> > > > > Whatever you do you should not have to increase mic gain position or increase
> > > >
> > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >your
> > > >
> > > > >
> > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > >I
> > > >
> > > >
> > > > > wouldnt think much higher.
> > > > >
> > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > >
> > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >
> > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >Good
> > > >
> > > >
> > > > > luck Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 10:08:00 AM

> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Hi Terry,
> > > > >
> > > > > The only difference from my original post is that I increased the "gain" on
> > > >the
> > > >
> > > > >
> > > > > input (Mic gain), therefore got an ALC reading.
> > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > >why...
> > > > >
> > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > >
> > > > > > Based on what you are reporting I would expect it to
> > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > >
> > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >right
> > > >
> > > > >
> > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > >
> > > > > Hope this makes sense..
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--This appears different than what you originally reported of getting
> > > >no
> > > >
> > > > >
> > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > >
> > > >Where
> > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > >hard
> > > >
> > > > >
> > > > >on
> > > > >

> > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > >
> > > > > >the
> > > > > >
> > > > > > >
> > > > > > > peg.
> > > > > > >
> > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >
> > > > > >off
> > > > > >
> > > > > >
> > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > >back
> > > > >
> > > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > >
> > > > > >to
> > > > > >
> > > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > >
> > > > > >in
> > > > > >
> > > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >
> > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > >without
> > > > >
> > > > >
> > > > > > PROC NOT engaged, just Mic.
> > > > > > >
> > > > > > > Chris
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > > >

> > > > > > > Hi Terry, in a nutshell,
> > > > > > > >
> > > > > > > > It doesn't weigh up here.
> > > > > > > >
> > > > > > > > Following to the letter the service manual and then taking into account
> > > > > >your
> > > > > >
> > > > > >
> > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > >of
> > > > >
> > > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > >meter)
> > > > > >
> > > > > > >
> > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > >
> > > > > > > >
> > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > > > > >
> > > > > > > > Thanks
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > Sent from my iPhone
> > > > > > > >
> > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > > >
> > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >have
> > > > >
> > > > >
> > > > > >same
> > > > > > >
> > > > > > > >
> > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > >adjust
> > > > > >
> > > > > >
> > > > > > >mic
> > > > > > > >
> > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > >
> > > > > >Tune
> > > > > > >
> > > > > > > >
> > > > > > > > > with Proc on and off and see approx the same max ALC indication.

> > > > > > > > >
> > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > >
> > > > > >can
> > > > > > >
> > > > > > > >
> > > > > > > > >move
> > > > > > > > >
> > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > >
> > > > > > >will
> > > > > > > >
> > > > > > > > >be
> > > > > > > > >
> > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > >is
> > > > > >
> > > > > > >
> > > > > > > >to
> > > > > > > >
> > > > > > > > >set
> > > > > > > > >
> > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > >increase
> > > > > > >
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > >longer
> > > > > >
> > > > > > >
> > > > > > > > >needed
> > > > > > > > >
> > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > >
> > > > > >would
> > > > > > >
> > > > > > > >
> > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > >good
> > > > > >
> > > > > > >
> > > > > > > > >matched
> > > > > > > > >
> > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > > > > > > > >
> > > > > > > > > Thanks Terry,
> > > > > > > > > >
> > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > >then
> > > > > >
> > > > > >ON
> > > > > > >
> > > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > >to
> > > > > >
> > > > > >
> > > > > > >have
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > >equal
> > > > > >
> > > > > >
> > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > >
> > > > > >with
> > > > > > >
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > >I
> > > > > >
> > > > > > >
> > > > > > > > >no
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > >any
> > > > > >
> > > > > >
> > > > > > > > > >lower on
> > > > > > > > > >
> > > > > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry

> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > ><cparnell1001@>
> > > > > > >
> > > > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Thanks Terry....
> > > > > > > > > > > > >
> > > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > >NZ
> > > > > >
> > > > > >
> > > > > > > > >time.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > > >switch
> > > > > > > > >
> > > > > > > > > > > >in
> > > > > > > > > > > >
> > > > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > >at
> > > > > > >
> > > > > > > > > >20db
> > > > > > > > > > > >
> > > > > > > > > > > > >on
> > > > > > > > > > > >
> > > > > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > >box.
> > > > > > >
> > > > > > > > > >Less
> > > > > > > > > > > >
> > > > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > ><wagstw46@>
> > > > > > > > >
> > > > > > > > > > > > wrote:

> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > >
> > > > >max
> > > > > >
> > > > > >
> > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > >
> > > > >end
> > > > > >
> > > > > >of
> > > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > >
> > > > > >between
> > > > > > > >
> > > > > > > > >1000 and
> > > > > > > > > >
> > > > > > > > > > > > > 1100.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > >you
> > > > > >
> > > > > > >
> > > > > > > >expect
> > > > > > > > >
> > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > >the
> > > > > >
> > > > > > >
> > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > >to peg

> > > > > > > > >
> > > > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > >
> > > > > > >what
> > > > > > >
> > > > > > >
> > > > > > > > >would you
> > > > > > > > >
> > > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > > >
> > > > > >gain
> > > > > >
> > > > > > >
> > > > > > > >not
> > > > > > >
> > > > > > > > >touched
> > > > > > > >
> > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > > >when
> > > > > >
> > > > > > >
> > > > > > > >you
> > > > > > >
> > > > > > > > >flip to
> > > > > > >
> > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > >any
> > > > >
> > > > > > >
> > > > > > > >ALC
> > > > > > >
> > > > > > > > >meter
> > > > > > >
> > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > >
> > > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > >
> > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > >scale.
> > > > >
> > > > > > >
> > > > > > > >Quickly

> > > > > > >
> > > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > >
> > > > > > >box.
> > > > > > >
> > > > > > > >Mic
> > > > > > > >
> > > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > >
> > > > > >far
> > > > > >
> > > > > >
> > > > > > > >end of
> > > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > >
> > > > > >times
> > > > > > >
> > > > > > > > >
> > > > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > >This
> > > > >
> > > > >
> > > > > > > > > >adjustment is
> > > > > > > > >
> > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > >tends
> > > > >
> > > > > >to
> > > > > > >
> > > > > > > > >
> > > > > > > > > >peg
> > > > > > > > >
> > > > > > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >
> > > > > >around
> > > > > > >
> > > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > > > > >max

> > > > > > > > >
> > > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > >meter
> > > >
> > > > >to
> > > > > >
> > > > > > >
> > > > > > > >Comp
> > > > > > > > >
> > > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > _________________________________
> > > > > > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >alignment
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > >(Heater
> > > > > > >
> > > > > > > >
> > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > > > > >etc), but
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > >"align"
> > > > > > >
> > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > > > > > >speech
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > >
> > > > > > >the
> > > > > > > > > >

> > > > > >
> > > > > > >AG
> > > > > > >
> > > > > > > > >output to
> > > > > > > > >
> > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > >maximum
> > > >
> > > > >
> > > > > > > >on-scale ALC
> > > > > > > > >
> > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > >
> > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > >on-scaled).
> > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > >
> > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > >
> > > > > >turn
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >Proc ON
> > > > > > > >
> > > > > > > > > > > > and
> > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > >meter
> > > >
> > > > >at
> > > > >
> > > > > >
> > > > > > >this
> > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > >reading.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > >pages
> > > > > >

> > > > > >
> > > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > >
> > > > > >switch
> > > > > > >
> > > > > > > >and
> > > > > > > >
> > > > > > > > > >LEAVE
> > > > > > > > > >
> > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > >
> > > > > >heater
> > > > > > >
> > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > >step
> > > > >
> > > > >
> > > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > >"max
> > > > >
> > > > >
> > > > > > > >meter
> > > > > > > >
> > > > > > > > >reading on
> > > > > > > > >
> > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > >reading.
> > > > >
> > > > >
> > > > > > > >That
> > > > > > > >
> > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > >indication
> > > > >
> > > > > >

> > > > > >of
> > > > > >
> > > > > > >20db
> > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > >with
> > > >
> > > > >a
> > > > >
> > > > >
> > > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > >meter
> > > >
> > > >
> > > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > >
> > > > >mic
> > > > >
> > > > > >
> > > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > >1200
> > > >
> > > > >
> > > > > >and
> > > > > >
> > > > > > >
> > > > > > > > >peaked L27.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >would
> > > >
> > > >
> > > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > > >
> > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > > >box".
> > > > >
> > > > > >

> > > > > > >Just
> > > > > > > >
> > > > > > > > > >make it
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >very clear what meter position and what scale you are to
> > > read.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > >
> > > > > > > >heater
> > > > > > > > >
> > > > > > > > > > >switch on
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > >-K9TW
> > > > >
> > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > > > >
> Ok Terry, thank you.
> >
> Been troubleshooting my 990 for a week so haven't had much
> > > >
> > > > > > >chance
> > > > > > > > >
> > > > > > > > > > >to
> > > > > > > > > > >
> > > > > > > > > > > > > > > >check
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > > > > > > >
> Cheers
> Chris
> >
> >
> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> >
> Chris --Sorry I did not. It is supposed to rain all day
> > > > > >so
> > > > > > > >
> > > > > > > > >I
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > >will
> > > > > > > > > > > > > > >

> > > > > > > > >give it a
> > > > > > > > > >
> > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > > > > >
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >wrote:
> >
> Hi Terry, did you get chance to test the SP alignment
> > > > >in
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > > > > >
> > > > > > > > > > > > >830
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >at the
> > > > > > > > > > > > > > > > > > >
> >weekend?
> >
> >
> Cheers
> Chris, ZL1CDP
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> >
> >
> >
> [Non-text portions of this message have been removed]
> >
> >
> >
> ------------------------------------
> >
> Yahoo! Groups Links
> >
> >
> >
> [Non-text portions of this message have been removed]
> >

> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > > ---------- ----------
> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > > ---------- ----------
> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > > > > > > > >about
> > > > > > > > > > >
> > > > > > > > > > > out of ideas.
> > > > > > > > > > >
> > > > > > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > > > >

> > > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > > >
> > > > > position.
> > > > > >
> > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > >at
> > > > >
> > > > >
> > > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > > >heater
> > > > > >
> > > > > switches. Let it warm up a little.
> > > > > >
> > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >Wave
> > > > >
> > > > >
> > > > > Tek generator to exactly 10 mv.
> > > > > >
> > > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > place meter switch in ALC position.
> > > > > >
> > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > >
> > > > > end of the black ALC box. Maybe a needles worth.
> > > > > >
> > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >position
> > > > >
> > > > > >
> > > > > and I have not touched mic gain pot.
> > > > > >
> > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > >
> > > > > black ALC box. It could be adjusted a little to get a match if I had the
> > > >covers
> > > > >
> > > > > >
> > > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > > >just
> > > > > >
> > > > > a little above 20db on the Comp scale.
> > > > > >
> > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > >as
> > > > >
> > > > >
> > > > > found condition for my daily operator is very close to being right on the
> > > >same

> > > >
> > > >
> > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > >on
> > > >
> > > > > >
> > > > > and off.
> > > > > >
> > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > >
> > > > > some more and if I come up with something will write.
> > > > > >
> > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > >
> > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >your
> > > > >
> > > > > >
> > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > >I
> > > > >
> > > > >
> > > > > wouldnt think much higher.
> > > > > >
> > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > >
> > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > >
> > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >Good
> > > > >
> > > > >
> > > > > luck Terry
> > > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > Hi Terry,
> > > > > >
> > > > > The only difference from my original post is that I increased the "gain" on
> > > >the
> > > > >
> > > > > >
> > > > > input (Mic gain), therefore got an ALC reading.
> > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > >why...
> > > > > >

> > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > >
> > > > > > Based on what you are reporting I would expect it to
> > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > >
> > > > > >in
> > > > > >
> > > > > >
> > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > >
> > > > > >
> > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >right
> > > > >
> > > > > >
> > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > >
> > > > > > Hope this makes sense..
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--This appears different than what you originally reported of getting
> > > >no
> > > > >
> > > > > >
> > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > >
> > > > > > >Where
> > > > > > >
> > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > >hard
> > > > >
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > >
> > > > > >the
> > > > > >
> > > > > > >
> > > > > > > peg.
> > > > > > >
> > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >
> > > > > >off
> > > > > >
> > > > > >

> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > >back
> > > >
> > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > >
> > > > >to
> > > > > >
> > > > > >
> > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > >
> > > > >in
> > > > > >
> > > > > >
> > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >
> > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > >without
> > > >
> > > >
> > > > > > > PROC NOT engaged, just Mic.
> > > > > > >
> > > > > > > Chris
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > > >
> > > > > > > > Hi Terry, in a nutshell,
> > > > > > > >
> > > > > > > > It doesn't weigh up here.
> > > > > > > >
> > > > > > > > Following to the letter the service manual and then taking into account
> > > > >your
> > > > > > > >
> > > > > > > >
> > > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > >of
> > > > > > >
> > > > > > >

> > > > > >ALC
> > > > > >
> > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > >meter)
> > > > >
> > > > > >
> > > > > > >deflection without PROC engaged, just Mic.
> > > > > > >
> > > > > > >
> > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >
> > > > > > >
> > > > > > > Thanks
> > > > > > > Chris
> > > > > > >
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > >
> > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >have
> > > > >
> > > > >
> > > > > >same
> > > > > >
> > > > > > >
> > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > >adjust
> > > > > >
> > > > > >
> > > > > > >mic
> > > > > > >
> > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > >
> > > > > >Tune
> > > > > >
> > > > > >
> > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > >
> > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > >
> > > > >can
> > > > > >
> > > > > >
> > > > > > >move
> > > > > > >
> > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > >
> > > > > >will
> > > > > >

> > > > > > >be
> > > > > > > >
> > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > >is
> > > >
> > > > >
> > > > > >to
> > > > > > >
> > > > > > > >set
> > > > > > > > >
> > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > >increase
> > > > > >
> > > > > > > >
> > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > >longer
> > > > >
> > > > > >
> > > > > > > >needed
> > > > > > > > >
> > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > >
> > > > > >would
> > > > > > >
> > > > > > > >
> > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >good
> > > > >
> > > > > >
> > > > > > > >matched
> > > > > > > >
> > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Thanks Terry,
> > > > > > > > >
> > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >then
> > > > >
> > > > > >ON
> > > > > > >
> > > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > > same point? that's what it states from memory... point of exercise is

> > > >to
> > > >
> > > >
> > > > > >have
> > > > > > >
> > > > > > > >
> > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > >equal
> > > > >
> > > > >
> > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > >
> > > > > >with
> > > > > >
> > > > > > > >
> > > > > > > > >the
> > > > > > > >
> > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > >I
> > > > >
> > > > > > >no
> > > > > > >
> > > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > >any
> > > > >
> > > > >
> > > > > > > >lower on
> > > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Thanks Terry....
> > > > > > > > >
> > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > >NZ

> > > >
> > > >
> > > > > > >time.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > >switch
> > > > >
> > > > > >
> > > > > > >in
> > > > > > >
> > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > >at
> > > > >
> > > > >
> > > > > > >20db
> > > > > > >
> > > > > > > >on
> > > > > > >
> > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > >box.
> > > > >
> > > > > >
> > > > > > >Less
> > > > > > >
> > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > >
> > > > > > > > > > > ---
> > > > > > > > > > > In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > ><wagstw46@>
> > > > >
> > > > >
> > > > > > > > > > > wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > Step A:
> > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > >
> > > > >max
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >clockwise.
> > > > > > > > > > >
> > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > 2. You have the meter switch to ALC position.

> > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > >
> > > > >end
> > > > > >
> > > > > >of
> > > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > >
> > > > > > >between
> > > > > > > >
> > > > > > > > > >1000 and
> > > > > > > > > >
> > > > > > > > > > > > > 1100.
> > > > > > > > > > > > >
> > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > >you
> > > > >
> > > > > >
> > > > > > >expect
> > > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > >the
> > > > >
> > > > > >
> > > > > > >meter
> > > > > > > >
> > > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > >
> > > > > > >what
> > > > > > > >
> > > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic

> > >
> > > > >gain
> > > > >
> > > > > >
> > > > > > >not
> > > > > > > >
> > > > > > > > >touched
> > > > > > > > >
> > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > >when
> > > > > >
> > > > > >
> > > > > > >you
> > > > > > > >
> > > > > > > > >flip to
> > > > > > > > >
> > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > >any
> > > > >
> > > > > >
> > > > > > >ALC
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > >
> > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > >
> > > > > > >sensitive
> > > > > > > >
> > > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > >scale.
> > > > >
> > > > > >
> > > > > > >Quickly
> > > > > > > >
> > > > > > > > > >turn
> > > > > > > > >
> > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > >
> > > > > > >box.
> > > > > > > >
> > > > > > > > > >Mic
> > > > > > > > >
> > > > > > > > > > > >gain
> > > > > > > > >
> > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at

> > >
> > > > >far
> > > > >
> > > > >
> > > > > > >end of
> > > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > >
> > > > > >times
> > > > > > >
> > > > > > > >
> > > > > > > > > >until you
> > > > > > > > > >
> > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > >This
> > > > >
> > > > >
> > > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > >tends
> > > > >
> > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >peg
> > > > > > > > >
> > > > > > > > > > > >hard
> > > > > > > > > >
> > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >
> > > > >around
> > > > > > >
> > > > > > > >the
> > > > > > > > >
> > > > > > > > > > > >max
> > > > > > > > > >
> > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > >meter
> > > > >
> > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >Comp
> > > > > > > > >
> > > > > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > > should see about 20db on Comp Scale.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > _____
> > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >alignment
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > >
> > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > >(Heater
> > > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > >etc), but
> > > > > > > > > >
> > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > >"align"
> > > > > > > > > >
> > > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >speech
> > > > > > > > > >
> > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > >
> > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > > >
> > > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >AG
> > > > > > > > > >
> > > > > > > > > > > > >output to
> > > > > > > > > >
> > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > >maximum
> > > > > > > > > >
> > > > > > > > > > > > >on-scale ALC
> > > > > > > > > > > > > > > > >

> > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > >on-scaled).
> > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > >
> > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > >
> > > > > > >turn
> > > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > >Proc ON
> > > > > > >
> > > > > > > > > > > > > and
> > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > >meter
> > > >
> > > > >at
> > > > >
> > > > >
> > > > > >this
> > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > >reading.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > >pages
> > > > > >
> > > > > >
> > > > > > >40&41. As
> > > > > > > > > > > > >
> > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > >
> > > > >switch
> > > > >
> > > > > >and
> > > > > >
> > > > > > >LEAVE

> > > > > > > > >
> > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >
> > > > > > >heater
> > > > > > > >
> > > > > > > > > >off of the
> > > > > > > > > >
> > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > >step
> > > > >
> > > > >
> > > > > > > > > >conditions still
> > > > > > > > > >
> > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > >"max
> > > > >
> > > > >
> > > > > > > >meter
> > > > > > > > >
> > > > > > > > > >reading on
> > > > > > > > > >
> > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > >reading.
> > > > >
> > > > >
> > > > > > > >That
> > > > > > > >
> > > > > > > > > >would be on
> > > > > > > > > >
> > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > >indication
> > > > >
> > > > > > > >of
> > > > > > > >
> > > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > > > > >and
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > >with
> > > > >
> > > > > > > >a
> > > > > > > >
> > > > > > > >

> > > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > >meter
> > > >
> > > >
> > > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > >
> > > > >mic
> > > > >
> > > > > >
> > > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > >1200
> > > >
> > > > >
> > > > > >and
> > > > > >
> > > > > > >
> > > > > > > > >peaked L27.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >would
> > > >
> > > >
> > > > > >say
> > > > > >
> > > > > >
> > > > > > > > >something
> > > > > > > > >
> > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > > >box".
> > > > >
> > > > > >
> > > > > > >Just
> > > > > > >
> > > > > > > > >make it
> > > > > > > > >
> > > > > > > > > > > > >very clear what meter position and what scale you are to
> > > read.
> > > > > > > > > > > > >
> > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > >
> > > > > > >heater
> > > > > > >
> > > > > > > > >switch on

> > > > > > > > >
> > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > >-K9TW
> > > >
> > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > > >
> > > > > >chance
> > > > > > >
> > > > > > > >to
> > > > > > > >
> > > > > > > > > >check
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > > >so
> > > > > >
> > > > > > >I
> > > > > > >
> > > > > > >
> > > > > > > > >will
> > > > > > > > > >
> > > > > > > > > > > >give it a
> > > > > > > > > > >
> > > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@...m, Chris Parnell
> > > >
> > > > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > > >in

> > > >
> > > >
> > > > > >the
> > > > > >
> > > > > > >830
> > > > > > >
> > > > > > > > >at the
> > > > > > > >
> > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > Yahoo! Groups Links
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> > > > (Message over 64 KB, truncated)

31944. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 11:31:47 UTC
From: w5rkl
Topic: 31878 Message: 31944

Hi Chris,

Based on the HV and power output levels you provided, 850VDC high voltage and 70 watts output, that equates to an IP current level of approximately 150ma. Therefore, with those levels the INPUT power in the final amplifier would be;

.150 x 850 = 127.5 watts

Since the 830 final amplifier has an efficiency rating of approximately 55%, power output would be

127.5 - 45% = 70.125 watts

the same as your 830 is producing. That tells me the HV and LV Rectifier Unit supplies are within specifications and operating as they should.

I recommend you troubleshoot the 830's transmit signal path, take level measurements and compare your findings with the 830 service manual Level Diagram on page 44.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.
>
> My 830 was working "OK" originally, although the alignment was miles off.
> Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.
>
> I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.
> To which I decided to re-align the radio.
>
> On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
> I purchased a new front fascia and it looks great.. needs to work great now :-)
>
> Cheers
> Chris

>
>
>
> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
>
> > Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!
> >
> > 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?
> >
> > 2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.
> >
> > 3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.
> >
> > 4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.
> >
> > 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.
> >
> > 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.
> >
> > 7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.
> >
> > 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.
> >
> > Good Luck-Terry K9TW
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > >
> > > Hi Terry,
> > >
> > > Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
> > >
> > > Cheers

> > > Chris
> > >
> > >
> > > On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > >
> > > > Chris--
> > > >
> > > > Do you have Skype? Maybe we could connect on Skype and perform each step
> > > > together on our rigs and see at what step we differ. Not sure if we could have
> > > > clear enough real time video or not for this to work. Not sure about our time
> > > > difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >
> > > > Maybe Mike or Gordon would be better to do this with you as they repair these
> > > > rigs for a living? As you know I had never performed this step until you asked
> > > > about it. In fact I have never completed a full alignment as I dont have sweep
> > > > generator. I have just done selected steps.
> > > >
> > > > Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 9:55:30 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > > have no attenuation in there)...
> > > >
> > > > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > > > down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > > > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > > > with regards to ALC readings.
> > > >
> > > > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > > > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> > > >
> > > > I may record a small video and send it to you... easier to see what I mean and
> > > > what i'm doing.
> > > >
> > > > Turning the Mic gain up and down of course makes a difference, but the point is,
> > > > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >
> > > > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > > > test signals.

> > > > >
> > > > > With your mic gain at No. 4 it appears you have much more gain than I do in my
> > > > >
> > > > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > > > where I can get a good match at far right end of ALC black box.
> > > > > >
> > > > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > > > > >
> > > > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > > > > >
> > > > > no meter indication. I do know with both of my rigs I end up at very close to
> > > > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > > > >
> > > > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > > > > >
> > > > > signal injected? I found it a little touchy. When you first reported no meter
> > > > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > > > starting to get confused regards what your problem is.
> > > > > >
> > > > > If turning mic gain down a little doesnt help then I would say it is on to
> > > > > troubleshooting with Mike.
> > > > > >
> > > > > Terry
> > > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > Hi Terry / Mike.....
> > > > > >
> > > > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > > > piece of kit.
> > > > > Here's what I see when I follow your instructions:
> > > > > >
> > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > > > >
> > > > > Exactly the same as me Terry, except my mini clips are connected directly to
> > > > > >the
> > > > > >
> > > > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > > > >
> > > > > > I have the mic gain set exactly at
> > > > > > No. 4 position.
> > > > > > >
> > > > > Same here
> > > > > >
> > > > > > I set SG switch on rear of rig to off and turn on rig and heater

> > > > > > switches. Let it warm up a little.
> > > > > > >
> > > > > > Same here
> > > > > >
> > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > >Wave
> > > > > >
> > > > > >
> > > > > > > Tek generator to exactly 10 mv
> > > > > > >
> > > > > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > > >
> > > > > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > place meter switch in ALC position.
> > > > > > >
> > > > > >
> > > > > > Same here
> > > > > >
> > > > > > >
> > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > >
> > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > >
> > > > > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > > > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > > > > >
> > > > > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > > > > s-meter scale, it's S9+40dB +).
> > > > > >
> > > > > > >
> > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > >position
> > > > > >
> > > > > > >
> > > > > > > and I have not touched mic gain pot.
> > > > > > >
> > > > > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > > > > >
> > > > > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > > > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > > > > I'm saying and seeing.
> > > > > >
> > > > > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > > > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > > > > PROC ON, which on the S-Meter is S-9.
> > > > > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > > > > minimum.
> > > > > >
> > > > > > >
> > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the

> > > >
> > > > > > black ALC box.
> > > > > >
> > > > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > > > > >
> > > > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > > >
> > > > > > It could be adjusted a little to get a match if I had the covers
> > > > > > off, but close enough.
> > > > > >
> > > > > >
> > > > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > > >them
> > > > > >
> > > > > with the PROC ON.
> > > > > >
> > > > > > I switch the meter from ALC to Comp and it indicates just
> > > > > > a little above 20db on the Comp scale.
> > > > > >
> > > > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > > > adjust L26 for 20dB reading.
> > > > > >
> > > > > I will need to do some component checking in the circuit around the Processor
> > > > >as
> > > > > >
> > > > > Mike and yourself have recommended.
> > > > > >
> > > > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > > > > >
> > > > > Thanks
> > > > > Chris, ZL1CDP
> > > > > >
> > > > > >
> > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > >as
> > > > > >
> > > > > >
> > > > > > found condition for my daily operator is very close to being right on the
> > > > >same
> > > > > >
> > > > > >
> > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > >on
> > > > > >
> > > > > >
> > > > > > and off.
> > > > > >
> > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > >

> > > > > > some more and if I come up with something will write.
> > > > > > >
> > > > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > > > >
> > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > >your
> > > > > > >
> > > > > > > >
> > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > >I
> > > > > > >
> > > > > > >
> > > > > > > wouldnt think much higher.
> > > > > > > >
> > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > > >
> > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > >
> > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > >Good
> > > > > > >
> > > > > > >
> > > > > > > luck Terry
> > > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > Hi Terry,
> > > > > > > >
> > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > >the
> > > > > > >
> > > > > > > >
> > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > >why...
> > > > > > > >
> > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > > > > >
> > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > >in
> > > > > > > >
> > > > > > > >
> > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > >

> > > > > >
> > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > > >right
> > > > >
> > > > > >
> > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > >
> > > > > > Hope this makes sense..
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--This appears different than what you originally reported of getting
> > > > >no
> > > > >
> > > > > >
> > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > >
> > > > > >Where
> > > > > >
> > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > >hard
> > > > >
> > > > > >
> > > > > >on
> > > > > >
> > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > >
> > > > > >the
> > > > >
> > > > > >
> > > > > > > peg.
> > > > > >
> > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >
> > > > >off
> > > > >
> > > > >
> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > >back
> > > > >
> > > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > >
> > > > > >to
> > > > >
> > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is somewhere

> > > > >
> > > > > >in
> > > > > > >
> > > > > > >
> > > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > >
> > > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > > > >without
> > > > > > > >
> > > > > > > >
> > > > > > > > PROC NOT engaged, just Mic.
> > > > > > > > >
> > > > > > > > Chris
> > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > > > >
> > > > > > > > Hi Terry, in a nutshell,
> > > > > > > > > >
> > > > > > > > It doesn't weigh up here.
> > > > > > > > > >
> > > > > > > > Following to the letter the service manual and then taking into account
> > > > > > > >your
> > > > > > > >
> > > > > > > >
> > > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > > > >of
> > > > > > > >
> > > > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > > > >meter)
> > > > > > > >
> > > > > > > >
> > > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > > >
> > > > > > > > >
> > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.

> > > >
> > > > > > > > >
> > > > > > > > > Thanks
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > > > >
> > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > > >have
> > > > > >
> > > > > >
> > > > > > >same
> > > > > > >
> > > > > > >
> > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > >adjust
> > > > > >
> > > > > >
> > > > > > >mic
> > > > > > >
> > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > >
> > > > > > >Tune
> > > > > > >
> > > > > > >
> > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > >
> > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > >
> > > > > > >can
> > > > > > >
> > > > > > >
> > > > > > > >move
> > > > > > >
> > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > >
> > > > > > >will
> > > > > > >
> > > > > > > >be
> > > > > > >
> > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > >is
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >set
> > > > > > >

> > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > >increase
> > > > > > >
> > > > > > > >
> > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > >longer
> > > > > >
> > > > > >
> > > > > > > > >needed
> > > > > > > > >
> > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > >
> > > > > > >would
> > > > > > > >
> > > > > > > >
> > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > >good
> > > > > >
> > > > > >
> > > > > > > > >matched
> > > > > > > >
> > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > > Thanks Terry,
> > > > > > > > >
> > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > >then
> > > > > >
> > > > > > >ON
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >to
> > > > > > > >
> > > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > >to
> > > > > >
> > > > > >
> > > > > > > > >have
> > > > > > > >
> > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris

> > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > > >equal
> > > > > > >
> > > > > > >
> > > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > >
> > > > > > >with
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > >I
> > > > > > >
> > > > > > > > >
> > > > > > > > > >no
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > >any
> > > > > > >
> > > > > > >
> > > > > > > > > > >lower on
> > > > > > > > > >
> > > > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > > Thanks Terry....
> > > > > > > > > >
> > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > >NZ
> > > > > > >
> > > > > > >
> > > > > > > > > >time.
> > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > >

> > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > > >switch
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >in
> > > > > > > > > > >
> > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > > >at
> > > > > > >
> > > > > > > >
> > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > > > >
> > > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > >box.
> > > > > > >
> > > > > > > > >
> > > > > > > > > >Less
> > > > > > > > > > >
> > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > ><wagstw46@>
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > > >
> > > > > > >max
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >clockwise.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > >
> > > > > > >end
> > > > > > > > >
> > > > > > > > > >of
> > > > > > > > > > >
> > > > > > > > > > > >the
> > > > > > > > > > > > >

> > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > >
> > > > > > > > > >between
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >1000 and
> > > > > > > > > > > > > > > > > >
> 1100.
> > > > > > > > > > > > > > > > > > > >
> You then turn Processor on with Comp Level max cw. What would
> > > > > >you
> > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >expect
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >the ALC
> > > > > > > > > > > > > > > > > > > >
> reading to do for the same mic gain setting? Would you expect
> > > > > >the
> > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >meter
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >to peg
> > > > > > > > > > > > > > > > > > > >
> hard upscale far right? If you had a mic connected and whistled
> > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >what
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >would you
> > > > > > > > > > > > > > > > > > > >
> expect ALC meter to do? Just some food for thought.
> >
> Step B:
> With Processor on and Comp level set max clockwise and the mic
> > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >gain
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >not
> > > > > > > > > > > > > > > > > > > >
> touched
> >
> from above you are telling me that you have no ALC indication
> > > > > > > > > > > > >when

> > > > > >
> > > > > >
> > > > > > > > >you
> > > > > > > > >
> > > > > > > > > > > >flip to
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > >any
> > > > >
> > > > > > >
> > > > > > > >ALC
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > >
> > > > > > > > >sensitive
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > >scale.
> > > > >
> > > > > > >
> > > > > > > > >Quickly
> > > > > > > > >
> > > > > > > > > > >turn
> > > > > > > > > > >
> > > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > >
> > > > > > > > >box.
> > > > > > > > >
> > > > > > > > > > >Mic
> > > > > > > > > > >
> > > > > > > > > > > > > >gain
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > > >
> > > > > > >far
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >end of
> > > > > > > > > > >
> > > > > > > > > > > > > >ALC
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > > > >

> > > > > > >times
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >until you
> > > > > > > > > > >
> > > > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > > >This
> > > > > >
> > > > > >
> > > > > > > > > > > >adjustment is
> > > > > > > > > > >
> > > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > > >tends
> > > > > >
> > > > > > >to
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >peg
> > > > > > > > > >
> > > > > > > > > > > >hard
> > > > > > > > > > >
> > > > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >
> > > > > >around
> > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >max
> > > > > > > > > >
> > > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > > >meter
> > > > > >
> > > > > > >to
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >Comp
> > > > > > > > > >
> > > > > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM

> > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >alignment
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > > >(Heater
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > > > >
> > > > > > > > > > > > >etc), but
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > >"align"
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >the
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >speech
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > >
> > > > > > >the
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >AG
> > > > > > > > > > > >
> > > > > > > > > > > > >output to
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > >maximum
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >on-scale ALC
> > > > > > > > > > > >
> > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > > > > >on-scaled).
> > > > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > > > > >
> > > > > > > > > > >turn

> > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >Proc ON
> > > > > > > > > >
> > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > >meter
> > > > > >
> > > > > > >at
> > > > > > >
> > > > > > > >
> > > > > > > > >this
> > > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > > >reading.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > > >pages
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > >
> > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > > >
> > > > > > >switch
> > > > > > > >
> > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > >LEAVE
> > > > > > > > > > >
> > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > > > >
> > > > > > > > >heater
> > > > > > > > > >
> > > > > > > > > > > >off of the
> > > > > > > > > > >
> > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > > > > >step
> > > > > > >

> > > > >
> > > > > > > > > > >conditions still
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > > > > > > >
> 1. Step 1 is OK except I would prefer that they would say
> > > > > >"max
> > > > > >
> > > > > >
> > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > >reading on
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > > > > > > >
> 2. Step 2 is OK but again they tell you to obtain S-1
> > > > > >reading.
> > > > > >
> > > > > >
> > > > > > > > >That
> > > > > > > > > >
> > > > > > > > > > >would be on
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > > > >indication
> > > > > >
> > > > > > > > >of
> > > > > > > > > >
> > > > > > > > > > >20db
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > >and
> > > > > > > > > > > > > > > > > >
> >that would be on the Compression Scale. So would be better
> > > > > >with
> > > > > >
> > > > > > > > >a
> > > > > > > > > >
> > > > > > > > > > >multi-scale
> > > > > > > > > > > >
> >meter for them to tell you the expected value and on what
> > > > > >meter
> > > > > >
> > > > > > > > >scale.
> >
> 3. Step 3 is OK but I would prefer they would tell you to set
> > > > > >

> > > > > >mic
> > > > > >
> > > > > > >
> > > > > > > >gain
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > > >1200
> > > > >
> > > > > >
> > > > > > >and
> > > > > > >
> > > > > > > >
> > > > > > > > > >peaked L27.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > >would
> > > > >
> > > > >
> > > > > > >say
> > > > > > >
> > > > > > >
> > > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > > > >box".
> > > > > >
> > > > > > >
> > > > > > > >Just
> > > > > > > >
> > > > > > > > > >make it
> > > > > > > > > >
> > > > > > > > > > > > > >very clear what meter position and what scale you are to
> > > > > read.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > >
> > > > > > > >heater
> > > > > > > >
> > > > > > > > > >switch on
> > > > > > > > > >
> > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > > >>-K9TW
> > > > >
> > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > >

> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > > >
> > > > > > >chance
> > > > > > > >
> > > > > > > >to
> > > > > > > > >
> > > > > > > > > >check
> > > > > > > > > > >
> > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > > > >so
> > > > > >
> > > > > >I
> > > > > > >
> > > > > > >
> > > > > > > >will
> > > > > > > > >
> > > > > > > > > >give it a
> > > > > > > > > > >
> > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > > > >in
> > > > > >
> > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > >830
> > > > > > > > >
> > > > > > > > > >at the
> > > > > > > > > > >
> > > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > >

> > > > > > > > > > > > > > > > > > >
> Cheers
> Chris, ZL1CDP
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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> ----------
> > > > > > > > > > > > > > > > > > >
> Yahoo! Groups Links
> > > > > > > > > > > > > > > > > > >
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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> > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > ------------------------------------
> > > > > > >
> > > > > > > Yahoo! Groups Links
> > > > > > >
> > > > > > > [Non-text portions of this message have been removed]
> > > > > > >
> > > > > > >
> > > > > > >
> > > > > >
> > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > >about
> > > > > > >
> > > > > > > out of ideas.
> > > > > > >
> > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > > > >
> > > > > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > > > > >
> > > > > > > position.
> > > > > > >
> > > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > > > >at
> > > > > > >
> > > > > > >
> > > > > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > > > >heater
> > > > > > >
> > > > > > > switches. Let it warm up a little.
> > > > > > >
> > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > >Wave
> > > > > > >
> > > > > > >
> > > > > > > Tek generator to exactly 10 mv.
> > > > > > >
> > > > > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > place meter switch in ALC position.

> > > > > >
> > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > >
> > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > >
> > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > >position
> > > > > >
> > > > > > >
> > > > > > > and I have not touched mic gain pot.
> > > > > > >
> > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > > >
> > > > > > > black ALC box. It could be adjusted a little to get a match if I had the
> > > > > >covers
> > > > > >
> > > > > > >
> > > > > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > > > >just
> > > > > > >
> > > > > > > a little above 20db on the Comp scale.
> > > > > > >
> > > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > > >as
> > > > > >
> > > > > > >
> > > > > > > found condition for my daily operator is very close to being right on the
> > > > > >same
> > > > > >
> > > > > > >
> > > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > > >on
> > > > > >
> > > > > > > > and off.
> > > > > > >
> > > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > >
> > > > > > > some more and if I come up with something will write.
> > > > > > >
> > > > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > > >
> > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > >your
> > > > > >
> > > > > > >
> > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > >I
> > > > > >
> > > > > >

> > > > > > wouldnt think much higher.
> > > > > > >
> > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > > >
> > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > > >
> > > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > > >Good
> > > > > > >
> > > > > > >
> > > > > > > luck Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Hi Terry,
> > > > > > >
> > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > > >the
> > > > > > >
> > > > > > >
> > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > > >why...
> > > > > > >
> > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > > > >
> > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > >in
> > > > > > >
> > > > > > >
> > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > >
> > > > > > >
> > > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > > > > >right
> > > > > > >
> > > > > > >
> > > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > > >
> > > > > > > Hope this makes sense..
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >

> > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--This appears different than what you originally reported of getting
> > > > > >no
> > > > > >
> > > > > > >
> > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > > >
> > > > > > >Where
> > > > > > >
> > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > > >hard
> > > > > >
> > > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > > >
> > > > > >the
> > > > > > >
> > > > > > >
> > > > > > > peg.
> > > > > > >
> > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > > >
> > > > >off
> > > > > >
> > > > > > >
> > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > >back
> > > > > >
> > > > > > >
> > > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > > >
> > > > >to
> > > > > > >
> > > > > > >
> > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > >
> > > > >in
> > > > > > >
> > > > > > >
> > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > <TS-520_820_530_830@yahoogroups.com>

> > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >
> > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > >without
> > > > >
> > > > >
> > > > > > > PROC NOT engaged, just Mic.
> > > > > > >
> > > > > > > Chris
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > >
> > > > > > > > Hi Terry, in a nutshell,
> > > > > > > >
> > > > > > > > It doesn't weigh up here.
> > > > > > > >
> > > > > > > > Following to the letter the service manual and then taking into account
> > > > > >your
> > > > > >
> > > > > >
> > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > >of
> > > > >
> > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > >meter)
> > > > >
> > > > >
> > > > > > >deflection without PROC engaged, just Mic.
> > > > > > >
> > > > > > >
> > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >
> > > > > > >
> > > > > > > Thanks
> > > > > > > Chris
> > > > > > >
> > > > > > > Sent from my iPhone
> > > > > > >
> > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > >
> > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > >have
> > > > >

> > > > >
> > > > > > >same
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > > >adjust
> > > > > > > >
> > > > > > > >
> > > > > > > > > >mic
> > > > > > > > > > >
> > > > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > >
> > > > > > >Tune
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > > > >
> > > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > >
> > > > > > >can
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >move
> > > > > > > > > >
> > > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > >
> > > > > > >will
> > > > > > > >
> > > > > > > > > >be
> > > > > > > > > >
> > > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > >is
> > > > > > >
> > > > > > > > >
> > > > > > > > > >to
> > > > > > > > >
> > > > > > > > > >set
> > > > > > > > > >
> > > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > >increase
> > > > > > >
> > > > > > > > >
> > > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > > >longer
> > > > > > >
> > > > > > >
> > > > > > > > > > >needed
> > > > > > > > > >
> > > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > >

> > > > > > >would
> > > > > > > >
> > > > > > > >
> > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > >good
> > > > > >
> > > > > >
> > > > > > > > >matched
> > > > > > > > >
> > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > Thanks Terry,
> > > > > > > > > >
> > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > >then
> > > > > >
> > > > > > >ON
> > > > > > >
> > > > > > >
> > > > > > > > >to
> > > > > > > >
> > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > >to
> > > > > >
> > > > > >
> > > > > > > >have
> > > > > > > >
> > > > > > > >
> > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > >equal
> > > > > >
> > > > > >
> > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > >
> > > > > > >with
> > > > > > >
> > > > > > >

> > > > > > > >the
> > > > > > > > >
> > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > >I
> > > > > >
> > > > > > >
> > > > > > > >no
> > > > > > > >
> > > > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > >any
> > > > > >
> > > > > >
> > > > > > > > >lower on
> > > > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Thanks Terry....
> > > > > > > > > >
> > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > >NZ
> > > > > >
> > > > > >
> > > > > > > > >time.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > >switch
> > > > > > >
> > > > > > > >
> > > > > > > > >in
> > > > > > > >
> > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > >at
> > > > > >
> > > > > >
> > > > > > > > >20db
> > > > > > > >

> > > > > > > >on
> > > > > > > > >
> > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > >box.
> > > > > >
> > > > > > >
> > > > > > > >Less
> > > > > > > > >
> > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > ><wagstw46@>
> > > > > > >
> > > > > > >
> > > > > > > > > > wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > >
> > > > > > >max
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > >
> > > > > > >end
> > > > > > > >
> > > > > > > >of
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > >
> > > > > > >between
> > > > > > > >
> > > > > > > > > >1000 and
> > > > > > > > > >
> > > > > > > > > > > > 1100.

> > > > > > > > > > > > >
> > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > > >you
> > > > >
> > > > > >
> > > > > > > >expect
> > > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > > > >the
> > > > >
> > > > > >
> > > > > > > >meter
> > > > > > > >
> > > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > >
> > > > > > >what
> > > > > > >
> > > > > > >
> > > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > > > >
> > > > > > >gain
> > > > > >
> > > > > > >
> > > > > > > >not
> > > > > > > >
> > > > > > > > > >touched
> > > > > > > > > >
> > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > > > >when
> > > > > >
> > > > > >
> > > > > > > >you
> > > > > > > >
> > > > > > > > > >flip to
> > > > > > > > > >
> > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > > >any
> > > > >
> > > > > >
> > > > > > > >ALC
> > > > > > >

> > > > > > > >
> > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > > >
> > > > > > > > >sensitive
> > > > > > > > > >
> > > > > > > > > > > >and
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > > >scale.
> > > > > >
> > > > > > >
> > > > > > > >Quickly
> > > > > > > > >
> > > > > > > > > >turn
> > > > > > > > > > >
> > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > > >
> > > > > > > >box.
> > > > > > > > >
> > > > > > > > > >Mic
> > > > > > > > > > >
> > > > > > > > > > > >gain
> > > > > > > > > > > >
> > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > >
> > > > > >far
> > > > > > > >
> > > > > > > >
> > > > > > > > > >end of
> > > > > > > > > > >
> > > > > > > > > > > >ALC
> > > > > > > > > > > >
> > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > > >
> > > > > > > >times
> > > > > > > > > >
> > > > > > > > > > > >until you
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > > >This
> > > > > >
> > > > > > >
> > > > > > > > > > > >adjustment is
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter

> > > > >tends
> > > > >
> > > > > >to
> > > > > >
> > > > > > >
> > > > > > > >peg
> > > > > > > >
> > > > > > > > >hard
> > > > > > > > >
> > > > > > > > > right and then slowly come back down. So it will tend to float
> > > >
> > > > > >around
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > >max
> > > > > > > >
> > > > > > > > end of the ALC box until things settle down. If you switch
> > > > >meter
> > > > >
> > > > > >to
> > > > > >
> > > > > > >Comp
> > > > > > >
> > > > > > > >you
> > > > > > > >
> > > > > > > > should see about 20db on Comp Scale.
> > > > > > > >
> > > > > > > > Terry
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >alignment
> > > > > > > > >
> > > > > > > > Hi Terry, thanks for this.
> > > > > > > > >
> > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > >(Heater
> > > > > > > > >
> > > > > > > > >on
> > > > > > > > >
> > > > > > > > >etc), but

> > > > > > > > > >
> > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > >"align"
> > > > > >
> > > > > > >
> > > > > > > >the
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >speech
> > > > > > > > > > > >
> > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > >
> > > > > > > >the
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >AG
> > > > > > > > > >
> > > > > > > > > > >output to
> > > > > > > > > > >
> > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > >maximum
> > > > > > >
> > > > > > > > >
> > > > > > > > > > >on-scale ALC
> > > > > > > > > > > >
> > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > >on-scaled).
> > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > > >
> > > > > > > >turn
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > >Proc ON
> > > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > > > >meter
> > > > > > >
> > > > > > > >at
> > > > > > > > >

> > > > > > >
> > > > > > > > >this
> > > > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > > >reading.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > >pages
> > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > >40&41. As
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > > >
> > > > > > > > >switch
> > > > > > > > >
> > > > > > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > > >LEAVE
> > > > > > > > >
> > > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > > > > > >
> > > > > > > > > > > > >heater
> > > > > > > > >
> > > > > > > > > > > > > >off of the
> > > > > > > > >
> > > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > > > >step
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > >conditions still
> > > > > > > > >
> > > > > > > > > > > > > > > >being in force?
> > > > > > > > >
> > > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > > > >"max
> > > > > > > > >
> > > > > > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > > > >reading on

> > > > > > > > > >
> > > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > > >reading.
> > > > > >
> > > > > >
> > > > > > > >That
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >would be on
> > > > > > > > > > >
> > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > > >indication
> > > > > >
> > > > > > > >
> > > > > > > > >of
> > > > > > > > >
> > > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > > >with
> > > > > >
> > > > > > > >a
> > > > > > > >
> > > > > > > > > >multi-scale
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > > >meter
> > > > > >
> > > > > > > > >scale.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > > > >
> > > > > > > >mic
> > > > > > > >
> > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > > >1200
> > > > > >
> > > > > > > > >and
> > > > > > > > > >

```
> > > > > > > >
> > > > > > > > > >peaked L27.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > >would
> > > > >
> > > > >
> > > > > > >say
> > > > > > >
> > > > > > >
> > > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > > > >box".
> > > > > >
> > > > > > >
> > > > > > > >Just
> > > > > > > >
> > > > > > > > > >make it
> > > > > > > > > >
> > > > > > > > > > > > > >very clear what meter position and what scale you are to
> > > > read.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > >
> > > > > > > >heater
> > > > > > > >
> > > > > > > > > >switch on
> > > > > > > > > >
> > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > > >-K9TW
> > > > >
> > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > >
(Message over 64 KB, truncated)
```

31945. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 11:40:00 UTC
From: Terry Wagoner
Topic: 31874 Message: 31945

Mike -- I am going to have to go back to the old ARRL and Bill Orr handbooks and the tube curves because they made such a big deal about regulated screen supplies back then and built power supplies that used gas regulator tubes to provide stable screen supplies. I had old Johnson rigs that had regulated screen supplies and heavy choke input filters to stabilize the output voltage.

I have looked at Eimac, Penta, Burle, RCA and other tetrode tube app notes and they all describe the requirement for a regulated screen supply.

I thought the only reason they got away from regulated screens was a cost savings at a sacrifice of a little linearity.

I thought that the varying screen supply varied the bias point and affected where the tube was operating on the curve.

What I think you are saying is that in AB1 the only thing that can introduce IMD is overdriving the tube and I agree regulated screen supply wont prevent over driving and that is why they came up with ALC to catch the horse after it is out of the barn.

Back to the books for me.

Terry

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 19, 2011 12:16:48 AM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

An additional item that determines amplifier linearity is

3. Bias voltage setting.

The amplifier's bias is set so the amplifier tube(s) operate over their characteristic linear curve. See tube manuals for more details on how the characteristic linear curve affects how a tube's output signal will be based on the bias voltage setting.

If at anytime the bias voltage is incorrectly set, either too negative or much less negative, these 2 bias settings can result in the amplifier tube(s) operating outside of the tubes characteristic linear curve leading to the output sine wave signal, whether it's AF or RF, to be distorted.

None of these problems can be prevented by a regulated amplifier screen voltage.

73s
Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Linearity of an amplifier depends on 2 things
>
> 1. The amplifier class
> 2. Driver stage signal level
>
> All of the final amplifiers in the Kenwood hybrids operate in Class AB1 just
>like many other tube type transceivers or hybrid transceivers.
>
> If the driver stage signal level causes the grids of the final tubes to swing
>positive, grid current flows in the final tubes and power is consumed in the
>final amplifier's grid circuit. This results in the final amplifier's output
>signal containing distortion and the final amplifier is no longer operating in
>its linear state. A regulated screen supply cannot prevent this from happening.
>
>
> 73s
> Mike
> W5RKL
>
>
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
><andywestcottpublic@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > There is no real reason to regulate the final amplifier supply. The screen
>voltage varies too often and regulating the supply would be a waste of time and
>would not produce any added benefit. The supply for the 830's final amplifier is
>quite stable for what it's designed to do.
> > >
> > >
> >
> > Agreed.
> > Some better hi-fi amps have stabilised supplies for the output stages,
>presumably this aids linearity, but I would expect it to reduce output device
>dissipation during quiescent periods when the supply would normally be at a
>maximum. Presumably the PA in a transmitter would benefit in the same way.
> >

> > I doubt very much that the small benefit of reduced dissipation would
>anywhere near compensate for the added expense and complication though - the
>idea was thrown in for discussion rather than as a practical suggestion.
> >
>

[Non-text portions of this message have been removed]

31946. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 11:43:23 UTC
From: Terry Wagoner
Topic: 31878 Message: 31946

Ok I understand the history now. Would be interested if you make the suggested adjustment of VR-7. I would like to have a new pristine front panel for my spare 830 as well. Good luck-Terry

---

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 19, 2011 6:21:57 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry,

Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.

My 830 was working "OK" originally, although the alignment was miles off.
Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.

I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.
To which I decided to re-align the radio.

On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
I purchased a new front fascia and it looks great.. needs to work great now :-)

Cheers
Chris

On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:

> Chris--No one ever accused me of being very smart, but I will never fail due to
>lack of effort!
>
> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
>position, that when you flip to send the meter pegs off scale right hand side of
>the meter. Is this true?
>
> 2. The expected response would be for the meter to deflect to the far end of
>the ALC black box scale or somewhere close either side of the Max ALC range and
>not peg.
>

> 3. I dont believe this has anything to do with your Processor or Comp Level
>setting. Comp level pot is not in the circuit when Processor is off.
>
> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
>difficulty doing this step as written and you had not completed it yet. I
>suggest you go back and repeat this step.
>
> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
>be able to flip to send with 10 mv signal injected and get max ALC reading and
>not peg the meter full scale or any ALC indication very far past the black
>border. If that is not how you left this step then this is likely your problem.
>
>
> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
>off. When meter pegs hard right reduce mic gain slightly to just get if off the
>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
>able to move meter indication down to the ALC box max border or S9.
>
>
> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
>returning to Step 32. Make sure Step 31 is as accurate as you ca.
>
>
> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
>the AF board.
>
>
> Good Luck-Terry K9TW
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>wrote:
> >
> > Hi Terry,
> >
> > Yes I do have Skype, and am happy to try this... I have just sent you and
>Mike an email off list with some voltage measurements.
> >
> > Cheers
> > Chris
> >
> >
> > On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> >
> > > Chris--
> > >
> > > Do you have Skype? Maybe we could connect on Skype and perform each step
> > > together on our rigs and see at what step we differ. Not sure if we could

>have
>
> > > clear enough real time video or not for this to work. Not sure about our
>time
>
> > > difference, but could schedule it Zulu/GMT just as we would a QSO.
> > >
> > > Maybe Mike or Gordon would be better to do this with you as they repair
>these
>
> > > rigs for a living? As you know I had never performed this step until you
>asked
>
> > > about it. In fact I have never completed a full alignment as I dont have
>sweep
>
> > > generator. I have just done selected steps.
> > >
> > > Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Fri, June 17, 2011 9:55:30 PM
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as
>I
>
> > > have no attenuation in there)...
> > >
> > > So I got some test reference dBmA numbers against my calibrated probe and
>wrote
>
> > > down the numbers for 5mV, 10mV and 50mV before I started again.
> > > So... re-did the whole thing and of course, its more in line with your "Mic
>Gain
>
> > > 4" setting now, but still a huge difference when going from PROC OFF to
>PROC ON
>
> > > with regards to ALC readings.
> > >
> > > When the ALC meter is at full ALC gauge reading with PROC ON, the second I
>turn
>
> > > the PROC OFF, the ALC shoots right over to the right hand side of the
>meter.
> > >
> > > I may record a small video and send it to you... easier to see what I mean

>and
>
> > > what i'm doing.
> > >
> > > Turning the Mic gain up and down of course makes a difference, but the
>point is,
>
> > > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > >
> > > Cheers
> > > Chris
> > >
> > > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > >
> > > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv
>1500hz
>
> > > > test signals.
> > > >
> > > > With your mic gain at No. 4 it appears you have much more gain than I do
>in my
>
> > > >
> > > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is
>just
>
> > > > where I can get a good match at far right end of ALC black box.
> > > >
> > > > With Proc off and 10mv injected it doesnt take much adjustment right
>around the
>
> > > >
> > > > No. 4 setting of the mic gain to peg the meter or to have it fall back
>and have
>
> > > >
> > > > no meter indication. I do know with both of my rigs I end up at very
>close to
>
> > > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > >
> > > > I assume you have tried adjusting the mic gain down while leaving
>required 10mv
>
> > > >
> > > > signal injected? I found it a little touchy. When you first reported no
>meter
>
> > > > indication that is why I suggested turning mic gain up a little. Maybe I
>am

>
> > > > starting to get confused regards what your problem is.
> > > >
> > > > If turning mic gain down a little doesnt help then I would say it is on
>to
>
> > > > troubleshooting with Mike.
> > > >
> > > > Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > Hi Terry / Mike.....
> > > >
> > > > I am using a Marconi Instruments 2955 Radio Communications Test Set. -
>Good
>
> > > > piece of kit.
> > > > Here's what I see when I follow your instructions:
> > > >
> > > > > I use a spare mic connector and clipped the generator output to it with
>
> > > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > >
> > > > Exactly the same as me Terry, except my mini clips are connected directly
>to
>
> > > >the
> > > >
> > > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > >
> > > > > I have the mic gain set exactly at
> > > > > No. 4 position.
> > > > >
> > > > Same here
> > > >
> > > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > > switches. Let it warm up a little.
> > > > >
> > > > Same here
> > > >
> > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave
>from
>
> > > >Wave
> > > >

> > > >
> > > > > Tek generator to exactly 10 mv
> > > > >
> > > > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > >
> > > > > turned Proc off and set Comp level to max CW. I set mode switch to USB.
>I
>
> > > > > place meter switch in ALC position.
> > > > > >
> > > > >
> > > > > Same here
> > > > >
> > > > > >
> > > > > I then flip to Send and get ALC meter indication that is just outside
>the max
>
> > > > >
> > > > > end of the black ALC box. Maybe a needles worth.
> > > > > >
> > > > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and
>10mV
>
> > > > > and USB mode, I flick to send and I get full scale meter deflection in
>ALC mode
>
> > > > >
> > > > > (Full meter deflection, not on-scale ALC meter deflection, so if you look
>at
>
> > > > > s-meter scale, it's S9+40dB +).
> > > > >
> > > > > >
> > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC

> > > > >position
> > > > >
> > > > > >
> > > > > and I have not touched mic gain pot.
> > > > > >
> > > > > With Proc on, and Proc level fully clockwise, not adjusting any gains at
>either
>
> > > > >
> > > > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around
>S9+20dB
>
> > > > > now.. (I am only using the S-Meter scale as it's easier for you to gauge
>what
>

> > > > I'm saying and seeing.
> > > >
> > > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get
>maximum
>
> > > > "On-Scale" ALC reading, so now I get an accurate end of scale reading
>without
>
> > > > PROC ON, which on the S-Meter is S-9.
> > > > I check where VR-7 is now within it's VR scale and notice it's almost at

> > > > minimum.
> > > >
> > > > >
> > > > > I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > >
> > > > > black ALC box.
> > > > >
> > > > So now that I have adjusted VR-7 for full on-scale ALC meter reading,
>with PROC
>
> > > >
> > > > OFF, I put PROC ON and the reading drops to around the end of the letter
>C of
>
> > > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >
> > > > > It could be adjusted a little to get a match if I had the covers
> > > > > off, but close enough.
> > > > >
> > > >
> > > > I check L27 and find it's at it's peak, so I cannot go any higher and
>align
>
> > > >them
> > > >
> > > > with the PROC ON.
> > > >
> > > > > I switch the meter from ALC to Comp and it indicates just
> > > > > a little above 20db on the Comp scale.
> > > > >
> > > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so
>I
>
> > > > adjust L26 for 20dB reading.
> > > >
> > > > I will need to do some component checking in the circuit around the
>Processor

>
> > > >as
> > > >
> > > > Mike and yourself have recommended.
> > > >
> > > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I
>mentioned.
> > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > >
> > > > >
> > > > > I repeatedly switched Proc on and off and get the same results. In
>short my
>
> > > >as
> > > >
> > > >
> > > > > found condition for my daily operator is very close to being right on
>the
>
> > > >same
> > > >
> > > >
> > > > > indicated level on the ALC meter scale (near max on black border) with
>Proc
>
> > > >on
> > > >
> > > > > >
> > > > > and off.
> > > > >
> > > > > At this point Chris not sure I can be of any more help? I will think
>about it
>
> > > >
> > > > > some more and if I come up with something will write.
> > > > >
> > > > > Whatever you do you should not have to increase mic gain position or
>increase
>
> > > >
> > > > > audio generator output level above 10 mv. Depending on the pre-amp gain
>in
>
> > > >your
> > > >
> > > > >
> > > > > rig you may have to be a little higher than position 4 on the mic gain
>, but

>
> > > >I
> > > >
> > > >
> > > > > wouldnt think much higher.
> > > > > >
> > > > > > Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >
> > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary
>from
>
> > > >
> > > > > > Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >Good
> > > >
> > > >
> > > > > > luck Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Hi Terry,
> > > > > >
> > > > > > The only difference from my original post is that I increased the
>"gain" on
>
> > > >the
> > > >
> > > > > >
> > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> > > >why...
> > > > > >
> > > > > > I don't leave it pegged, I immediately back down the Mic gain to
>compensate.
> > > > > >
> > > > > > > Based on what you are reporting I would expect it to
> > > > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in

> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >
> > > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the
>far
>
> > > >right
> > > >
> > > > >
> > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > >
> > > > > Hope this makes sense..
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris--This appears different than what you originally reported of
>getting
>
> > > >no
> > > >
> > > > >
> > > > > > ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > >
> > > > > >Where
> > > > > >
> > > > > > is your mic gain set at? I would not leave meter pegged to long as it
>is
>
> > > >hard
> > > >
> > > > >
> > > > > >on
> > > > > >
> > > > > > the movement. I would slowly turn down mic gain until I could get
>meter off
>
> > > >
> > > > > >the
> > > > >
> > > > > > > peg.
> > > > > >
> > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at

>least
>
> > >
> > > > >off
> > > > >
> > > > >
> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and
>report
>
> > > >back
> > > >
> > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > > >
> > > > >to
> > > > >
> > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of
>black ALC
>
> > >
> > > > > > setting), with processor on and full scale (pegged meter) deflection

> > > >without
> > > >
> > > >
> > > > > > PROC NOT engaged, just Mic.
> > > > > >
> > > > > > Chris

> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > >
> > > > > > > Hi Terry, in a nutshell,
> > > > > > >
> > > > > > > It doesn't weigh up here.
> > > > > > >
> > > > > > > Following to the letter the service manual and then taking into
>account
>
> > > > >your
> > > > > >
> > > > > >
> > > > > > >notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >of
> > > > >
> > > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > >(ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > > >meter)
> > > > > >
> > > > > > >
> > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > >
> > > > > > > >
> > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC
>OFF.
>
> > >
> > > > > > > >
> > > > > > > Thanks
> > > > > > > Chris
> > > > > > > >
> > > > > > > Sent from my iPhone
> > > > > > > >
> > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > > >
> > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied
>to
>
> > > >have
> > > > >
> > > > >
> > > > > >same

> > > > > >
> > > > > > >
> > > > > > > > ALC reading (max) with Processor on and off. You should not have
>to
>
> > > > >adjust
> > > > > >
> > > > > >
> > > > > > >mic
> > > > > > > >
> > > > > > > > gain or input signal level once balanced. You should be able to
>flip to
>
> > > >
> > > > > >Tune
> > > > > > >
> > > > > > >
> > > > > > > > with Proc on and off and see approx the same max ALC indication.

> > > > > > > > >
> > > > > > > > If you initially get no indication (I think that is your
>problem?) you
>
> > > >
> > > > >can
> > > > > >
> > > > > > >
> > > > > > > >move
> > > > > > > >
> > > > > > > > mic gain up slightly until you get an indication. It wont take
>much and
>
> > > >
> > > > >will
> > > > > >
> > > > > > >be
> > > > > > > >
> > > > > > > > very touchy and will want to peg the meter. Only other choice you
>have
>
> > >is
> > > >
> > > > >
> > > > > >to
> > > > > > >
> > > > > > >set
> > > > > > > >
> > > > > > > > audio generator output higher as others suggested. I chose to
>just
>

> > > > >increase
> > > > >
> > > > > >
> > > > > > > mic gain until I got an indication. After I found that point I no
>
> > > >longer
> > > > >
> > > > >
> > > > > > >needed
> > > > > > > >
> > > > > > > > to touch the mic gain. If I had to increase mic gain each time
>then it
>
> > > >
> > > > > >would
> > > > > > >
> > > > > > >
> > > > > > > > not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >good
> > > > >
> > > > >
> > > > > > >matched
> > > > > > > >
> > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > Thanks Terry,
> > > > > > > > >
> > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc
>OFF
>
> > > >then
> > > > >
> > > > >ON
> > > > > >
> > > > > > >
> > > > > > > >to
> > > > > > > > >
> > > > > > > > same point? that's what it states from memory... point of
>exercise is
>
> > > >to
> > > > >

> > > >
> > > > > >have
> > > > > >
> > > > > > >
> > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >equal
> > > > >
> > > > >
> > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter
>scale
>
> > > >
> > > > > >with
> > > > > >
> > > > > > >
> > > > > > > >the
> > > > > > > > >
> > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > > >I
> > > > >
> > > > > >
> > > > > > >no
> > > > > > >
> > > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant
>go
>
> > > >any
> > > > >
> > > > >
> > > > > > > > >lower on
> > > > > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > >

> > > > > > > > >wrote:
> > > > > > > > > >
> > > > > > > > > > Thanks Terry....
> > > > > > > > > >
> > > > > > > > > > Will hopefully get around to confirming all of this later
>tonight
>
> > > >NZ
> > > >
> > > >
> > > > > > >time.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > > >switch
> > > > >
> > > > > >
> > > > > > >in
> > > > > > >
> > > > > > > > >the ALC position) to do your adjustment with the ALC indicated
>level
>
> > > >at
> > > >
> > > >
> > > > > >20db
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >the Compression scale as opposed to down at the high end of the
>ALC
>
> > > >box.
> > > >
> > > > >
> > > > > > >Less
> > > > > > >
> > > > > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > ><wagstw46@>
> > > > >

> > > > >
> > > > > > > > > wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Chris--OK you are telling me the following:
> Step A:
> 1. You have the Processor button off and Compression
>level pot
>
> > >
> > > > >max
> > > > > >
> > > > > >
> > > > > > > > > >clockwise.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > You are in USB mode.
> 2. You have the meter switch to ALC position.
> 3. You inject 1500hz @10 mv into mic input.
> 4. You flip Stand-by switch to Tune.
> 5. You adjust mic gain until meter pointer is at the far
>right
>
> > >
> > > > >end
> > > > > >
> > > > > > >of
> > > > > > > >
> > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >ALC
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > black bordered box.
> 6. You return to Stand-by.
> >
> Is the above correct? Where is your mic gain at? You
>should be
>
> > >
> > > > > > >between
> > > > > > > > > >
> > > > > > > > > > > > >1000 and
> > > > > > > > > > > > > > > >
> 1100.
> >
> You then turn Processor on with Comp Level max cw. What
>would
>
> > > >you
> > > > >
> > > > > >
> > > > > > > > >expect

> > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > reading to do for the same mic gain setting? Would you
>expect
>
> > > >the
> > > > >
> > > > > >
> > > > > > >meter
> > > > > > > >
> > > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > hard upscale far right? If you had a mic connected and
>whistled
>
> > > >
> > > > > > >what
> > > > > > >
> > > > > > >
> > > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > >
> > > > > > > > > > > > Step B:
> > > > > > > > > > > > With Processor on and Comp level set max clockwise and
>the mic
>
> > >
> > > > >gain
> > > > > >
> > > > > > >
> > > > > > > >not
> > > > > > > >
> > > > > > > > > >touched
> > > > > > > > > >
> > > > > > > > > > > > from above you are telling me that you have no ALC
>indication
>
> > > > >when
> > > > > > >
> > > > > > >
> > > > > > > > >you
> > > > > > > >
> > > > > > > > > >flip to
> > > > > > > > >
> > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > > >any

> > > >
> > > > >
> > > > > >ALC
> > > > > >
> > > > > > >
> > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > >
> > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will
>be very
>
> > > >
> > > > > > >sensitive
> > > > > > >
> > > > > > > > >and
> > > > > > > >
> > > > > > > > > > > > you should reach a point where it will drive meter hard
>up
>
> > > >scale.
> > > > >
> > > > > >
> > > > > > >Quickly
> > > > > > >
> > > > > > > > >turn
> > > > > > > >
> > > > > > > > > > > > mic gain back down until meter is at far right end of ALC
>black
>
> > > >
> > > > > >box.
> > > > > >
> > > > > > >Mic
> > > > > >
> > > > > > > > >gain
> > > > > > >
> > > > > > > > > > > > pot will be sensitive. Once you have ALC indication
>staying at
>
> > >
> > > > >far
> > > > >
> > > > >
> > > > > > >end of
> > > > > >
> > > > > > > > >ALC
> > > > > >
> > > > > > > > > > > > box you can peak L27. You may have to go back and forth
>several

>
> > > >
> > > > > >times
> > > > > >
> > > > > > >
> > > > > > > > >until you
> > > > > > > > >
> > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step
>A.
>
> > > >This
> > > >
> > > >
> > > > > > > > > >adjustment is
> > > > > > > > >
> > > > > > > > > > > > a little difficult due to the ALC time constant. The
>meter
>
> > > >tends
> > > >
> > > > >to
> > > > > >
> > > > > > >
> > > > > > > > >peg
> > > > > > > >
> > > > > > > > > > >hard
> > > > > > > > >
> > > > > > > > > > > > > > right and then slowly come back down. So it will tend to
>float
>
> > >
> > > > > >around
> > > > > > >
> > > > > > > > >the
> > > > > > > >
> > > > > > > > > > >max
> > > > > > > > >
> > > > > > > > > > > > > > end of the ALC box until things settle down. If you
>switch
>
> > > >meter
> > > >
> > > > >to
> > > > > >
> > > > > > >
> > > > > > > > >Comp
> > > > > > > >
> > > > > > > > > > >you
> > > > > > > > >
> > > > > > > > > > > > > > should see about 20db on Comp Scale.

> > > > > > > > > > > > >
> > > > > > > > > > > > > > Terry
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > _____
> > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >alignment
> > > > > > > > > > > > >
> > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > >
> > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to
>be
>
> > > > > >(Heater
> > > > > >
> > > > > > >
> > > > > > > > >on
> > > > > > > >
> > > > > > > > > >etc), but
> > > > > > > > > >
> > > > > > > > > > > > > none of it explains why I (and evidently others), can not
>
> > > >"align"
> > > > >
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > >
> > > > > > > > >speech
> > > > > > > >
> > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > >
> > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to
>maximum. Set
>
> > > >
> > > > >the
> > > > > >
> > > > > > >
> > > > > > > >AG
> > > > > > >
> > > > > > > > >output to
> > > > > > > >
> > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the

>
> > > >maximum
> > > >
> > > > >
> > > > > > > > > >on-scale ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > > > > >on-scaled).
> > > > > > > > > > > > > > Mic input providing the same ALC meter reading
10mV......
> > > > > > > > > > > >
> > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > Every step up until here works fine. I get to the point
>where I
>
> > > >
> > > > > >turn
> > > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > > >Proc ON
> > > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is
off.
> > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on
>the
>
> > > >meter
> > > > >
> > > > >at
> > > > > >
> > > > > > >
> > > > > > >this
> > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > >reading.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > Chris
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor

>Adjustment on
>
> > > > >pages
> > > > >
> > > > > >
> > > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > > > > >
> They should tell you to load up normally. Then switch
>off SG
>
> > >
> > > > > >switch
> > > > > > >
> > > > > > > >and
> > > > > > > >
> > > > > > > > > >LEAVE
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication
>with the
>
> > > >
> > > > > > >heater
> > > > > > > >
> > > > > > > > > >off of the
> > > > > > > > > >
> >Driver Tube. A minor detail. I think they rely on
>previous
>
> > > >step
> > > > >
> > > > >
> > > > > > > > > >conditions still
> > > > > > > > > >
> >being in force?
> >
> 1. Step 1 is OK except I would prefer that they would
>say
>
> > > >"max
> > > > >
> > > > >
> > > > > > > > > >meter
> > > > > > > > > >
> > > > > > > > > > > > > > > > > >reading on
> > > > > > > > > > > > > > > > > >
> >the Compression Scale".
> >
> 2. Step 2 is OK but again they tell you to obtain S-1

> > > >reading.
> > > >
> > > >
> > > > > >That
> > > > > >
> > > > > > >
> > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > >indication
> > > >
> > > > >
> > > > > >of
> > > > > >
> > > > > > >20db
> > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > >that would be on the Compression Scale. So would be
>better
>
> > > >with
> > > >
> > > > >a
> > > > >
> > > > >
> > > > > > > > >multi-scale
> > > > > > > > >
> > > > > > > > > > > > >meter for them to tell you the expected value and on
>what
>
> > > >meter
> > > >
> > > >
> > > > > > >scale.
> > > > > > > > > > > > >
> > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you
>to set
>
> > > >
> > > > >mic
> > > > >
> > > > > >
> > > > > > >gain
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > > >1200

> > > >
> > > > >
> > > > > >and
> > > > > >
> > > > > > >
> > > > > > > > >peaked L27.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if
>they
>
> > > >would
> > > > >
> > > > >
> > > > > > >say
> > > > > > >
> > > > > > >
> > > > > > > > > >something
> > > > > > > > > >
> > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter
>scale
>
> > > > >box".
> > > > > >
> > > > > > >
> > > > > > > >Just
> > > > > > > >
> > > > > > > > > >make it
> > > > > > > > > >
> > > > > > > > > > > > > > > >very clear what meter position and what scale you are to
>
> > > read.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and
>leave
>
> > > >
> > > > > > >heater
> > > > > > >
> > > > > > > > > >switch on
> > > > > > > > > >
> > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know.
>Terry
>
> > > >-K9TW
> > > > >
> > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell

>
> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had
>much
>
> > >
> > > > > >chance
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > > >check
> > > > > > > > >
> > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all
>day
>
> > > >so
> > > >
> > > > >I
> > > > >
> > > > >
> > > > > > >will
> > > > > > >
> > > > > > > > >give it a
> > > > > > > > >
> > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell
>
> > >
> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP
>alignment
>

```
> > > >in
> > > >
> > > >
> > > > > >the
> > > > > >
> > > > > > >830
> > > > > > >
> > > > > > > > >at the
> > > > > > > > >
> > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been
removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > >
```

> > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > ------------------------------------
> > > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > > ------------------------------------
> > > > > > > > >
> > > > > > > > > Yahoo! Groups Links
> > > > > > > > >
> > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris--I will give some more thought. Not sure what is going on. I am
>just
>
> > > > > >about
> > > > > > > > >
> > > > > > > > > out of ideas.
> > > > > > > > >
> > > > > > > > > I just repeated the test on my daily operating TS-830 with the covers
>on the
>
> > > >
> > > > > > > > > rig. I just unplugged the mic and brought the test equipment to the
>operating
>
> > > > >
> > > > > > > > > position.
> > > > > > > > >

> > > > > I use a spare mic connector and clipped the generator output to it with
>
> > > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set
>exactly
>
> > > >at
> > > >
> > > >
> > > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig
>and
>
> > > > >heater
> > > > >
> > > > > switches. Let it warm up a little.
> > > > >
> > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave
>from
>
> > > >Wave
> > > >
> > > >
> > > > > Tek generator to exactly 10 mv.
> > > > >
> > > > > I turned Proc off and set Comp level to max CW. I set mode switch to
>USB. I
>
> > > > > place meter switch in ALC position.
> > > > >
> > > > > I then flip to Send and get ALC meter indication that is just outside
>the max
>
> > > >
> > > > > end of the black ALC box. Maybe a needles worth.
> > > > >
> > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC

> > > >position
> > > >
> > > > >
> > > > > and I have not touched mic gain pot.
> > > > >
> > > > > I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > >
> > > > > black ALC box. It could be adjusted a little to get a match if I had
>the
>
> > > >covers
> > > >

> > > > >
> > > > > off, but close enough. I switch the meter from ALC to Comp and it
>indicates
>
> > > > >just
> > > > > >
> > > > > a little above 20db on the Comp scale.
> > > > > >
> > > > > I repeatedly switched Proc on and off and get the same results. In
>short my
>
> > > >as
> > > > >
> > > > >
> > > > > found condition for my daily operator is very close to being right on
>the
>
> > > >same
> > > > >
> > > > >
> > > > > indicated level on the ALC meter scale (near max on black border) with
>Proc
>
> > > >on
> > > > >
> > > > > >
> > > > > and off.
> > > > > >
> > > > > At this point Chris not sure I can be of any more help? I will think
>about it
>
> > > > >
> > > > > some more and if I come up with something will write.
> > > > > >
> > > > > Whatever you do you should not have to increase mic gain position or
>increase
>
> > > > >
> > > > > audio generator output level above 10 mv. Depending on the pre-amp gain
>in
>
> > > >your
> > > > >
> > > > > >
> > > > > rig you may have to be a little higher than position 4 on the mic gain
>, but
>
> > > >I
> > > > >
> > > > >

> > > > > wouldnt think much higher.
> > > > >
> > > > > Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > > >
> > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary
>from
>
> > > >
> > > > > Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >Good
> > > >
> > > >
> > > > > luck Terry
> > > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > Hi Terry,
> > > > > >
> > > > > The only difference from my original post is that I increased the
>"gain" on
>
> > > >the
> > > >
> > > > > >
> > > > > input (Mic gain), therefore got an ALC reading.
> > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> > > >why...
> > > > > >
> > > > > I don't leave it pegged, I immediately back down the Mic gain to
>compensate.
> > > > > >
> > > > > > Based on what you are reporting I would expect it to
> > > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in
> > > > > >
> > > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > >

> > > > >
> > > > > Once I have done the initial adjustment Terry, and get the ALC to the
>far
>
> > > >right
> > > > >
> > > > > >
> > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > >
> > > > > > Hope this makes sense..
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >
> > > > > > > Chris--This appears different than what you originally reported of
>getting
>
> > > >no
> > > > >
> > > > > > >
> > > > > > > ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > >
> > > > > >Where
> > > > > > >
> > > > > > > is your mic gain set at? I would not leave meter pegged to long as it
>is
>
> > > >hard
> > > > >
> > > > > > >
> > > > > > > >on
> > > > > > >
> > > > > > > the movement. I would slowly turn down mic gain until I could get
>meter off
>
> > > > >
> > > > > >the
> > > > > > >
> > > > > > > > peg.
> > > > > > >
> > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at
>least
>
> > >
> > > > >off

> > > > >
> > > > >
> > > > > > the peg and on the meter scale. Now turn on Proc and key rig and
>report
>
> > > >back
> > > >
> > > >
> > > > > > what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > > >
> > > > >to
> > > > >
> > > > >
> > > > > > be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >
> > > > >in
> > > > >
> > > > >
> > > > > > the ALC box window can you adjust L27 and bring the reading up?
Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of
>black ALC
>
> > >
> > > > > > setting), with processor on and full scale (pegged meter) deflection

> > > >without
> > > >
> > > >
> > > > > > PROC NOT engaged, just Mic.
> > > > > >
> > > > > > Chris
> > > > > > Sent from my iPhone
> > > > > >
> > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@...> wrote:
> > > > > >

> > > > > > > Hi Terry, in a nutshell,
> > > > > > > >
> > > > > > > > It doesn't weigh up here.
> > > > > > > >
> > > > > > > > Following to the letter the service manual and then taking into
>account
>
> > > > >your
> > > > > >
> > > > > >
> > > > > > > >notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >of
> > > > >
> > > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > >(ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > > >meter)
> > > > > >
> > > > > > >
> > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > >
> > > > > > > >
> > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC
>OFF.
>
> > >
> > > > > > >
> > > > > > > > Thanks
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > Sent from my iPhone
> > > > > > > >
> > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@...> wrote:
> > > > > > > >
> > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied
>to
>
> > >have
> > > > >
> > > > > >
> > > > > > >same
> > > > > > >
> > > > > > > >
> > > > > > > > ALC reading (max) with Processor on and off. You should not have
>to

>
> > > > >adjust
> > > > >
> > > > >
> > > > > > >mic
> > > > > > > >
> > > > > > > > > gain or input signal level once balanced. You should be able to
>flip to
>
> > > >
> > > > > >Tune
> > > > > > >
> > > > > > >
> > > > > > > > > with Proc on and off and see approx the same max ALC indication.

> > > > > > > > >
> > > > > > > > > If you initially get no indication (I think that is your
>problem?) you
>
> > > >
> > > > >can
> > > > > >
> > > > > > >
> > > > > > > >move
> > > > > > > >
> > > > > > > > > mic gain up slightly until you get an indication. It wont take
>much and
>
> > > >
> > > > > >will
> > > > > > >
> > > > > > > >be
> > > > > > > >
> > > > > > > > > very touchy and will want to peg the meter. Only other choice you
>have
>
> > > >is
> > > > >
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >set
> > > > > > > >
> > > > > > > > > audio generator output higher as others suggested. I chose to
>just
>
> > > > >increase
> > > > > >
> > > > > > >
> > > > > > > > > mic gain until I got an indication. After I found that point I no

>
> > > >longer
> > > >
> > > >
> > > > > > >needed
> > > > > > > >
> > > > > > > > > to touch the mic gain. If I had to increase mic gain each time
>then it
>
> > >
> > > > > >would
> > > > > > >
> > > > > > >
> > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >good
> > > > >
> > > > >
> > > > > > > >matched
> > > > > > > > >
> > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > Thanks Terry,
> > > > > > > > > >
> > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc
>OFF
>
> > > >then
> > > > > >
> > > > > >ON
> > > > > > >
> > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > > > same point? that's what it states from memory... point of
>exercise is
>
> > > >to
> > > > > >
> > > > > >
> > > > > > > > >have
> > > > > > > > >
> > > > > > > > > >

> > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > >
> > > > > > > > > Cheers
> > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >equal
> > > > >
> > > > >
> > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter
>scale
>
> > > >
> > > > > >with
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > > >I
> > > > >
> > > > > >no
> > > > > >
> > > > > >
> > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant
>go
>
> > > >any
> > > > >
> > > > >
> > > > > > >lower on
> > > > > >
> > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > >
> > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > ><cparnell1001@>
> > > > > > >
> > > > > > >
> > > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > Thanks Terry....
> > > > > > > > >

> > > > > > > > > > Will hopefully get around to confirming all of this later
>tonight
>
> > > >NZ
> > > >
> > > >
> > > > > > >time.
> > > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > >
> > > > > > > > > > > Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > > >switch
> > > > >
> > > > > >
> > > > > > >in
> > > > > > >
> > > > > > > > >the ALC position) to do your adjustment with the ALC indicated
>level
>
> > > >at
> > > >
> > > >
> > > > > >20db
> > > > > >
> > > > > > >on
> > > > > > >
> > > > > > > > >the Compression scale as opposed to down at the high end of the
>ALC
>
> > > >box.
> > > >
> > > > >
> > > > > > >Less
> > > > > > >
> > > > > > > > >decay time to mess with. Terry
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > ><wagstw46@>
> > > > >
> > > > >
> > > > > > > > wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Chris--OK you are telling me the following:

> > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > 1. You have the Processor button off and Compression
>level pot
>
> > >
> > > > >max
> > > > > >
> > > > > >
> > > > > > > > > >clockwise.
> > > > > > > > > > >
> > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far
>right
>
> > >
> > > > >end
> > > > > >
> > > > > >of
> > > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > >
> > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You
>should be
>
> > >
> > > > > >between
> > > > > > > >
> > > > > > > > > >1000 and
> > > > > > > > > > > >
> > > > > > > > > > > > > 1100.
> > > > > > > > > > > > >
> > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What
>would
>
> > > >you
> > > > >
> > > > > >
> > > > > > >expect
> > > > > > > >
> > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading to do for the same mic gain setting? Would you

>expect
>
> > > >the
> > > >
> > > > >
> > > > > >meter
> > > > > > >
> > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > > hard upscale far right? If you had a mic connected and
>whistled
>
> > > >
> > > > > >what
> > > > > > >
> > > > > > >
> > > > > > > > > >would you
> > > > > > > > > > >
> > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and
>the mic
>
> > >
> > > > >gain
> > > > > >
> > > > > > >
> > > > > > > >not
> > > > > > > > >
> > > > > > > > > >touched
> > > > > > > > > > >
> > > > > > > > > > > > > > from above you are telling me that you have no ALC
>indication
>
> > > > >when
> > > > > > >
> > > > > > >
> > > > > > > >you
> > > > > > > > >
> > > > > > > > > >flip to
> > > > > > > > > > >
> > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > > >any
> > > > >
> > > > > > >
> > > > > > > >ALC
> > > > > > > > >

> > > > > > >
> > > > > > > > > >meter
> > > > > > > > > >
> > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > >
> > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will
>be very
>
> > > >
> > > > > > >sensitive
> > > > > > > >
> > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > you should reach a point where it will drive meter hard
>up
>
> > > >scale.
> > > > >
> > > > > >
> > > > > > >Quickly
> > > > > > >
> > > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC
>black
>
> > > >
> > > > > >box.
> > > > > > >
> > > > > > >Mic
> > > > > > >
> > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication
>staying at
>
> > >
> > > > >far
> > > > > >
> > > > > >
> > > > > > >end of
> > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > > > > box you can peak L27. You may have to go back and forth
>several
>
> > > >
> > > > > >times
> > > > > > >

> > > > > > >
> > > > > > > > > >until you
> > > > > > > > > >
> > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step
>A.
>
> > > >This
> > > > >
> > > > >
> > > > > > > > > >adjustment is
> > > > > > > > > >
> > > > > > > > > > > > > a little difficult due to the ALC time constant. The
>meter
>
> > > >tends
> > > > >
> > > > > >to
> > > > > >
> > > > > > >
> > > > > > > >peg
> > > > > > >
> > > > > > > > >hard
> > > > > > > >
> > > > > > > > > > > > right and then slowly come back down. So it will tend to
>float
>
> > >
> > > > >around
> > > > > >
> > > > > > >the
> > > > > > >
> > > > > > > > >max
> > > > > > > >
> > > > > > > > > > > > end of the ALC box until things settle down. If you
>switch
>
> > > >meter
> > > > >
> > > > > >to
> > > > > >
> > > > > > >Comp
> > > > > > >
> > > > > > > > >you
> > > > > > > >
> > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > >
> > > > > > > > > > > > Terry
> > > > > > > > > > > >
> > > > > > > > > > > >

> > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >alignment
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to
>be
>
> > > > > >(Heater
> > > > > > >
> > > > > > > >
> > > > > > > > >on
> > > > > > > > >
> > > > > > > > > >etc), but
> > > > > > > > > >
> > > > > > > > > > none of it explains why I (and evidently others), can not
>
> > > >"align"
> > > > > >
> > > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > >speech
> > > > > > > > > >
> > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > >
> > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to
>maximum. Set
>
> > > > >
> > > > > >the
> > > > > > > >
> > > > > > > > >AG
> > > > > > > > >
> > > > > > > > > >output to
> > > > > > > > > >
> > > > > > > > > > 10 mV
> > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
>
> > > >maximum
> > > > > >
> > > > > > > >

> > > > > > > > >on-scale ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > > > > >on-scaled).
> > > > > > > > > > > > > > Mic input providing the same ALC meter reading
10mV......
> > > > > > > > > > > > >
> > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > Every step up until here works fine. I get to the point
>where I
>
> > > >
> > > > > >turn
> > > > > > >
> > > > > > >the
> > > > > > > >
> > > > > > > > >Proc ON
> > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is
off.
> > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on
>the
>
> > > >meter
> > > > >
> > > > >at
> > > > > >
> > > > > > >
> > > > > > > >this
> > > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > >reading.
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor
>Adjustment on
>
> > > > >pages
> > > > > > > >

> > > > > >
> > > > > > > > > >40&41. As
> > > > > > > > > >
> > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > > > >
> They should tell you to load up normally. Then switch
>off SG
>
> > >
> > > > > >switch
> > > > > > >
> > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > >LEAVE
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication
>with the
>
> > > >
> > > > > > >heater
> > > > > > > >
> > > > > > > > > >off of the
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on
>previous
>
> > > >step
> > > > >
> > > > >
> > > > > > > > > > >conditions still
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > > > > >
> 1. Step 1 is OK except I would prefer that they would
>say
>
> > > >"max
> > > > >
> > > > >
> > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > >reading on
> > > > > > > > > >
> > > > > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > > > > >
> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >reading.
> > > > >
> > > > >
> > > > > > > > >That

> > > > > >
> > > > > > > >
> > > > > > > > > >would be on
> > > > > > > > > >
> > > > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > >indication
> > > > >
> > > > > >
> > > > > > >of
> > > > > > > >
> > > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be
>better
>
> > > >with
> > > > >
> > > > > >a
> > > > > > >
> > > > > > > >
> > > > > > > > > >multi-scale
> > > > > > > > > >
> > > > > > > > > > > > > > > > > > >meter for them to tell you the expected value and on
>what
>
> > > >meter
> > > > >
> > > > > >
> > > > > > > >scale.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you
>to set
>
> > > > >
> > > > > > >mic
> > > > > > > >
> > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > > >1200
> > > > >
> > > > > >
> > > > > > >and
> > > > > > > >

> > > > > > >
> > > > > > > > > >peaked L27.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if
>they
>
> > > >would
> > > > >
> > > > >
> > > > > > >say
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >something
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter
>scale
>
> > > > >box".
> > > > > > >
> > > > > > > >
> > > > > > > > > >Just
> > > > > > > > > > >
> > > > > > > > > > > > >make it
> > > > > > > > > > > > > >
> >very clear what meter position and what scale you are to
>
> > > read.
> > > > > > > > > > > > > > >
> So, I think if you load up, place SG switch to off, and
>leave
>
> > > >
> > > > > > >heater
> > > > > > > >
> > > > > > > > > > >switch on
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know.
>Terry
>
> > > >-K9TW
> > > > >
> > > > >
> > > > > > >
> > > > > > > > > > > > > > > > >
> --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell
>
> > > > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > > > > > > > > > > >wrote:

> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had
>much
>
> > >
> > > > > >chance
> > > > > > >
> > > > > > > >to
> > > > > > > > >
> > > > > > > > > >check
> > > > > > > > > > >
> > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all
>day
>
> > > >so
> > > > >
> > > > > >I
> > > > > > >
> > > > > > > >
> > > > > > > > >will
> > > > > > > > > >
> > > > > > > > > > > >give it a
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell
>
> > >
> > > > > > > > ><cparnell1001@>
> > > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP
>alignment
>
> > > >in
> > > > >
> > > > > >
> > > > > > > >the

> > > > > >
> > > > > > > >830
> > > > > > > >
> > > > > > > > > >at the
> > > > > > > > > >
> > > > > > > > > > > > > > > >weekend?
> >
> >
> Cheers
> Chris, ZL1CDP
> >
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> Yahoo! Groups Links
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> > > > > > > > > Yahoo! Groups Links
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Yahoo! Groups Links

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31947. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 12:09:06 UTC
From: Chris Parnell
Topic: 31878 Message: 31947

Hi Mike,

Thanks... will try and figure it out.

Chris

On 19/06/2011, at 11:31 PM, w5rkl wrote:

> Hi Chris,
>
> Based on the HV and power output levels you provided, 850VDC high voltage and 70 watts output, that equates to an IP current level of approximately 150ma. Therefore, with those levels the INPUT power in the final amplifier would be;
>
> .150 x 850 = 127.5 watts
>
> Since the 830 final amplifier has an efficiency rating of approximately 55%, power output would be
>
> 127.5 - 45% = 70.125 watts
>
> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit supplies are within specifications and operating as they should.
>
> I recommend you troubleshoot the 830's transmit signal path, take level measurements and compare your findings with the 830 service manual Level Diagram on page 44.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry,
> >
> > Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.
> >
> > My 830 was working "OK" originally, although the alignment was miles off.
> > Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.
> >
> > I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.
> > To which I decided to re-align the radio.

> >
> > On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
> > I purchased a new front fascia and it looks great.. needs to work great now :-)
> >
> > Cheers
> > Chris
> >
> >
> >
> > On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> >
> > > Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!
> > >
> > > 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?
> > >
> > > 2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.
> > >
> > > 3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.
> > >
> > > 4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.
> > >
> > > 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.
> > >
> > > 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.
> > >
> > > 7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > >
> > > 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.
> > >
> > > Good Luck-Terry K9TW

> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > > >
> > > > Hi Terry,
> > > >
> > > > Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >
> > > > > Chris--
> > > > >
> > > > > Do you have Skype? Maybe we could connect on Skype and perform each step
> > > > > together on our rigs and see at what step we differ. Not sure if we could have
> > > > > clear enough real time video or not for this to work. Not sure about our time
> > > > > difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > > >
> > > > > Maybe Mike or Gordon would be better to do this with you as they repair these
> > > > > rigs for a living? As you know I had never performed this step until you asked
> > > > > about it. In fact I have never completed a full alignment as I dont have sweep
> > > > > generator. I have just done selected steps.
> > > > >
> > > > > Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 9:55:30 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > > > have no attenuation in there)...
> > > > >
> > > > > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > > > > down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > > > > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > > > > with regards to ALC readings.
> > > > >
> > > > > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > > > > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> > > > >
> > > > > I may record a small video and send it to you... easier to see what I mean and
> > > > > what i'm doing.
> > > > >
> > > > > Turning the Mic gain up and down of course makes a difference, but the point is,

> > > > > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > > > > test signals.
> > > > > >
> > > > > > With your mic gain at No. 4 it appears you have much more gain than I do in my
> > > > > >
> > > > > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > > > > where I can get a good match at far right end of ALC black box.
> > > > > >
> > > > > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > > > > >
> > > > > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > > > > >
> > > > > > no meter indication. I do know with both of my rigs I end up at very close to
> > > > > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > > > >
> > > > > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > > > > >
> > > > > > signal injected? I found it a little touchy. When you first reported no meter
> > > > > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > > > > starting to get confused regards what your problem is.
> > > > > >
> > > > > > If turning mic gain down a little doesnt help then I would say it is on to
> > > > > > troubleshooting with Mike.
> > > > > >
> > > > > > Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Hi Terry / Mike.....
> > > > > >
> > > > > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > > > > piece of kit.
> > > > > > Here's what I see when I follow your instructions:
> > > > > >
> > > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > > > >
> > > > > > Exactly the same as me Terry, except my mini clips are connected directly to
> > > > > >the

> > > > > >
> > > > > > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > > > > >
> > > > > > > > I have the mic gain set exactly at
> > > > > > > > No. 4 position.
> > > > > > > >
> > > > > > > > Same here
> > > > > > > >
> > > > > > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > > > > > switches. Let it warm up a little.
> > > > > > > >
> > > > > > > > Same here
> > > > > > > >
> > > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > > >Wave
> > > > > > > >
> > > > > > > >
> > > > > > > > Tek generator to exactly 10 mv
> > > > > > > >
> > > > > > > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > > > > >
> > > > > > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > > place meter switch in ALC position.
> > > > > > > >
> > > > > > > >
> > > > > > > > Same here
> > > > > > > >
> > > > > > > >
> > > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > > > >
> > > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > > >
> > > > > > > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > > > > > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > > > > > > >
> > > > > > > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > > > > > > s-meter scale, it's S9+40dB +).
> > > > > > > >
> > > > > > > >
> > > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > > >position
> > > > > > > >
> > > > > > > >
> > > > > > > > and I have not touched mic gain pot.
> > > > > > > >
> > > > > > > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > > > > > > >
> > > > > > > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > > > > > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > > > > > > I'm saying and seeing.

> > > > > >
> > > > > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > > > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > > > > PROC ON, which on the S-Meter is S-9.
> > > > > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > > > > minimum.
> > > > > >
> > > > > > >
> > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > > > >
> > > > > > > black ALC box.
> > > > > > >
> > > > > > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > > > > >
> > > > > > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > > > > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > > > >
> > > > > > > > It could be adjusted a little to get a match if I had the covers
> > > > > > > > off, but close enough.
> > > > > > > >
> > > > > > >
> > > > > > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > > > > >them
> > > > > > >
> > > > > > > with the PROC ON.
> > > > > > >
> > > > > > > > I switch the meter from ALC to Comp and it indicates just
> > > > > > > > a little above 20db on the Comp scale.
> > > > > > > >
> > > > > > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > > > > > adjust L26 for 20dB reading.
> > > > > > >
> > > > > > > I will need to do some component checking in the circuit around the Processor
> > > > > > >as
> > > > > > >
> > > > > > > Mike and yourself have recommended.
> > > > > > >
> > > > > > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > > > > > >
> > > > > > > Thanks
> > > > > > > Chris, ZL1CDP
> > > > > > >
> > > > > > > >
> > > > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > > > >as
> > > > > > >
> > > > > > >
> > > > > > > > found condition for my daily operator is very close to being right on the
> > > > > > >same
> > > > > > >

> > > > > >
> > > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > > >on
> > > > > > >
> > > > > > > >
> > > > > > > > and off.
> > > > > > > >
> > > > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > > >
> > > > > > > > some more and if I come up with something will write.
> > > > > > > >
> > > > > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > > > >
> > > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > >your
> > > > > > >
> > > > > > > > >
> > > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > >I
> > > > > > >
> > > > > > >
> > > > > > > > wouldnt think much higher.
> > > > > > > >
> > > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > > >
> > > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > >
> > > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > >Good
> > > > > > >
> > > > > > >
> > > > > > > > luck Terry
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > >
> > > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > >the
> > > > > > >
> > > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > >why...
> > > > > > >
> > > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.

> > > > > > >
> > > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > > > >in
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > > > >
> > > > > > > > >
> > > > > > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > > > > > > >right
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > > > > >
> > > > > > > > > > Hope this makes sense..
> > > > > > > > >
> > > > > > > > > > Cheers
> > > > > > > > > > Chris
> > > > > > > > >
> > > > > > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > > > > >
> > > > > > > > > > Chris--This appears different than what you originally reported of getting
> > > > > > > > >no
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > > > > > >
> > > > > > > > > >Where
> > > > > > > > >
> > > > > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > > > > > >hard
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > > > > >
> > > > > > > > > >the
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > peg.
> > > > > > > > >
> > > > > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > > > > > >
> > > > > > > > > >off
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report

> > > > > >back
> > > > > > >
> > > > > > >
> > > > > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > > > >in
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > > > > >
> > > > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > > > > > >without
> > > > > > > >
> > > > > > > >
> > > > > > > > > PROC NOT engaged, just Mic.
> > > > > > > > >
> > > > > > > > > Chris
> > > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > > > >
> > > > > > > > > > Hi Terry, in a nutshell,
> > > > > > > > >
> > > > > > > > > > It doesn't weigh up here.
> > > > > > > > >
> > > > > > > > > > Following to the letter the service manual and then taking into account
> > > > > > > > >your
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > > > > > >of
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > >ALC

> > > > > > > > >
> > > > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > > > > >meter)
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Thanks
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > > Sent from my iPhone
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > > > > >have
> > > > > > > > >
> > > > > > > > > > >same
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > > > >adjust
> > > > > > > > >
> > > > > > > > > > >mic
> > > > > > > > > > >
> > > > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > > > > >
> > > > > > > > > > >Tune
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > > > > >
> > > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > > > > >
> > > > > > > > > > >can
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >move
> > > > > > > > > > >
> > > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > > > > >
> > > > > > > > > > >will
> > > > > > > > > > >
> > > > > > > > > > > >be

> > > > > > > > >
> > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > > >is
> > > > > > >
> > > > > > > > >
> > > > > > > > > >to
> > > > > > > > >
> > > > > > > > > >set
> > > > > > > > > >
> > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > > >increase
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > > > >longer
> > > > > > >
> > > > > > > > >
> > > > > > > > > >needed
> > > > > > > > >
> > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > > >
> > > > > > > > > >would
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > > > >good
> > > > > > >
> > > > > > > > >
> > > > > > > > > >matched
> > > > > > > > >
> > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > >
> > > > > > > > > > _____
> > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > > Thanks Terry,
> > > > > > > > >
> > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > > > >then
> > > > > > >
> > > > > > > > >ON
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >to
> > > > > > > > >
> > > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > > > >to

> > > > > >
> > > > > >
> > > > > > > > >have
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > > > > > >equal
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > > > > >
> > > > > > > > >with
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > > > > >I
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > >no
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > > > > >any
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > > >lower on
> > > > > > > > >
> > > > > > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > ><cparnell1001@>
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > > > > >wrote:
> > > > > > > > >
> > > > > > > > > > > > > > > > Thanks Terry....
> > > > > > > > >
> > > > > > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > > > > >NZ
> > > > > > > > >

> > > > > >
> > > > > > > > >time.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > > > >switch
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >in
> > > > > > > > > >
> > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > > > >at
> > > > > > >
> > > > > > >
> > > > > > > > >20db
> > > > > > > > >
> > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > > > >box.
> > > > > > >
> > > > > > > >
> > > > > > > > > >Less
> > > > > > > > > >
> > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > > ><wagstw46@>
> > > > > > > >
> > > > > > > >
> > > > > > > > > > > wrote:
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > > >
> > > > > > > >max
> > > > > > > >
> > > > > > > >
> > > > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.

> > > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > > >
> > > > > > > >end
> > > > > > > > >
> > > > > > > > >of
> > > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > > >
> > > > > > > > > > > >ALC
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > > > > >
> > > > > > > > > >between
> > > > > > > > > > >
> > > > > > > > > > > >1000 and
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > 1100.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > >expect
> > > > > > > > > > > >
> > > > > > > > > > > > >the ALC
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > > > > > > >the
> > > > > > > > > > >
> > > > > > > > > > > >meter
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >to peg
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > > > > > > > >
> > > > > > > > > > > >what
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >would you
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > > > > > > > > >

> > > > > > >gain
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >not
> > > > > > > > > >
> > > > > > > > > > >touched
> > > > > > > > > > >
> > > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > > > >when
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > >flip to
> > > > > > > > > > >
> > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > > >any
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > > > > > >
> > > > > > > > > >sensitive
> > > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > > > > >scale.
> > > > > > > > >
> > > > > > > > > >Quickly
> > > > > > > > > >
> > > > > > > > > > >turn
> > > > > > > > > > >
> > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > > > > > >
> > > > > > > > > >box.
> > > > > > > > > >
> > > > > > > > > > >Mic
> > > > > > > > > > >
> > > > > > > > > > > >gain
> > > > > > > > > > > >
> > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > > > > > > >

> > > > > > >far
> > > > > > > >
> > > > > > > >
> > > > > > > > > >end of
> > > > > > > > > > >
> > > > > > > > > > > > >ALC
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > > > >
> > > > > > > > > >times
> > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > >until you
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > > > >This
> > > > > > >
> > > > > > > >
> > > > > > > > > > >adjustment is
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > > > > >tends
> > > > > > > >
> > > > > > > > > >to
> > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >peg
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >hard
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > > > > >
> > > > > > > > > >around
> > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >the
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >max
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > > > > >meter
> > > > > > > >
> > > > > > > > > >to
> > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >Comp
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >you
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > > > > > > > >

> > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > > > > > > > > > > > > > >alignment
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > > > > > > > > > > > > >(Heater
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >on
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >etc), but
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > > > > > > > > > > > > >"align"
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >the
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >speech
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >the
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >AG
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >output to
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > > > > > > > > > > > > >maximum
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >on-scale ALC
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > reading. Set the PROC to ON.

> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > > > >on-scaled).
> > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > > >
> > > > > > > >turn
> > > > > > > > >
> > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > >Proc ON
> > > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > > >meter
> > > > > > >
> > > > > > >at
> > > > > > > >
> > > > > > > > >
> > > > > > > > >this
> > > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > > > >reading.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > > > >pages
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >40&41. As
> > > > > > > > > > >
> > > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > > > >
> > > > > > > >switch
> > > > > > > > >
> > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > >LEAVE
> > > > > > > > > > >

> > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > > >
> > > > > > > > >heater
> > > > > > > > >
> > > > > > > > > > >off of the
> > > > > > > > > > >
> > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > > > >step
> > > > > >
> > > > > >
> > > > > > > > > > >conditions still
> > > > > > > > > > >
> > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > > > >"max
> > > > > >
> > > > > >
> > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > >reading on
> > > > > > > > > > >
> > > > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > > > >reading.
> > > > > >
> > > > > >
> > > > > > > >That
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >would be on
> > > > > > > > > > >
> > > > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > > > >indication
> > > > > >
> > > > > > >
> > > > > > > >of
> > > > > > > >
> > > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > > > >with
> > > > > >
> > > > > > >a
> > > > > > >
> > > > > > >
> > > > > > > > > > >multi-scale

> > > > > > > > > > >
> > > > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > > > >meter
> > > > > >
> > > > > >
> > > > > > > > >scale.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > > > >
> > > > > > >mic
> > > > > > >
> > > > > > > >
> > > > > > > > >gain
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > > > >1200
> > > > > >
> > > > > > >
> > > > > > > >and
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >peaked L27.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > > >would
> > > > > >
> > > > > >
> > > > > > > >say
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >something
> > > > > > > > > > >
> > > > > > > > > > > > > > >like "top or far right end of black bordered ALC meter scale
> > > > > > >box".
> > > > > > >
> > > > > > > >
> > > > > > > > >Just
> > > > > > > > >
> > > > > > > > > > >make it
> > > > > > > > > > >
> > > > > > > > > > > > > > >very clear what meter position and what scale you are to
> > > > > read.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > So, I think if you load up, place SG switch to off, and leave
> > > > > >
> > > > > > > > >heater
> > > > > > > > >
> > > > > > > > > > >switch on
> > > > > > > > > > >

> > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > > > >-K9TW
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > > > >
> Ok Terry, thank you.
> >
> Been troubleshooting my 990 for a week so haven't had much
> > > > > > >
> > > > > > > > > > >chance
> > > > > > > > > > > >
> > > > > > > > > > > > > > > >to
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >check
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > > > > > > > >
> Cheers
> Chris
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > > > > > > > >
> Chris --Sorry I did not. It is supposed to rain all day
> > > > > > > > > > >so
> > > > > > > > > > > >
> > > > > > > > > > > > > > >I
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >will
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >give it a
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > > > >
> Hi Terry, did you get chance to test the SP alignment
> > > > > > > > > > > > >in
> > > > > > > > > > > > > >
```
```

> > > > > >
> > > > > > > >the
> > > > > > > >
> > > > > > > > >830
> > > > > > > > >
> > > > > > > > > > >at the
> > > > > > > > > > >
> > > > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > > > Chris, ZL1CDP
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > >
> > > > > > > > > > ------------------------------------

> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > ------------------------------------
> > > > > > > > > > > >
> > > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > > >
> > > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > > > > > > > >about
> > > > > > > > > > >
> > > > > > > > > > > out of ideas.
> > > > > > > > > > >
> > > > > > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > > > > > > > > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > > > > > > > > >
> > > > > > > > > > > position.
> > > > > > > > > > >
> > > > > > > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > > > > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > > > > > > > > > >at
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > > > > > > > > > >heater
> > > > > > > > > > >
> > > > > > > > > > > switches. Let it warm up a little.

> > > > > > >
> > > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > > >Wave
> > > > > > >
> > > > > > >
> > > > > > > > Tek generator to exactly 10 mv.
> > > > > > > >
> > > > > > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > > place meter switch in ALC position.
> > > > > > > >
> > > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > > >
> > > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > > >
> > > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > > >position
> > > > > > >
> > > > > > > > and I have not touched mic gain pot.
> > > > > > > >
> > > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > > > > >
> > > > > > > > black ALC box. It could be adjusted a little to get a match if I had the
> > > > > > >covers
> > > > > > >
> > > > > > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > > > > >just
> > > > > > >
> > > > > > > > a little above 20db on the Comp scale.
> > > > > > > >
> > > > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > > > >as
> > > > > > >
> > > > > > >
> > > > > > > > found condition for my daily operator is very close to being right on the
> > > > > > >same
> > > > > > >
> > > > > > >
> > > > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > > > >on
> > > > > > >
> > > > > > > > and off.
> > > > > > > >
> > > > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > > >
> > > > > > > > some more and if I come up with something will write.
> > > > > > > >
> > > > > > > > Whatever you do you should not have to increase mic gain position or increase

> > > > > >
> > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > > >your
> > > > > > >
> > > > > > > >
> > > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > > > >I
> > > > > > > >
> > > > > > > >
> > > > > > > > wouldnt think much higher.
> > > > > > > >
> > > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > > > >
> > > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > > >
> > > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > > >Good
> > > > > > > >
> > > > > > > >
> > > > > > > > luck Terry
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > >
> > > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > > >the
> > > > > > > >
> > > > > > > >
> > > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > > >why...
> > > > > > > >
> > > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > > > > >
> > > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > > >
> > > > > > > >in
> > > > > > > >
> > > > > > > >
> > > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > > >
> > > > > > > >
> > > > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > > > > >right

> > > > > >
> > > > > > >
> > > > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > > > >
> > > > > > > > Hope this makes sense..
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris--This appears different than what you originally reported of getting
> > > > > > >no
> > > > > > > >
> > > > > > > >
> > > > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > > > >
> > > > > > > > >Where
> > > > > > > > >
> > > > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > > > >hard
> > > > > > > >
> > > > > > > >
> > > > > > > > >on
> > > > > > > > >
> > > > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > > > >
> > > > > > > > >the
> > > > > > > >
> > > > > > > > >
> > > > > > > > > peg.
> > > > > > > > >
> > > > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > > > > >
> > > > > > > > >off
> > > > > > > >
> > > > > > > >
> > > > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > > > >back
> > > > > > > >
> > > > > > > >
> > > > > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > > > >in
> > > > > > > >

> > > > > > >
> > > > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > > > >without
> > > > > > >
> > > > > > >
> > > > > > > > > PROC NOT engaged, just Mic.
> > > > > > > > >
> > > > > > > > > Chris
> > > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > > > >
> > > > > > > > > Hi Terry, in a nutshell,
> > > > > > > > >
> > > > > > > > > It doesn't weigh up here.
> > > > > > > > >
> > > > > > > > > Following to the letter the service manual and then taking into account
> > > > > > >your
> > > > > > >
> > > > > > >
> > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > > >of
> > > > > >
> > > > > >
> > > > > > >ALC
> > > > > > >
> > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > > >meter)
> > > > > >
> > > > > >
> > > > > > >deflection without PROC engaged, just Mic.
> > > > > > >
> > > > > > >
> > > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > > >
> > > > > >
> > > > > > > > > Thanks

> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > > Sent from my iPhone
> > > > > > > > > >
> > > > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > > > > >
> > > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > > > >have
> > > > > > >
> > > > > > >
> > > > > > > >same
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > > >adjust
> > > > > > >
> > > > > > >
> > > > > > > >mic
> > > > > > > >
> > > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > > >Tune
> > > > > > >
> > > > > > >
> > > > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > > > >
> > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > > >can
> > > > > > >
> > > > > > >
> > > > > > > >move
> > > > > > > >
> > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > > >will
> > > > > > >
> > > > > > > >be
> > > > > > > >
> > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > > >is
> > > > > > >
> > > > > > >
> > > > > > > >to
> > > > > > > >
> > > > > > > >set
> > > > > > > >
> > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > > >increase
> > > > > > >
> > > > > > >
```
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> > > > > > > >
> > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > > >longer
> > > > > > >
> > > > > > >
> > > > > > > > > >needed
> > > > > > > > > >
> > > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > > >
> > > > > > > > >would
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > > >good
> > > > > > >
> > > > > > >
> > > > > > > > > >matched
> > > > > > > > > >
> > > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > > Thanks Terry,
> > > > > > > > > >
> > > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > > >then
> > > > > > >
> > > > > > >
> > > > > > > > > >ON
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >to
> > > > > > > > > >
> > > > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > > >to
> > > > > > >
> > > > > > >
> > > > > > > > > >have
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > >

> > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > > >equal
> > > > > >
> > > > > >
> > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > >
> > > > > > >with
> > > > > > >
> > > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > > >I
> > > > > >
> > > > > > >
> > > > > > > >no
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > > >any
> > > > > >
> > > > > >
> > > > > > > > >lower on
> > > > > > > > >
> > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > ><cparnell1001@>
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > Thanks Terry....
> > > > > > > > > > > >
> > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > > >NZ
> > > > > >
> > > > > >
> > > > > > > > >time.
> > > > > > > > > > > >
> > > > > > > > > > > > Cheers
> > > > > > > > > > > > Chris
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > > >switch
> > > > > > >

> > > > > > > >
> > > > > > > > > >in
> > > > > > > > > >
> > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > > > >at
> > > > > > > >
> > > > > > > >
> > > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > > > >box.
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >Less
> > > > > > > > > >
> > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > > > ><wagstw46@>
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > > > > > >
> > > > > > > > > > >max
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > > > > > >
> > > > > > > > > > >end
> > > > > > > > > > >
> > > > > > > > > > > >of
> > > > > > > > > > >
> > > > > > > > > > > > >the
> > > > > > > > > > >
> > > > > > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > black bordered box.

> > > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > > >
> > > > > > > > > > >between
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >1000 and
> > > > > > > > > > > > > > > > > >
> 1100.
> >
> You then turn Processor on with Comp Level max cw. What would
> > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > > > > >expect
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >the ALC
> >
> reading to do for the same mic gain setting? Would you expect
> > > > > > > > >the
> > > > > > > > > > >
> > > > > > > > > > > > > > >meter
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >to peg
> >
> hard upscale far right? If you had a mic connected and whistled
> > > > > > > > > > >
> > > > > > > > > > > > > > >what
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >would you
> >
> expect ALC meter to do? Just some food for thought.
> >
> Step B:
> With Processor on and Comp level set max clockwise and the mic
> > > > > > > > > > >
> > > > > > > > > > > > > > >gain
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >not
> >
> >touched
> >
> from above you are telling me that you have no ALC indication
> > > > > > > > > > > > > > >when
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >you

> > > > > > > > >
> > > > > > > > > > >flip to
> > > > > > > > > > >
> > > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > > >any
> > > > > > >
> > > > > > > >
> > > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > > > >
> > > > > > > > >sensitive
> > > > > > > > >
> > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > > > >scale.
> > > > > > >
> > > > > > > > >Quickly
> > > > > > > > >
> > > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > > > >
> > > > > > > > >box.
> > > > > > > > >
> > > > > > > > > >Mic
> > > > > > > > >
> > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > > > >
> > > > > > > >far
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >end of
> > > > > > > > >
> > > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > > > >
> > > > > > > > >times
> > > > > > > > >
> > > > > > > > >

> > > > > > > > > > >until you
> > > > > > > > > > >
> > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > > > >This
> > > > > >
> > > > > >
> > > > > > > > > > >adjustment is
> > > > > > > > > > >
> > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > > > >tends
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >peg
> > > > > > > > >
> > > > > > > > > > >hard
> > > > > > > > > > >
> > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > > >
> > > > > > > >around
> > > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >max
> > > > > > > > > > >
> > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > > > >meter
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >Comp
> > > > > > > > >
> > > > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > > >alignment
> > > > > > > > > > > > > >

> > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > > > > >(Heater
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >on
> > > > > > > > > > > > >
> > > > > > > > > > > > > >etc), but
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > > > > >"align"
> > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >the
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > >speech
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > > > >
> > > > > > > > > > > >the
> > > > > > > > > > > > >
> > > > > > > > > > > > > >AG
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >output to
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > > > > > > >maximum
> > > > > > > > > > > >
> > > > > > > > > > > > >on-scale ALC
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > > > > > > >on-scaled).
> > > > > > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > > > > > > >
> > > > > > > > > > > >turn
> > > > > > > > > > > > >
> > > > > > > > > > > > > >the
> > > > > > > > > > > > > > >

> > > > > > > > > > >Proc ON
> > > > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > > > >meter
> > > > > > > >
> > > > > > > > >at
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >this
(Message over 64 KB, truncated)

31948. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 12:22:30 UTC
From: w5rkl
Topic: 31874 Message: 31948

Hi Andy,

I don't know what you mean by "bias current". When you say "bias current" are you talking about "grid current"? If so, how does variations in screen voltage affect grid current?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > If at anytime the bias voltage is incorrectly set, either too negative or much less negative, these 2 bias settings can result in the amplifier tube(s) operating outside of the tubes characteristic linear curve leading to the output sine wave signal, whether it's AF or RF, to be distorted.
> >
> > None of these problems can be prevented by a regulated amplifier screen voltage.
> >
>
> No, but the point Terry was making is that variation in screen grid voltage will affect bias current and therefore gain, varying with the envelope. This has to contribute slightly to harmonic distortion so regulating the screen must reduce this to some degree, and reduce dissipation within the tube too, my main interest.
>

31949. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 12:43:41 UTC
From: andy_westcott2004
Topic: 31874 Message: 31949

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Andy,
>
> I don't know what you mean by "bias current". When you say "bias current" are you talking about "grid current"? If so, how does variations in screen voltage affect grid current?
>

Terminology accident on my part - I meant quiescent plate current, a result of the level of bias voltage on the grid, therefore 'bias current'.

This will of course be affected by screen grid voltage.

I knew what I meant, the problem being few people seem able to read my mind. :)

31950. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 15:48:36 UTC
From: w5rkl
Topic: 31874 Message: 31950

Hi Andy,

Based on your responses, I still do not see where variations in the tube's screen voltage will produce distortion and non-linear operation. Maybe you can explain in detail how your variations in screen grid #3 voltage produces distortion and non-linear operation.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Andy,
> >
> > I don't know what you mean by "bias current". When you say "bias current" are you talking about "grid current"? If so, how does variations in screen voltage affect grid current?
> >
>
> Terminology accident on my part - I meant quiescent plate current, a result of the level of bias voltage on the grid, therefore 'bias current'.
>
> This will of course be affected by screen grid voltage.
>
> I knew what I meant, the problem being few people seem able to read my mind. :)
>

31951. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 18:45:38 UTC
From: John Davidson
Topic: 31874 Message: 31951

I think that is understood by stating the class of amplifier and that, in turn,
 is determined by the bias setting.

JD

_____
From: w5rkl w5rkl@...

An additional item that determines amplifier linearity is

3. Bias voltage setting.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Linearity of an amplifier depends on 2 things
>
> 1. The amplifier class
> 2. Driver stage signal level
> >
>
>
>
>
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004"
><andywestcottpublic@> wrote:
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > There is no real reason to regulate the final amplifier supply. The screen
>voltage varies too often and regulating the supply would be a waste of time and
>would not produce any added benefit. The supply for the 830's final amplifier is
>quite stable for what it's designed to do.
> > >
> > >
> > >
> > Agreed.
> > Some better hi-fi amps have stabilised supplies for the output stages,

>presumably this aids linearity, but I would expect it to reduce output device
>dissipation during quiescent periods when the supply would normally be at a
>maximum. Presumably the PA in a transmitter would benefit in the same way.
> >
> > I doubt very much that the small benefit of reduced dissipation would
>anywhere near compensate for the added expense and complication though - the
>idea was thrown in for discussion rather than as a practical suggestion.
> >
>

[Non-text portions of this message have been removed]

31952. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 18:51:31 UTC
From: John Davidson
Topic: 31874 Message: 31952

You actually adjust the grid bias VOLTAGE pot by observing the idling PLATE CURRENT reading for a given level. , 60MA for the TS5xx siries radios.
It can be confusing, I know !

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 19, 2011 8:22:30 AM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Hi Andy,

I don't know what you mean by "bias current". When you say "bias current" are you talking about "grid current"? If so, how does variations in screen voltage affect grid current?

73s
Mike
W5RKL

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.

[Non-text portions of this message have been removed]

31953. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 21:21:26 UTC
From: w5rkl
Topic: 31874 Message: 31953

The question I posed to Andy, and anyone else for that matter, is not about setting the bias pot for a no signal 60ma but rather how and why the belief that the screen voltage causes non-linear operation in the amplifier?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> You actually adjust the grid bias VOLTAGE pot by observing the idling PLATE
> CURRENT reading for a given level. , 60MA for the TS5xx siries radios.
> It can be confusing, I know !
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, June 19, 2011 8:22:30 AM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
> Â
> Hi Andy,
>
> I don't know what you mean by "bias current". When you say "bias current" are
> you talking about "grid current"? If so, how does variations in screen voltage
> affect grid current?
>
> 73s
> Mike
> W5RKL
>
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> .
>
>
>
> [Non-text portions of this message have been removed]
>

31954. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 21:26:09 UTC
From: Bob Macklin
Topic: 31874 Message: 31954

Consider how many transmitters were made with this basic final design with
no problem from unregulated screen grids. THIS INCLUDES COLLINS!

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "w5rkl" <w5rkl@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Sunday, June 19, 2011 2:21 PM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

The question I posed to Andy, and anyone else for that matter, is not about
setting the bias pot for a no signal 60ma but rather how and why the belief
that the screen voltage causes non-linear operation in the amplifier?

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> You actually adjust the grid bias VOLTAGE pot by observing the idling
> PLATE
> CURRENT reading for a given level. , 60MA for the TS5xx siries radios.
> It can be confusing, I know !
>
>
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, June 19, 2011 8:22:30 AM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
> ?
> Hi Andy,
>
> I don't know what you mean by "bias current". When you say "bias current"
> are
> you talking about "grid current"? If so, how does variations in screen
> voltage
> affect grid current?
>

> 73s
> Mike
> W5RKL
>
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>
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Yahoo! Groups Links

31955. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 21:30:07 UTC
From: w5rkl
Topic: 31874 Message: 31955

I agree Bob!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Consider how many transmitters were made with this basic final design with
> no problem from unregulated screen grids. THIS INCLUDES COLLINS!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Sunday, June 19, 2011 2:21 PM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
>
> The question I posed to Andy, and anyone else for that matter, is not about
> setting the bias pot for a no signal 60ma but rather how and why the belief
> that the screen voltage causes non-linear operation in the amplifier?
>
> 73s
> Mike
> W5RKL

31956. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 22:10:55 UTC
From: Chris Parnell
Topic: 31878 Message: 31956

Mike,

Any idea where would be a good place to start the voltage measurements?

Cheers
Chris

On 19/06/2011, at 11:31 PM, w5rkl wrote:

> Hi Chris,
>
> Based on the HV and power output levels you provided, 850VDC high voltage and 70 watts output, that equates to an IP current level of approximately 150ma. Therefore, with those levels the INPUT power in the final amplifier would be;
>
> .150 x 850 = 127.5 watts
>
> Since the 830 final amplifier has an efficiency rating of approximately 55%, power output would be
>
> 127.5 - 45% = 70.125 watts
>
> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit supplies are within specifications and operating as they should.
>
> I recommend you troubleshoot the 830's transmit signal path, take level measurements and compare your findings with the 830 service manual Level Diagram on page 44.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry,
> >
> > Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.
> >
> > My 830 was working "OK" originally, although the alignment was miles off.
> > Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.
> >
> > I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.

> > To which I decided to re-align the radio.
> >
> > On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
> > I purchased a new front fascia and it looks great.. needs to work great now :-)
> >
> > Cheers
> > Chris
> >
> >
> >
> > On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> >
> > > Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!
> > >
> > > 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?
> > >
> > > 2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.
> > >
> > > 3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.
> > >
> > > 4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.
> > >
> > > 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.
> > >
> > > 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.
> > >
> > > 7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > >
> > > 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.
> > >

> > > Good Luck-Terry K9TW
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
> > > >
> > > > Hi Terry,
> > > >
> > > > Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >
> > > > > Chris--
> > > > >
> > > > > Do you have Skype? Maybe we could connect on Skype and perform each step
> > > > > together on our rigs and see at what step we differ. Not sure if we could have
> > > > > clear enough real time video or not for this to work. Not sure about our time
> > > > > difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > > >
> > > > > Maybe Mike or Gordon would be better to do this with you as they repair these
> > > > > rigs for a living? As you know I had never performed this step until you asked
> > > > > about it. In fact I have never completed a full alignment as I dont have sweep
> > > > > generator. I have just done selected steps.
> > > > >
> > > > > Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Sent: Fri, June 17, 2011 9:55:30 PM
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > > > have no attenuation in there)...
> > > > >
> > > > > So I got some test reference dBmA numbers against my calibrated probe and wrote
> > > > > down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > > So... re-did the whole thing and of course, its more in line with your "Mic Gain
> > > > > 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > > > > with regards to ALC readings.
> > > > >
> > > > > When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > > > > the PROC OFF, the ALC shoots right over to the right hand side of the meter.
> > > > >
> > > > > I may record a small video and send it to you... easier to see what I mean and
> > > > > what i'm doing.
> > > > >

> > > > > Turning the Mic gain up and down of course makes a difference, but the point is,
> > > > > I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > >
> > > > > > Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > > > > test signals.
> > > > > >
> > > > > > With your mic gain at No. 4 it appears you have much more gain than I do in my
> > > > > >
> > > > > > mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > > > > where I can get a good match at far right end of ALC black box.
> > > > > >
> > > > > > With Proc off and 10mv injected it doesnt take much adjustment right around the
> > > > > >
> > > > > > No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > > > > >
> > > > > > no meter indication. I do know with both of my rigs I end up at very close to
> > > > > > No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > > > >
> > > > > > I assume you have tried adjusting the mic gain down while leaving required 10mv
> > > > > >
> > > > > > signal injected? I found it a little touchy. When you first reported no meter
> > > > > > indication that is why I suggested turning mic gain up a little. Maybe I am
> > > > > > starting to get confused regards what your problem is.
> > > > > >
> > > > > > If turning mic gain down a little doesnt help then I would say it is on to
> > > > > > troubleshooting with Mike.
> > > > > >
> > > > > > Terry
> > > > > >
> > > > > > _____
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Sent: Fri, June 17, 2011 7:04:54 PM
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >
> > > > > > Hi Terry / Mike.....
> > > > > >
> > > > > > I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > > > > piece of kit.
> > > > > > Here's what I see when I follow your instructions:
> > > > > >
> > > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > > mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > > > >
> > > > > > Exactly the same as me Terry, except my mini clips are connected directly to

> > > > > >the
> > > > > >
> > > > > > Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > > > >
> > > > > > > I have the mic gain set exactly at
> > > > > > > No. 4 position.
> > > > > > >
> > > > > > Same here
> > > > > >
> > > > > > > I set SG switch on rear of rig to off and turn on rig and heater
> > > > > > > switches. Let it warm up a little.
> > > > > > >
> > > > > > Same here
> > > > > >
> > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > > >Wave
> > > > > >
> > > > > >
> > > > > > > Tek generator to exactly 10 mv
> > > > > > >
> > > > > > Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > > >
> > > > > > > turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > place meter switch in ALC position.
> > > > > > >
> > > > > >
> > > > > > Same here
> > > > > >
> > > > > > >
> > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > >
> > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > >
> > > > > > At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > > > > and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > > > > >
> > > > > > (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > > > > s-meter scale, it's S9+40dB +).
> > > > > >
> > > > > > >
> > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > > >position
> > > > > >
> > > > > > >
> > > > > > > and I have not touched mic gain pot.
> > > > > > >
> > > > > > With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > > > > >
> > > > > > the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > > > > now.. (I am only using the S-Meter scale as it's easier for you to gauge what

> > > > > > I'm saying and seeing.
> > > > > >
> > > > > > At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > > > > "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > > > > PROC ON, which on the S-Meter is S-9.
> > > > > > I check where VR-7 is now within it's VR scale and notice it's almost at
> > > > > > minimum.
> > > > > >
> > > > > > >
> > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > > > >
> > > > > > > black ALC box.
> > > > > > >
> > > > > > So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > > > > >
> > > > > > OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > > > > the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > > >
> > > > > > > It could be adjusted a little to get a match if I had the covers
> > > > > > > off, but close enough.
> > > > > > >
> > > > > >
> > > > > > I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > > > >them
> > > > > >
> > > > > > with the PROC ON.
> > > > > >
> > > > > > > I switch the meter from ALC to Comp and it indicates just
> > > > > > > a little above 20db on the Comp scale.
> > > > > > >
> > > > > > Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > > > > adjust L26 for 20dB reading.
> > > > > >
> > > > > > I will need to do some component checking in the circuit around the Processor
> > > > > >as
> > > > > >
> > > > > > Mike and yourself have recommended.
> > > > > >
> > > > > > I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
> > > > > >
> > > > > > Thanks
> > > > > > Chris, ZL1CDP
> > > > > >
> > > > > > >
> > > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > > >as
> > > > > >
> > > > > >
> > > > > > > found condition for my daily operator is very close to being right on the
> > > > > >same

> > > > > >
> > > > > >
> > > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > > >on
> > > > > >
> > > > > > >
> > > > > > > and off.
> > > > > > >
> > > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > >
> > > > > > > some more and if I come up with something will write.
> > > > > > >
> > > > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > > >
> > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > >your
> > > > > >
> > > > > > >
> > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > >I
> > > > > >
> > > > > >
> > > > > > > wouldnt think much higher.
> > > > > > >
> > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > >
> > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > >
> > > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > >Good
> > > > > >
> > > > > >
> > > > > > > luck Terry
> > > > > > >
> > > > > > > _____
> > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > To: TS-520_820_530_830@...m
> > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >
> > > > > > > Hi Terry,
> > > > > > >
> > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > >the
> > > > > >
> > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > >why...
> > > > > > >

> > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > > > > >
> > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > > >in
> > > > > > > >
> > > > > > > >
> > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > >
> > > > > > > >
> > > > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far
> > > > > > >right
> > > > > > > >
> > > > > > > >
> > > > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > > > >
> > > > > > > > Hope this makes sense..
> > > > > > > >
> > > > > > > > Cheers
> > > > > > > > Chris
> > > > > > > >
> > > > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > > > >
> > > > > > > > > Chris--This appears different than what you originally reported of getting
> > > > > > >no
> > > > > > > >
> > > > > > > >
> > > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > > > > >
> > > > > > > >Where
> > > > > > > >
> > > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > > > >hard
> > > > > > > >
> > > > > > > >
> > > > > > > >on
> > > > > > > >
> > > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > > > >
> > > > > > > >the
> > > > > > > >
> > > > > > > >
> > > > > > > > peg.
> > > > > > > >
> > > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > > > > >
> > > > > > > >off
> > > > > > > >
> > > > > > > >

> > > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > > >back
> > > > > > >
> > > > > > >
> > > > > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > > > > >
> > > > > > > > >to
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > > >
> > > > > > > > >in
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > > > > >
> > > > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > > > > > >without
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > PROC NOT engaged, just Mic.
> > > > > > > > >
> > > > > > > > > Chris
> > > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > > > >
> > > > > > > > > > Hi Terry, in a nutshell,
> > > > > > > > >
> > > > > > > > > > It doesn't weigh up here.
> > > > > > > > >
> > > > > > > > > > Following to the letter the service manual and then taking into account
> > > > > > > > >your
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > > > > > >of
> > > > > > > > >
> > > > > > > > >

> > > > > > > >ALC
> > > > > > > > >
> > > > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > > > > >meter)
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > Thanks
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > > Sent from my iPhone
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > > > > > >have
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >same
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > > > > > >adjust
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >mic
> > > > > > > > > > >
> > > > > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > > > > > >
> > > > > > > > > > >Tune
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > > > > >
> > > > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > > > > > >
> > > > > > > > > > >can
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >move
> > > > > > > > > > >
> > > > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > > > > > >
> > > > > > > > > > >will
> > > > > > > > > > >

> > > > > > > > >be
> > > > > > > > > >
> > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > > >is
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >to
> > > > > > > > > >
> > > > > > > > > > >set
> > > > > > > > > > >
> > > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > > > >increase
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > > > >longer
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >needed
> > > > > > > > > > >
> > > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > > > >would
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > > > >good
> > > > > > > > >
> > > > > > > > > > >matched
> > > > > > > > > > >
> > > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > > >
> > > > > > > > > > > Thanks Terry,
> > > > > > > > > > >
> > > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > > > >then
> > > > > > > > >
> > > > > > > > > > >ON
> > > > > > > > > > >
> > > > > > > > > > >to
> > > > > > > > > > >
> > > > > > > > > > > same point? that's what it states from memory... point of exercise is

> > > > > >to
> > > > > > >
> > > > > > >
> > > > > > > > >have
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > > > >equal
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > > > >
> > > > > > > > >with
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >the
> > > > > > > > > > >
> > > > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > > > >I
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >no
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > > > >any
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > >lower on
> > > > > > > > > > >
> > > > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > >wrote:
> > > > > > > > > > > >
> > > > > > > > > > > > > Thanks Terry....
> > > > > > > > > > > >
> > > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > > > >NZ

> > > > > >
> > > > > >
> > > > > > > > > >time.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Chris -- I forgot to mention it may be easier initially (meter
> > > > > > > >switch
> > > > > > > >
> > > > > > > > > > > > > > >in
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > > > >at
> > > > > > >
> > > > > > > > > > > > > >20db
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >on
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > > > >box.
> > > > > > >
> > > > > > > > > > > > > >Less
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > > ><wagstw46@>
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > wrote:
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > > > > > > >
> > > > > > > > > > > > > > >max
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >clockwise.
> > > > > > > > > > > > > > > > > > >
> You are in USB mode.
> 2. You have the meter switch to ALC position.

> > > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > > >
> > > > > > > >end
> > > > > > > > >
> > > > > > > > >of
> > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > > >
> > > > > > > > > >between
> > > > > > > > > >
> > > > > > > > > > >1000 and
> > > > > > > > > >
> > > > > > > > > > > > > 1100.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > > > > >you
> > > > > > > >
> > > > > > > > >expect
> > > > > > > > >
> > > > > > > > > >the ALC
> > > > > > > > > >
> > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > > > > > >the
> > > > > > > >
> > > > > > > > >meter
> > > > > > > > >
> > > > > > > > > >to peg
> > > > > > > > > >
> > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > > > > >
> > > > > > > > >what
> > > > > > > > >
> > > > > > > > > >would you
> > > > > > > > > >
> > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic

> > > > >
> > > > > > >gain
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >not
> > > > > > > > > > >
> > > > > > > > > > > >touched
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > > > >when
> > > > > > > >
> > > > > > > > >
> > > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > >flip to
> > > > > > > > > > > > >
> Tune position? You then try to tweak L27 in attempt to obtain
> > > > > >any
> > > > > > >
> > > > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >meter
> > > > > > > > > > > > > >
> indication and get no ALC indication. Is This correct?
> >
> If so, try slowly turning mic gain up a little. It will be very
> > > > > > > > >
> > > > > > > > > > >sensitive
> > > > > > > > > > > >
> > > > > > > > > > > > > >and
> > > > > > > > > > > > > > >
> you should reach a point where it will drive meter hard up
> > > > > > > > > >scale.
> > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >Quickly
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >turn
> > > > > > > > > > > > > > > > > > >
> mic gain back down until meter is at far right end of ALC black
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >box.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >Mic
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >gain
> > > > > > > > > > > > > > > > > > > >
> pot will be sensitive. Once you have ALC indication staying at

> > > > >
> > > > > > > >far
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > >end of
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >ALC
> > > > > > > > > > > > > > > >
> box you can peak L27. You may have to go back and forth several
> > > > > > > >
> > > > > > > > > > > >times
> > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >until you
> > > > > > > > > > > > > > > >
> no longer have to tweak the mic gain up a hair from Step A.
> > > > > > >This
> > > > > > > >
> > > > > > > >
> > > > > > > > > > > >adjustment is
> > > > > > > > > > > > >
> a little difficult due to the ALC time constant. The meter
> > > > > > >tends
> > > > > > > >
> > > > > > > > > > > >to
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >peg
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >hard
> > > > > > > > > > > > > > > > >
> right and then slowly come back down. So it will tend to float
> > > > > > > >
> > > > > > > > > > > >around
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >the
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >max
> > > > > > > > > > > > > > > > >
> end of the ALC box until things settle down. If you switch
> > > > > > > >meter
> > > > > > > > >
> > > > > > > > > > > >to
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > >Comp
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >you
> > > > > > > > > > > > > > > > > >
> should see about 20db on Comp Scale.

> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > > > > > > > > >alignment
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > > > > > > > >(Heater
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >on
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >etc), but
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > > > > > > > >"align"
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >the
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >speech
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > > > > > > >
> > > > > > > > > > > >the
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >AG
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >output to
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > > > > > > > >maximum
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >on-scale ALC
> > > > > > > > > > > > > > > > >

> > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > > >on-scaled).
> > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV.....
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > >
> > > > > > > >turn
> > > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >Proc ON
> > > > > > > > > > >
> > > > > > > > > > > > > > and
> > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > > >meter
> > > > > >
> > > > > > >at
> > > > > > >
> > > > > > > >
> > > > > > > > >this
> > > > > > > > > > > > > > point, and therefore cannot obtain the same ALC maximum
> > > > > >reading.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris-Just completed Item 32 Speech Processor Adjustment on
> > > > > > >pages
> > > > > > >
> > > > > > > >
> > > > > > > > > > >40&41. As
> > > > > > > > > > >
> > > > > > > > > > > > > > >usual the service manual leaves out a few thing!
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > They should tell you to load up normally. Then switch off SG
> > > > >
> > > > > > > >switch
> > > > > > > >
> > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > >LEAVE

> > > > > > > > > > >
> > > > > > > > > > > > > > > > >THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > > > >
> > > > > > > > > > >heater
> > > > > > > > > > >
> > > > > > > > > > > > >off of the
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > >Driver Tube. A minor detail. I think they rely on previous
> > > > > >step
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >conditions still
> > > > > > > > > > >
> > > > > > > > > > > > > > > >being in force?
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 1. Step 1 is OK except I would prefer that they would say
> > > > > >"max
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >meter
> > > > > > > > > >
> > > > > > > > > > >reading on
> > > > > > > > > >
> > > > > > > > > > > > >the Compression Scale".
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 2. Step 2 is OK but again they tell you to obtain S-1
> > > > > >reading.
> > > > > > > >
> > > > > > > >
> > > > > > > > > > >That
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >would be on
> > > > > > > > >
> > > > > > > > > > > > >the S-meter scale. Then they tell you to obtain meter
> > > > > >indication
> > > > > > > >
> > > > > > > > >
> > > > > > > > > > >of
> > > > > > > > >
> > > > > > > > > > >20db
> > > > > > > > >
> > > > > > > > > > >and
> > > > > > > > >
> > > > > > > > > > > > > > > > > > >that would be on the Compression Scale. So would be better
> > > > > >with
> > > > > > > >
> > > > > > > > > > >a
> > > > > > > > >
> > > > > > > > >

> > > > > > > > > > >multi-scale
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > >meter for them to tell you the expected value and on what
> > > > > >meter
> > > > > > >
> > > > > > > >
> > > > > > > > > >scale.
> > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > 3. Step 3 is OK but I would prefer they would tell you to set
> > > > > > > >
> > > > > > > >mic
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >gain
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >approximately 1200 o'clock or No. 5 position. I set mine at
> > > > > >1200
> > > > > > >
> > > > > > > >
> > > > > > > > > >and
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > > >peaked L27.
> >
> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > > >would
> > > > > > >
> > > > > > > >
> > > > > > > > > >say
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > >something
> > > > > > > > > > > > > > > > > > >
> >like "top or far right end of black bordered ALC meter scale
> > > > > > > >box".
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > >Just
> > > > > > > > > > > > > > > > > > >
> >make it
> >
> >very clear what meter position and what scale you are to
> > > > > > > > > >read.
> >
> So, I think if you load up, place SG switch to off, and leave
> > > > > > > > > >
> > > > > > > > > > >heater
> > > > > > > > > > > > > > > > > >
> >switch on

> > > > > > > > > > >
> > > > > > > > > > > > > > > > >you will be able to complete this Item. Let me know. Terry
> > > > > >-K9TW
> > > > > > >
> > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Ok Terry, thank you.
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > Been troubleshooting my 990 for a week so haven't had much
> > > > > > >
> > > > > > > > > >chance
> > > > > > > > > > >
> > > > > > > > > > > >to
> > > > > > > > > > >
> > > > > > > > > > > > >check
> > > > > > > > > > > > >
> > > > > > > > > > > > > > >myself, but would be keen to know how it works for you.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Cheers
> > > > > > > > > > > > > > > Chris
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris --Sorry I did not. It is supposed to rain all day
> > > > > > >so
> > > > > > > > >
> > > > > > > > > >I
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >will
> > > > > > > > > > >
> > > > > > > > > > > > >give it a
> > > > > > > > > > > >
> > > > > > > > > > > > > >try today and report back. Terry
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > >
> > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > >wrote:
> > > > > > > > > > > > >
> > > > > > > > > > > > > > Hi Terry, did you get chance to test the SP alignment
> > > > > > >in

> > > > > >
> > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > >830
> > > > > > > > > >
> > > > > > > > > > >at the
> > > > > > > > > > >
> > > > > > > > > > > > > >weekend?
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> Cheers
> Chris, ZL1CDP
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > > >
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> > > > > > > > > > > > > > > > > > >
> ----------
> > > > > > > > > > > > > > > > > > >
> Yahoo! Groups Links
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
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> > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > >
> [Non-text portions of this message have been removed]
> > > > > > > > > > > > > > > > > > >

> > > > > > > > > > ------------------------------------
> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
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> > > > > > > > > > > ------------------------------------
> > > > > > > > > > >
> > > > > > > > > > > Yahoo! Groups Links
> > > > > > > > > > >
> > > > > > > > > > > [Non-text portions of this message have been removed]
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > > > > > > >
> > > > > > > > > > > > Chris--I will give some more thought. Not sure what is going on. I am just
> > > > > > > > > > > >about
> > > > > > > > > > >
> > > > > > > > > > > out of ideas.
> > > > > > > > > > >
> > > > > > > > > > > > I just repeated the test on my daily operating TS-830 with the covers on the
> > > > > > > > > > > rig. I just unplugged the mic and brought the test equipment to the operating
> > > > > > > > > > >
> > > > > > > > > > > position.
> > > > > > > > > > >
> > > > > > > > > > > > I use a spare mic connector and clipped the generator output to it with
> > > > > > > > > > > > mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > > > > > > > > > >at
> > > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > > > > > > > > > >heater
> > > > > > > > > > >

> > > > > > > switches. Let it warm up a little.
> > > > > > > >
> > > > > > > > I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > > > > >Wave
> > > > > > > >
> > > > > > > >
> > > > > > > > Tek generator to exactly 10 mv.
> > > > > > > > >
> > > > > > > > I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > > > > > > place meter switch in ALC position.
> > > > > > > > >
> > > > > > > > I then flip to Send and get ALC meter indication that is just outside the max
> > > > > > > >
> > > > > > > > end of the black ALC box. Maybe a needles worth.
> > > > > > > > >
> > > > > > > > I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > > > > >position
> > > > > > > >
> > > > > > > > >
> > > > > > > > and I have not touched mic gain pot.
> > > > > > > > >
> > > > > > > > I flip to Send and the ALC meter indication is a little bit more outside the
> > > > > > > black ALC box. It could be adjusted a little to get a match if I had the
> > > > > > >covers
> > > > > > > >
> > > > > > > > >
> > > > > > > > off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > > > > >just
> > > > > > > > >
> > > > > > > > a little above 20db on the Comp scale.
> > > > > > > > >
> > > > > > > > I repeatedly switched Proc on and off and get the same results. In short my
> > > > > > >as
> > > > > > > >
> > > > > > > >
> > > > > > > > found condition for my daily operator is very close to being right on the
> > > > > > >same
> > > > > > > >
> > > > > > > >
> > > > > > > > indicated level on the ALC meter scale (near max on black border) with Proc
> > > > > > >on
> > > > > > > >
> > > > > > > > >
> > > > > > > > and off.
> > > > > > > > >
> > > > > > > > At this point Chris not sure I can be of any more help? I will think about it
> > > > > > > >
> > > > > > > > some more and if I come up with something will write.
> > > > > > > > >

> > > > > > > Whatever you do you should not have to increase mic gain position or increase
> > > > > > >
> > > > > > > > audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > > > > >your
> > > > > > >
> > > > > > > > rig you may have to be a little higher than position 4 on the mic gain , but
> > > > > > >I
> > > > > > >
> > > > > > >
> > > > > > > > wouldnt think much higher.
> > > > > > > >
> > > > > > > > Also, you might want to measure the sig gen level at your mic connection when
> > > > > > >
> > > > > > > > flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > > > >
> > > > > > > Stand-by to Send. Other than that I think I have exhausted my experience.
> > > > > > >Good
> > > > > > >
> > > > > > >
> > > > > > > > luck Terry
> > > > > > > >
> > > > > > > > _____
> > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > >
> > > > > > > > Hi Terry,
> > > > > > > >
> > > > > > > > The only difference from my original post is that I increased the "gain" on
> > > > > > >the
> > > > > > >
> > > > > > > > input (Mic gain), therefore got an ALC reading.
> > > > > > > > Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > > > > >why...
> > > > > > >
> > > > > > > > I don't leave it pegged, I immediately back down the Mic gain to compensate.
> > > > > > >
> > > > > > > > Based on what you are reporting I would expect it to
> > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > >
> > > > > > >in
> > > > > > >
> > > > > > >
> > > > > > > > the ALC box window can you adjust L27 and bring the reading up?
> > > > > > > >
> > > > > > >
> > > > > > > > Once I have done the initial adjustment Terry, and get the ALC to the far

> > > > > >right
> > > > > >
> > > > > > >
> > > > > > > of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > > > > >
> > > > > > > Hope this makes sense..
> > > > > > >
> > > > > > > Cheers
> > > > > > > Chris
> > > > > > >
> > > > > > > On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > > >
> > > > > > > > Chris--This appears different than what you originally reported of getting
> > > > > > >no
> > > > > > >
> > > > > > >
> > > > > > > > ALC indication? Why now getting ALC indication? What did you do different?
> > > > > > >
> > > > > > > >Where
> > > > > > >
> > > > > > > > is your mic gain set at? I would not leave meter pegged to long as it is
> > > > > > >hard
> > > > > > >
> > > > > > >
> > > > > > > >on
> > > > > > >
> > > > > > > > the movement. I would slowly turn down mic gain until I could get meter off
> > > > > > >
> > > > > > > >the
> > > > > > >
> > > > > > >
> > > > > > > > peg.
> > > > > > >
> > > > > > > > With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > > > > >
> > > > > > > >off
> > > > > > >
> > > > > > >
> > > > > > > > the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > > > >back
> > > > > > >
> > > > > > >
> > > > > > > > what your ALC reading is. Based on what you are reporting I would expect it
> > > > > > >
> > > > > > > >to
> > > > > > >
> > > > > > >
> > > > > > > > be something less than far right of ALC black box? Assuming it is somewhere
> > > > > > >
> > > > > > > >in

> > > > > > >
> > > > > > > >
> > > > > > > > > the ALC box window can you adjust L27 and bring the reading up? Terry
> > > > > > > > >
> > > > > > > > > _____
> > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > To: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > > > > <TS-520_820_530_830@yahoogroups.com>
> > > > > > > > > Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > >
> > > > > > > > > Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > > > > > >
> > > > > > > > > setting), with processor on and full scale (pegged meter) deflection
> > > > > > > >without
> > > > > > > >
> > > > > > > >
> > > > > > > > > PROC NOT engaged, just Mic.
> > > > > > > > >
> > > > > > > > > Chris
> > > > > > > > > Sent from my iPhone
> > > > > > > > >
> > > > > > > > > On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > > > > >
> > > > > > > > > > Hi Terry, in a nutshell,
> > > > > > > > >
> > > > > > > > > > It doesn't weigh up here.
> > > > > > > > >
> > > > > > > > > > Following to the letter the service manual and then taking into account
> > > > > > > >your
> > > > > > > >
> > > > > > > > > >notes, the final situation is that I end up with full on-scale deflection
> > > > > > > >of
> > > > > > > >
> > > > > > > > > >ALC
> > > > > > > >
> > > > > > > > > >(ie end of black ALC setting), with processor on and full scale (pegged
> > > > > > > >meter)
> > > > > > > >
> > > > > > > > > >deflection without PROC engaged, just Mic.
> > > > > > > >
> > > > > > > >
> > > > > > > > > God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > > > > > >
> > > > > > > > > > > > > > > > >

> > > > > > > > > Thanks
> > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > Sent from my iPhone
> > > > > > > > > >
> > > > > > > > > On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > > > > > >
> > > > > > > > > > Yes--Objective is for a given mic gain setting with 10mv applied to
> > > > > > >have
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >same
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > ALC reading (max) with Processor on and off. You should not have to
> > > > > > >adjust
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > >mic
> > > > > > > > > >
> > > > > > > > > > gain or input signal level once balanced. You should be able to flip to
> > > > > > > > >
> > > > > > > > > >Tune
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > with Proc on and off and see approx the same max ALC indication.
> > > > > > > > > >
> > > > > > > > > > If you initially get no indication (I think that is your problem?) you
> > > > > > > > >
> > > > > > > > > >can
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >move
> > > > > > > > > >
> > > > > > > > > > mic gain up slightly until you get an indication. It wont take much and
> > > > > > > > >
> > > > > > > > > >will
> > > > > > > > > >
> > > > > > > > > > >be
> > > > > > > > > >
> > > > > > > > > > very touchy and will want to peg the meter. Only other choice you have
> > > > > > > > >
> > > > > > > > > >is
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >to
> > > > > > > > > >
> > > > > > > > > > >set
> > > > > > > > > >
> > > > > > > > > > audio generator output higher as others suggested. I chose to just
> > > > > > > > >
> > > > > > > > > >increase

> > > > > > >
> > > > > > > > >
> > > > > > > > > > > mic gain until I got an indication. After I found that point I no
> > > > > >longer
> > > > > > >
> > > > > > > >
> > > > > > > > > >needed
> > > > > > > > > >
> > > > > > > > > > > to touch the mic gain. If I had to increase mic gain each time then it
> > > > > >
> > > > > > > > >would
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > not be a valid adjustment. As I mentioned I ended up getting pretty
> > > > > >good
> > > > > > >
> > > > > > > >
> > > > > > > > > > >matched
> > > > > > > > > >
> > > > > > > > > > > ALC indication with mic gain just a hair past No.4. Terry
> > > > > > > > > >
> > > > > > > > > > > _____
> > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > > > > >
> > > > > > > > > > > Thanks Terry,
> > > > > > > > > >
> > > > > > > > > > > So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > > > >then
> > > > > > >
> > > > > > > >
> > > > > > > > > >ON
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >to
> > > > > > > > > >
> > > > > > > > > > > same point? that's what it states from memory... point of exercise is
> > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > > >have
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > ALC reading same position with Proc ON and OFF.
> > > > > > > > > >
> > > > > > > > > > > Cheers
> > > > > > > > > > > Chris
> > > > > > > > > >
> > > > > > > > > > > On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:

> > > > > > > > > > >
> > > > > > > > > > > > Chris--Just repeated adjustments and was able to get pretty good
> > > > > > >equal
> > > > > > > >
> > > > > > > >
> > > > > > > > > > > > > >indications at far right of ALC black box or S-9 on the S-meter scale
> > > > > > >
> > > > > > > > >with
> > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >the
> > > > > > > > > > > >
> > > > > > > > > > > > > > >mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > > > > > > >I
> > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > >no
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > > > >longer needed to tweak the mic gain to get an indication. I cant go
> > > > > > > > >any
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > > > >lower on
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >mic gain with 10mv input. Good Luck-Terry
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > > > > > > > ><cparnell1001@>
> > > > > > > > > > >
> > > > > > > > > > > > > > > >wrote:
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Thanks Terry....
> > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Will hopefully get around to confirming all of this later tonight
> > > > > > > > > > >NZ
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > > > >time.
> > > > > > > > > > > > > > > > > > >
> Cheers
> Chris
> > > > > > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > > >
> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > > > > > > > > > > > > > > >
> Chris -- I forgot to mention it may be easier initially (meter
> > > > > > > > > > > >switch

> > > > > > >
> > > > > > > > >
> > > > > > > > > >in
> > > > > > > > > >
> > > > > > > > > > > > >the ALC position) to do your adjustment with the ALC indicated level
> > > > > > >at
> > > > > > >
> > > > > > >
> > > > > > > > >20db
> > > > > > > > > >
> > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > > >the Compression scale as opposed to down at the high end of the ALC
> > > > > > >box.
> > > > > > >
> > > > > > > > >
> > > > > > > > > >Less
> > > > > > > > > >
> > > > > > > > > > > >decay time to mess with. Terry
> > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > > > > ><wagstw46@>
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > wrote:
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Chris--OK you are telling me the following:
> > > > > > > > > > > > > > > Step A:
> > > > > > > > > > > > > > > 1. You have the Processor button off and Compression level pot
> > > > > >
> > > > > > > >max
> > > > > > > > >
> > > > > > > > >
> > > > > > > > > > > >clockwise.
> > > > > > > > > > > >
> > > > > > > > > > > > > > > You are in USB mode.
> > > > > > > > > > > > > > > 2. You have the meter switch to ALC position.
> > > > > > > > > > > > > > > 3. You inject 1500hz @10 mv into mic input.
> > > > > > > > > > > > > > > 4. You flip Stand-by switch to Tune.
> > > > > > > > > > > > > > > 5. You adjust mic gain until meter pointer is at the far right
> > > > > > >
> > > > > > > > >end
> > > > > > > > > >
> > > > > > > > > >of
> > > > > > > > > >
> > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > >ALC
> > > > > > > > > > > >

> > > > > > > > > > > > > > > black bordered box.
> > > > > > > > > > > > > > > 6. You return to Stand-by.
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Is the above correct? Where is your mic gain at? You should be
> > > > > >
> > > > > > > > > > >between
> > > > > > > > > > >
> > > > > > > > > > > >1000 and
> > > > > > > > > > > >
> > > > > > > > > > > > > > > 1100.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > You then turn Processor on with Comp Level max cw. What would
> > > > > > >you
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > >expect
> > > > > > > > > > > > >
> > > > > > > > > > > > > >the ALC
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > reading to do for the same mic gain setting? Would you expect
> > > > > > >the
> > > > > > > > > > > > >
> > > > > > > > > > > > >
> > > > > > > > > > > > > >meter
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > >to peg
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > hard upscale far right? If you had a mic connected and whistled
> > > > > > > > >
> > > > > > > > > > >what
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > >would you
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > expect ALC meter to do? Just some food for thought.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Step B:
> > > > > > > > > > > > > > > With Processor on and Comp level set max clockwise and the mic
> > > > > > > > >
> > > > > > > > > > >gain
> > > > > > > > > > > >
> > > > > > > > > > > >
> > > > > > > > > > > > > >not
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > >touched
> > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > from above you are telling me that you have no ALC indication
> > > > > > > > > > >when
> > > > > > > > > > > >
> > > > > > > > > > > >

> > > > > > > > >you
> > > > > > > > > >
> > > > > > > > > > > >flip to
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > Tune position? You then try to tweak L27 in attempt to obtain
> > > > > > >any
> > > > > > >
> > > > > > > > >
> > > > > > > > > >ALC
> > > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >meter
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > indication and get no ALC indication. Is This correct?
> > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > If so, try slowly turning mic gain up a little. It will be very
> > > > > > >
> > > > > > > > > >sensitive
> > > > > > > > > >
> > > > > > > > > > > >and
> > > > > > > > > > >
> > > > > > > > > > > > > > > > > > you should reach a point where it will drive meter hard up
> > > > > > >scale.
> > > > > > >
> > > > > > > > > >
> > > > > > > > > > > >Quickly
> > > > > > > > > > >
> > > > > > > > > > > > > > > >turn
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > mic gain back down until meter is at far right end of ALC black
> > > > > > >
> > > > > > > > > >box.
> > > > > > > > > >
> > > > > > > > > > > >Mic
> > > > > > > > > > >
> > > > > > > > > > > > > > > >gain
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > pot will be sensitive. Once you have ALC indication staying at
> > > > > > >
> > > > > > > > > >far
> > > > > > > > > >
> > > > > > > > > > > >end of
> > > > > > > > > > >
> > > > > > > > > > > > > > > >ALC
> > > > > > > > > > > >
> > > > > > > > > > > > > > > > > > box you can peak L27. You may have to go back and forth several
> > > > > > >
> > > > > > > > > >times
> > > > > > > > > >

> > > > > > > > >
> > > > > > > > > > >until you
> > > > > > > > > > >
> > > > > > > > > > > > > > > no longer have to tweak the mic gain up a hair from Step A.
> > > > > >This
> > > > > >
> > > > > >
> > > > > > > > > > >adjustment is
> > > > > > > > > > >
> > > > > > > > > > > > > > > a little difficult due to the ALC time constant. The meter
> > > > > >tends
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >peg
> > > > > > > > >
> > > > > > > > > > >hard
> > > > > > > > > > >
> > > > > > > > > > > > > > > right and then slowly come back down. So it will tend to float
> > > > >
> > > > > > > >around
> > > > > > > >
> > > > > > > > >the
> > > > > > > > >
> > > > > > > > > > >max
> > > > > > > > > > >
> > > > > > > > > > > > > > > end of the ALC box until things settle down. If you switch
> > > > > >meter
> > > > > >
> > > > > > >to
> > > > > > >
> > > > > > > >
> > > > > > > > >Comp
> > > > > > > > >
> > > > > > > > > > >you
> > > > > > > > > > >
> > > > > > > > > > > > > > > should see about 20db on Comp Scale.
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > Terry
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > >
> > > > > > > > > > > > > > > _____
> > > > > > > > > > > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > > > > > > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > > > > > > > > > > Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > > > > > > > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > > >alignment

> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Hi Terry, thanks for this.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > All of that makes sense, and is exactly how I read it to be
> > > > > > >(Heater
> > > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >on
> > > > > > > > > >
> > > > > > > > > > > >etc), but
> > > > > > > > > > >
> > > > > > > > > > > > > none of it explains why I (and evidently others), can not
> > > > > >"align"
> > > > > > > >
> > > > > > > > > >
> > > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > > >speech
> > > > > > > > > > >
> > > > > > > > > > > > > > > processor based on this step at the top of page 41:-
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > > > > > > >
> > > > > > > > > > >the
> > > > > > > > > >
> > > > > > > > > > > > >AG
> > > > > > > > > > >
> > > > > > > > > > > > >output to
> > > > > > > > > > >
> > > > > > > > > > > > > > > 10 mV
> > > > > > > > > > > > > > > > > Adjust the MIC GAIN control until the meter indicates the
> > > > > > >maximum
> > > > > > > > >
> > > > > > > > > > >on-scale ALC
> > > > > > > > > > >
> > > > > > > > > > > > > > > > reading. Set the PROC to ON.
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > Adjust L27 until the same meter reading is obtained (MAX ALC
> > > > > > > > >on-scaled).
> > > > > > > > > > > > > > > > > Mic input providing the same ALC meter reading 10mV......
> > > > > > > > > > > > > > > >
> > > > > > > > > > > > > > > > > This is where my 830 (or me) gets stuck..
> > > > > > > > > > > > > > > > > Every step up until here works fine. I get to the point where I
> > > > > > > > >
> > > > > > > > > > >turn
> > > > > > > > > >
> > > > > > > > > > > > >the

> > > > > > > > >
> > > > > > > > > > > >Proc ON
> > > > > > > > > > > >
> > > > > > > > > > > > > > > and
> > > > > > > > > > > > > > > > > adjust L27 for the same reading as where the PROC is off.
> > > > > > > > > > > > > > > > > On adjusting L27 with the PROC ON I get no movement on the
> > > > > > >meter
> > > > > > > >
> > > > > > > > >at
> > > > > > > > > >
> > > > > > > > > > >
> > > > > > > > > > > > >th
(Message over 64 KB, truncated)

31957. Sudden loss of bias, receive sensitivity, and transmit in TS-820S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 22:56:25 UTC
From: ae5uu
Topic: 31957 Message: 31957

I have the following problem; sudden loss of bias, receive sensitivity, and transmit in my TS-820S.

All voltages are in spec:
14.0vdc
9.0vdc
3.3vdc
5.0vdc
-6.0vdc
All of the high voltages,including 900vdc, are correct at all test points, changing on transmit as per specification.

I have checked the following as well:

RL1 is OK
Connections to RL1 are OK
Tranceiver switch is OK
SG switch is OK
Fix Vox Q-13 is OK (although volume in the radio seems reduced)
The 14.0vdc at the Rectifier Unit is OK
Q-1 and Q-8 on the RF Unit are OK
R-6 on the Rectifier Unit is OK
No loose jumpers
No broken wires
No solder splashes
I want to check L-8 on the Coil Pack as per Kenwood instructions, but I can't find it; it is not on the schematic. L-1 through L-7 and L-9+ are on the schematic, just no L-8
Q-3 on the AF-AVR Unit is OK
All resistors in the Final Unit, HV unit, and the Rectifier Unit are OK

The only problem identified in testing is with Q-1 on the IF Unit. The schematic has to be incorrect. A connection from Q-1 to Q-4 is listed at 3.0vdc at Q-4 and 0.0vdc at Q-1. The actual value at Q-1 and Q-4 is 3.0vdc as it should be. At Q-1 the 14.5vdc voltage is correct. The common connection to Q-4, 3.0vdc, is OK. However the 3.0vdc (3.2vdc) voltage and the 2.0vdc (2.0vdc) voltage are not present.

Can anyone point me in the right direction on this issue?

Thanks,

AE5UU

31958. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-19 23:05:52 UTC
From: Terry Wagoner
Topic: 31874 Message: 31958

I think this is going to be one of those agree to disagree discussions. Take a look at what one noted expert has to say about importance of screen grid regulation not only for linearity but for tube protection including how Collins did it with seperate high current supplies with choke input filters.

http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf

Terry -K9TW

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sun, June 19, 2011 5:30:07 PM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

I agree Bob!

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> Consider how many transmitters were made with this basic final design with
> no problem from unregulated screen grids. THIS INCLUDES COLLINS!
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: "w5rkl" <w5rkl@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Sunday, June 19, 2011 2:21 PM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
>
> The question I posed to Andy, and anyone else for that matter, is not about
> setting the bias pot for a no signal 60ma but rather how and why the belief
> that the screen voltage causes non-linear operation in the amplifier?
>
> 73s
> Mike
> W5RKL

[Non-text portions of this message have been removed]

31959. TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 11:37:24 UTC
From: Will
Topic: 31959 Message: 31959

Hi
Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help

regards
Will

31960. Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 12:57:00 UTC
From: Will
Topic: 31959 Message: 31960

further to the initial information written, I suspect one of the HV caps must have failed ? I guess a repair kit needs to be sought !
If anyone can further advise, I'd be mighty grateful

Will

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> Hi
> Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
> I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help
>
> regards
> Will
>

31961. TS-820S Sudden loss of bias, receive sensitivity, and transmit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 13:52:18 UTC
From: ae5uu
Topic: 31961 Message: 31961

I have the following problem; sudden loss of bias, receive sensitivity, and transmit in my TS-820S.

All voltages are in spec:
14.0vdc
9.0vdc
3.3vdc
5.0vdc
-6.0vdc
All of the high voltages,including 900vdc, are correct at all test points, changing on transmit as per specification.

I have checked the following as well:

RL1 is OK
Connections to RL1 are OK
Tranceiver switch is OK
SG switch is OK
Fix Vox Q-13 is OK (although volume in the radio seems reduced)
The 14.0vdc at the Rectifier Unit is OK
Q-1 and Q-8 on the RF Unit are OK
R-6 on the Rectifier Unit is OK
No loose jumpers
No broken wires
No solder splashes
I want to check L-8 on the Coil Pack as per Kenwood instructions, but I can't find it; it is not on the schematic. L-1 through L-7 and L-9+ are on the schematic, just no L-8
Q-3 on the AF-AVR Unit is OK
All resistors in the Final Unit, HV unit, and the Rectifier Unit are OK

The only problem identified in testing is with Q-1 on the IF Unit. The schematic has to be incorrect. A connection from Q-1 to Q-4 is listed at 3.0vdc at Q-4 and 0.0vdc at Q-1. The actual value at Q-1 and Q-4 is 3.0vdc as it should be. At Q-1 the 14.5vdc voltage is correct. The common connection to Q-4, 3.0vdc, is OK. However the 3.0vdc (3.2vdc) voltage and the 2.0vdc (2.0vdc) voltage are not present.

Can anyone point me in the right direction on this issue?

Thanks,

AE5UU

31962. Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 14:28:45 UTC
From: Will
Topic: 31959 Message: 31962

What a great feeling it is to fly solo !!!
Have worked out that the cause of the failure was indeed a HV capacitor !!! I have an old 830 chassis with some bits n bobs onboard from which I was able to rabbit the spares. Replaced the HV caps, HT reading now 900 volts and back on air again with no real injuries sustained. Sending off to my American cousin K4EAA for brand new HV caps and will carry out a more efficient repair when they arrive.
Case closed. Best wishes to one and all.....Will / GM0HKS

--- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>
> further to the initial information written, I suspect one of the HV caps must have failed ? I guess a repair kit needs to be sought !
> If anyone can further advise, I'd be mighty grateful
>
> Will
>
> --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@> wrote:
> >
> > Hi
> > Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
> > I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help
> >
> > regards
> > Will
> >
>

31963. Re: [TS-520_820_530_830] Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 14:46:18 UTC
From: Charles Coffee
Topic: 31959 Message: 31963

Will,
Your HV should run around 900VDC with no load from the finals. This may
vary up to as much as 940VDC. Sounds like you are on
the right track, your HV filter caps (one) have given up. You can order the
complete kit from Ken, K4EAA (www.k43aa.com). You
should replace the disc ceramic caps and resistors that are across the HV
cap terminals. Replace both caps, do not try and
keep one of the old ones. Just make notes and make sure you write down
where the wires go and make sure you wire it
back up the same way. You really need a DMM or VOM that can measure up to
1000VDC if you can get access to one
to check your voltage when done.

Regards

Chuck, KJ4GU

On Mon, Jun 20, 2011 at 8:57 AM, Will <gm0hks@...> wrote:

> further to the initial information written, I suspect one of the HV caps
> must have failed ? I guess a repair kit needs to be sought !
> If anyone can further advise, I'd be mighty grateful
>
> Will
>
> --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
> >
> > Hi
> > Switched "old faithful" on this morning and noticed that upon tune up, IP
> reading is rather low as is the bias voltage (about 35 ma instead of 60ma)
> on idle.
> > I suspect my HT rail is down but need a little guidance before I go
> changing the transformer in the rig !!! The HV voltage reading is only 450
> volts ??? Is there anything else I need to check before moving on ? Other
> things I have noticed that the ALC reading is peaking much higher but the IP
> reading is low and would require an increase in clockwise motion of the
> carrier control to bring it up. I have carried out the tuning process but
> the maximum output power is only 20 watts. I hate HV and I do not really
> want to start "prodding" the transformer at this stage. Please help
> >
> > regards
> > Will
> >
>
>
>

>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

[Non-text portions of this message have been removed]

31964. Re: [TS-520_820_530_830] Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 14:55:49 UTC
From: Charles Coffee
Topic: 31959 Message: 31964

Will,
Also as a follow up from reading your email again.....

If you are NOT comfortable working with the High Voltage, find a ham in the area who can assist you.

You need to make sure the rig is unplugged from the wall, the HV Caps are discharged before working
on the unit.

You must ensure that the new caps are installed correctly (negative and positive sides) and that these
are wired in series.

When checking the high voltage, ALWAYS leave your left hand away from the chassis and table.

Use an alligator clip to connect the black lead to the chassis of the radio and your right hand only
for the red test lead.

The voltages in the Kenwood Hybrid is LETHAL. Please be careful, safety first.

Chuck, KJ4GU

On Mon, Jun 20, 2011 at 10:46 AM, Charles Coffee <chascoffee@...>wrote:

> Will,
> Your HV should run around 900VDC with no load from the finals. This may
> vary up to as much as 940VDC. Sounds like you are on
> the right track, your HV filter caps (one) have given up. You can order
> the complete kit from Ken, K4EAA (www.k43aa.com). You
> should replace the disc ceramic caps and resistors that are across the HV
> cap terminals. Replace both caps, do not try and
> keep one of the old ones. Just make notes and make sure you write down
> where the wires go and make sure you wire it
> back up the same way. You really need a DMM or VOM that can measure up to
> 1000VDC if you can get access to one
> to check your voltage when done.
>
> Regards
>
> Chuck, KJ4GU
>
>
> On Mon, Jun 20, 2011 at 8:57 AM, Will <gm0hks@...> wrote:

>
>> further to the initial information written, I suspect one of the HV caps
>> must have failed ? I guess a repair kit needs to be sought !
>> If anyone can further advise, I'd be mighty grateful
>>
>> Will
>>
>> --- In TS-520_820_530_830@yahoogroups.com, "Will" <gm0hks@...> wrote:
>> >
>> > Hi
>> > Switched "old faithful" on this morning and noticed that upon tune up,
>> IP reading is rather low as is the bias voltage (about 35 ma instead of
>> 60ma) on idle.
>> > I suspect my HT rail is down but need a little guidance before I go
>> changing the transformer in the rig !!! The HV voltage reading is only 450
>> volts ??? Is there anything else I need to check before moving on ? Other
>> things I have noticed that the ALC reading is peaking much higher but the IP
>> reading is low and would require an increase in clockwise motion of the
>> carrier control to bring it up. I have carried out the tuning process but
>> the maximum output power is only 20 watts. I hate HV and I do not really
>> want to start "prodding" the transformer at this stage. Please help
>> >
>> > regards
>> > Will
>> >
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>> ------------------------------------
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>> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31965. Re: [TS-520_820_530_830] TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 15:03:31 UTC
From: Dennis Windle
Topic: 31959 Message: 31965

With a HV reading of only 450V which is about 1/2 normal value, it is usually an indication of one of the HV smoothing Cap's has gone defective. You can get a replacement set from K4EAA or there are some of them on Ebay or you can go to Mouser or Digikey. Not sure what you mean by "HT" rail ? and or why you would need to change the transformer at this point?

KD8OXQ
Dennis

----- Original Message -----
From: Will
To: TS-520_820_530_830@yahoogroups.com
Sent: Monday, June 20, 2011 7:37 AM
Subject: [TS-520_820_530_830] TS830s _ loss of rf output power

Hi
Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help

regards
Will

[Non-text portions of this message have been removed]

31966. Re: [TS-520_820_530_830] TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 12:21:37 UTC
From: Jeramy Ross
Topic: 31959 Message: 31966

One of your HV electrolytics have failed. Replace both of them and
you should see your issues resolved.

73,
Jeramy W5XTL

On Mon, Jun 20, 2011 at 6:37 AM, Will <gm0hks@...> wrote:
> Hi
> Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
> I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help
>
> regards
> Will
>
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> ------------------------------------
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> Yahoo! Groups Links
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31967. Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 15:10:12 UTC
From: w5rkl
Topic: 31961 Message: 31967

Since Q4's Gate measures 3VDC but Q1's Gate 2 measures 0VDC (both Q4's Gate and Q1's Gate 2 leads are connected together and share the same 3VDC bias voltage), I would check continuity between Q4's Gate and Q1's Gate 2 first. I also would check the solder connections to Q1 leads, especially if Q1 has been replaced by a previous owner.

It's also possible that Q1 is bad, possibly an internal short, especially if Q1 has been replaced by a previous owner. MOSFET FETs are stable while in the circuit but are highly susceptible to static discharge damage outside a circuit if handled incorrectly.

I'm no expert on dual gate N-Channel (Q1) MOSFET FETs (Q1 is a 3SK35 Dual Gate N-Channel MOSFET FET). I've read up on them and I'm still learning.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> I have the following problem; sudden loss of bias, receive sensitivity, and transmit in my TS-820S.
>
> All voltages are in spec:
> 14.0vdc
> 9.0vdc
> 3.3vdc
> 5.0vdc
> -6.0vdc
> All of the high voltages,including 900vdc, are correct at all test points, changing on transmit as per specification.
>
> I have checked the following as well:
>
> RL1 is OK
> Connections to RL1 are OK
> Tranceiver switch is OK
> SG switch is OK
> Fix Vox Q-13 is OK (although volume in the radio seems reduced)
> The 14.0vdc at the Rectifier Unit is OK
> Q-1 and Q-8 on the RF Unit are OK
> R-6 on the Rectifier Unit is OK
> No loose jumpers
> No broken wires
> No solder splashes
> I want to check L-8 on the Coil Pack as per Kenwood instructions, but I can't find it; it is not on the schematic. L-1 through L-7 and L-9+ are on the schematic, just no L-8
> Q-3 on the AF-AVR Unit is OK

> All resistors in the Final Unit, HV unit, and the Rectifier Unit are OK
>
> The only problem identified in testing is with Q-1 on the IF Unit. The schematic has to be incorrect. A connection from Q-1 to Q-4 is listed at 3.0vdc at Q-4 and 0.0vdc at Q-1. The actual value at Q-1 and Q-4 is 3.0vdc as it should be. At Q-1 the 14.5vdc voltage is correct. The common connection to Q-4, 3.0vdc, is OK. However the 3.0vdc (3.2vdc) voltage and the 2.0vdc (2.0vdc) voltage are not present.
>
> Can anyone point me in the right direction on this issue?
>
> Thanks,
>
> AE5UU
>

31968. Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 15:26:15 UTC
From: Will
Topic: 31959 Message: 31968

Hi Chuck, Dennis & Jeramy,
thanks for the positive responses. It was indeed a failed HV cap that caused the issue. I have replaced them both and now the HV reading is back up at 900 volts and full output restored. With regard to the transformer Dennis; just over reaction and concern on my part. I took a chill pill and sat down to think about it; I ended up concluding that the caps should be the first to be replaced. Anyhow, its a great day as old faithful is back up and running like she always does; pity the bands are lousy here in the UK hi hi. Thanks again guys, I am deeply indebted to you all for your kind response. Very 73 all round.....Will

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> One of your HV electrolytics have failed. Replace both of them and
> you should see your issues resolved.
>
> 73,
> Jeramy W5XTL
>
> On Mon, Jun 20, 2011 at 6:37 AM, Will <gm0hks@...> wrote:
> > Hi
> > Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
> > I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help
> >
> > regards
> > Will
> >
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> > ------------------------------------
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> > Yahoo! Groups Links
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31969. Re: [TS-520_820_530_830] Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 15:43:20 UTC
From: Russell Nilson
Topic: 31961 Message: 31969

Good morning Mike,

I was hoping that I would hear from you.

I did not make it clear enough in my last apparently; on the IF Unit, the connection from Q-1 to Q-4 has continuity, and thus they both read 3.0vdc. The error that I refer to is on the schematic that I have for the IF Unit that shows Q-4 to read 3.0vdc and Q-1 to read 0.0vdc; obviously a typo.

The NTE replacement for transistor 3SK35(GR) used at Q-1, Q-2, Q-3, and Q-18 is NTE-222. They are available at Mouser for over $12 each, so I haven't run out and bought new ones yet until I know just what (how many?) are bad, if indeed they are the problem at all.. I do have an old IF board that I pulled Q-1 from and replaced the one on my current board without effect. The troubleshooting section of the manual points a finger only at Q-1 on the IF board. Could this single transistor still being bad cause all of the problems that I have described?

Thanks for your help.

Russell
AE5UU

--- On Mon, 6/20/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit
To: TS-520_820_530_830@yahoogroups.com
Date: Monday, June 20, 2011, 10:10 AM

Since Q4's Gate measures 3VDC but Q1's Gate 2 measures 0VDC (both Q4's Gate and Q1's Gate 2 leads are connected together and share the same 3VDC bias voltage), I would check continuity between Q4's Gate and Q1's Gate 2 first. I also would check the solder connections to Q1 leads, especially if Q1 has been replaced by a previous owner.

It's also possible that Q1 is bad, possibly an internal short, especially if Q1 has been replaced by a previous owner. MOSFET FETs are stable while in the circuit but are highly susceptible to static discharge damage outside a circuit if handled incorrectly.

I'm no expert on dual gate N-Channel (Q1) MOSFET FETs (Q1 is a 3SK35 Dual Gate N-Channel MOSFET FET). I've read up on them and I'm still learning.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:

>

> I have the following problem; sudden loss of bias, receive sensitivity, and transmit in my TS-820S.

>

> All voltages are in spec:

> 14.0vdc

> 9.0vdc

> 3.3vdc

> 5.0vdc

> -6.0vdc

> All of the high voltages,including 900vdc, are correct at all test points, changing on transmit as per specification.

>

> I have checked the following as well:

>

> RL1 is OK

> Connections to RL1 are OK

> Tranceiver switch is OK

> SG switch is OK

> Fix Vox Q-13 is OK (although volume in the radio seems reduced)

> The 14.0vdc at the Rectifier Unit is OK

> Q-1 and Q-8 on the RF Unit are OK

> R-6 on the Rectifier Unit is OK

> No loose jumpers

> No broken wires

> No solder splashes

> I want to check L-8 on the Coil Pack as per Kenwood instructions, but I can't find it; it is not on the schematic. L-1 through L-7 and L-9+ are on the schematic, just no L-8

> Q-3 on the AF-AVR Unit is OK

> All resistors in the Final Unit, HV unit, and the Rectifier Unit are OK

>

> The only problem identified in testing is with Q-1 on the IF Unit. The schematic has to be incorrect. A connection from Q-1 to Q-4 is listed at 3.0vdc at Q-4 and 0.0vdc at Q-1. The actual value at Q-1 and Q-4 is 3.0vdc as it should be. At Q-1 the 14.5vdc voltage is correct. The common connection to Q-4, 3.0vdc, is OK. However the 3.0vdc (3.2vdc) voltage and the 2.0vdc (2.0vdc) voltage are not present.

>

> Can anyone point me in the right direction on this issue?

>

> Thanks,

>

> AE5UU

>

[Non-text portions of this message have been removed]

31970. Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 16:00:41 UTC
From: w5rkl
Topic: 31961 Message: 31970

If Q1 is bad, not only would receive be affected but transmit (all modes) would also be affected. Q1 functions in both transmit and receive.

I guess I mis-read your statement when you talked about Q1s 3VDC (3.2VDC and 2VDC on Q1's Gate 1 and Source pins).

Yes, I agree, it appears the IF schematic voltage indications for Q4's Gate and Q1's Gate 2 are incorrect. Q1's Gate 2 should have 3VDC. This voltage will vary based on the AGC voltage produced in receive from an incoming signal. It also will vary depending on the ALC voltage produced during sideband transmission. The "AGL" line is common to both receive (AGC) and transmit (ALC) to control the gain of the IF amplifier.

If you have a signal generator you can apply a low level, 1mv or less, 8.830Mhz signal to the IF amplifier plug IF1 pin 1 and ground. This should produce a high S meter indication and AGC voltage at Gate 2 of Q1. Varying the signal level should cause the AGC voltage to rise and fall according to the signal generator's output level. This will tell if the IF unit is actually working properly or not.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Russell Nilson <nilsonrussell@...> wrote:
>
> Good morning Mike,
>
> I was hoping that I would hear from you.
>
> I did not make it clear enough in my last apparently; on the IF Unit, the connection from Q-1 to Q-4 has continuity, and thus they both read 3.0vdc.Â The error that I refer to is on the schematic that I have for the IF Unit that shows Q-4 to read 3.0vdc and Q-1 to read 0.0vdc; obviously a typo.
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> The NTE replacement for transistor 3SK35(GR) used at Q-1, Q-2, Q-3, and Q-18 is NTE-222.Â They are available at Mouser for over $12 each, so I haven't run out and bought new ones yet until I know just what (how many?) are bad, if indeed they are the problem at all..Â I do have an old IF board that I pulled Q-1 from and replaced the one on my current board without effect.Â The troubleshooting section of the manual points a finger only at Q-1 on the IF board.Â Could this single transistor still being bad cause all of the problems that I have described?
>
> Thanks for your help.
>
> Russell
> AE5UU
>

>
> --- On Mon, 6/20/11, w5rkl <w5rkl@...> wrote:
>
> From: w5rkl <w5rkl@...>
> Subject: [TS-520_820_530_830] Re: TS-820S Sudden loss of bias, receive sensitivity, and transmit
> To: TS-520_820_530_830@yahoogroups.com
> Date: Monday, June 20, 2011, 10:10 AM
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>
>
>
> It's also possible that Q1 is bad, possibly an internal short, especially if Q1 has been replaced by a previous owner. MOSFET FETs are stable while in the circuit but are highly susceptible to static discharge damage outside a circuit if handled incorrectly.
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>
>
> I'm no expert on dual gate N-Channel (Q1) MOSFET FETs (Q1 is a 3SK35 Dual Gate N-Channel MOSFET FET). I've read up on them and I'm still learning.
>
>
>
> 73s
>
> Mike
>
> W5RKL
>
>

>
> --- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@> wrote:
>
> >
>
> > I have the following problem; sudden loss of bias, receive sensitivity, and transmit in my TS-820S.
>
> >
>
> > All voltages are in spec:
>
> > 14.0vdc
>
> > 9.0vdc
>
> > 3.3vdc
>
> > 5.0vdc
>
> > -6.0vdc
>
> > All of the high voltages,including 900vdc, are correct at all test points, changing on transmit as per specification.
>
> >
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> > I have checked the following as well:
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> >
>
> > RL1 is OK
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> > Connections to RL1 are OK
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>
> > Fix Vox Q-13 is OK (although volume in the radio seems reduced)
>
> > The 14.0vdc at the Rectifier Unit is OK
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> > Q-1 and Q-8 on the RF Unit are OK
>
> > R-6 on the Rectifier Unit is OK
>
> > No loose jumpers
>
> > No broken wires

>
> > No solder splashes
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> > I want to check L-8 on the Coil Pack as per Kenwood instructions, but I can't find it; it is not on the schematic. L-1 through L-7 and L-9+ are on the schematic, just no L-8
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> > Can anyone point me in the right direction on this issue?
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> > Thanks,
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> > AE5UU
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> [Non-text portions of this message have been removed]
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31971. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 16:30:03 UTC
From: pwrapsengineer
Topic: 31874 Message: 31971

If you take a look at the 6146B characteristic curves for plate current vs grid 1 voltages (RCA data sheet examined), you will see that for a fixed grid 1 voltage (say -10V) there is a plate current of about 200mA when the screen grid (grid 2) is held at 150V and this increases to 300mA when the screen grid is held at 200V. This means that if you set the bias on the tube with grid 1 to about 30-40mA while holding grid 2 to 175V and then you hold the same grid 1 voltage while modulating grid 2 from 150 to 200V you will see a variation in plate current from about 20mA to about 50mA. This variation causes a type of distortion by changing the operating point of the tube as a function of screen grid voltage. This is the problem with unstabilized screen grid voltages.

I am not sure how much variation occurs in the actual operation of the 6146B in SSB but if the screen grid is bouncing around by more than a few volts during speech modulation, the resulting plate current is being distorted. In practice, it does not seem to be much of an issue. Bypassing the screen grid for audio frequencies at the impedance of the grid circuit would probably negate or minimize any real distortion and I haven't checked if this is done on the hybrids or if they are just bypassed for RF.

Larry
KS7J

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> I think this is going to be one of those agree to disagree discussions. Take a
> look at what one noted expert has to say about importance of screen grid
> regulation not only for linearity but for tube protection including how Collins
> did it with seperate high current supplies with choke input filters.
>
> http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf
>
> Terry -K9TW
>
>
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>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Sun, June 19, 2011 5:30:07 PM
> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>
>
> I agree Bob!
>
> 73s
> Mike

> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> >
> > Consider how many transmitters were made with this basic final design with
> > no problem from unregulated screen grids. THIS INCLUDES COLLINS!
> >
> > Bob Macklin
> > K5MYJ
> > Seattle, Wa.
> > "Real Radios Glow In The Dark"
> > ----- Original Message -----
> > From: "w5rkl" <w5rkl@>
> > To: <TS-520_820_530_830@yahoogroups.com>
> > Sent: Sunday, June 19, 2011 2:21 PM
> > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
> >
> >
> > The question I posed to Andy, and anyone else for that matter, is not about
> > setting the bias pot for a no signal 60ma but rather how and why the belief
> > that the screen voltage causes non-linear operation in the amplifier?
> >
> > 73s
> > Mike
> > W5RKL
>
>
>
>
> [Non-text portions of this message have been removed]
>

31972. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 16:46:47 UTC
From: Bob Macklin
Topic: 31874 Message: 31972

You people at making a big deal out of a minor problem.

If distortion is occurring during SSB operation you cannot hear it.

In the past it has never been a problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "pwrapsengineer" <larry.shorthill@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 20, 2011 9:30 AM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

> If you take a look at the 6146B characteristic curves for plate current vs
> grid 1 voltages (RCA data sheet examined), you will see that for a fixed
> grid 1 voltage (say -10V) there is a plate current of about 200mA when the
> screen grid (grid 2) is held at 150V and this increases to 300mA when the
> screen grid is held at 200V. This means that if you set the bias on the
> tube with grid 1 to about 30-40mA while holding grid 2 to 175V and then
> you hold the same grid 1 voltage while modulating grid 2 from 150 to 200V
> you will see a variation in plate current from about 20mA to about 50mA.
> This variation causes a type of distortion by changing the operating point
> of the tube as a function of screen grid voltage. This is the problem with
> unstabilized screen grid voltages.
>
> I am not sure how much variation occurs in the actual operation of the
> 6146B in SSB but if the screen grid is bouncing around by more than a few
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> distorted. In practice, it does not seem to be much of an issue.
> Bypassing the screen grid for audio frequencies at the impedance of the
> grid circuit would probably negate or minimize any real distortion and I
> haven't checked if this is done on the hybrids or if they are just
> bypassed for RF.
>
> Larry
> KS7J
>
>
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> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...>
> wrote:
>>
>> I think this is going to be one of those agree to disagree discussions.

>> Take a
>> look at what one noted expert has to say about importance of screen grid
>> regulation not only for linearity but for tube protection including how
>> Collins
>> did it with seperate high current supplies with choke input filters.
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>> http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf
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>> Terry -K9TW
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>> _____
>> From: w5rkl <w5rkl@...>
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>> Sent: Sun, June 19, 2011 5:30:07 PM
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>>
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>> I agree Bob!
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>> Mike
>> W5RKL
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>> > Consider how many transmitters were made with this basic final design
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>> > From: "w5rkl" <w5rkl@>
>> > To: <TS-520_820_530_830@yahoogroups.com>
>> > Sent: Sunday, June 19, 2011 2:21 PM
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>> > 73s
>> > Mike
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>> [Non-text portions of this message have been removed]
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31973. Re: TS830s _ loss of rf output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 17:02:59 UTC
From: pwrapsengineer
Topic: 31959 Message: 31973

Dennis, HT is for High Tension, a particularly British expression for High Voltage. We sometimes call the AC transmission lines from power generation stations, high tension lines for the same reason. The opposite to the HT rail is, of course, Earth. We on this side of the pond call it by its proper name, Ground. Now if I can just find my spanner I'll have a go at fixing something that's all bodged up!!

Cheers,
Larry, KS7J

--- In TS-520_820_530_830@yahoogroups.com, "Dennis Windle" <denniswindle@...> wrote:
>
> With a HV reading of only 450V which is about 1/2 normal value, it is usually an indication of one of the HV smoothing Cap's has gone defective. You can get a replacement set from K4EAA or there are some of them on Ebay or you can go to Mouser or Digikey. Not sure what you mean by "HT" rail ? and or why you would need to change the transformer at this point?
>
> KD8OXQ
> Dennis
>
> ----- Original Message -----
> From: Will
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Monday, June 20, 2011 7:37 AM
> Subject: [TS-520_820_530_830] TS830s _ loss of rf output power
>
>
>
> Hi
> Switched "old faithful" on this morning and noticed that upon tune up, IP reading is rather low as is the bias voltage (about 35 ma instead of 60ma) on idle.
> I suspect my HT rail is down but need a little guidance before I go changing the transformer in the rig !!! The HV voltage reading is only 450 volts ??? Is there anything else I need to check before moving on ? Other things I have noticed that the ALC reading is peaking much higher but the IP reading is low and would require an increase in clockwise motion of the carrier control to bring it up. I have carried out the tuning process but the maximum output power is only 20 watts. I hate HV and I do not really want to start "prodding" the transformer at this stage. Please help
>
> regards
> Will
>
>
>
>

>
> [Non-text portions of this message have been removed]
>

31974. HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 16:03:35 UTC
From: sv9dru
Topic: 31974 Message: 31974

Hi to all,
Just bought a TS-530s and found its HV caps neatly replaced by 4 new caps 68μF/400V each, mounted on a PCB with the associated bleeding resistors and ceramic caps. The PCB is very well installed in the place of the old HV caps.
It seems to work fine and I get about 900V indication in the rig's meter and about 50V sagging on voice peaks while operating SSB @ max output.

Do I need to be concerned about the 400V rating of these caps and replace them with 450-500V ones or just go by the old principle of "if it aint broken dont fix it" ??
Do I risk any sudden or catastrophic failure with these caps?

Any suggestions would be appreciated.
73,
Marinos, sv9dru / ki4gin

31975. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 18:27:13 UTC
From: Terry Wagoner
Topic: 31874 Message: 31975

Bob- It probably is a minor problem and unless valid testing/measurng is done no way to really quantify it. I dont have a spectrum analyzer so no way for me to look at 3rd/5th order products under varying screen voltages. I also have no evidence that anyone who has recently lost a 6146 tube determined that it was due to exceeding screen grid dissipation.

It is not so much about "hearing" distortion, it is about IMD and what the adjacent stations on each side of your signal are "hearing". Tune across the bands and tune across some of the signals and see what is passing as "not a problem" in our crowded bands today.

I am sorry I brought it up. As I said in my original post I am of course interested in clean signal and extending the life of these old 6146 tubes that are available to us today. If lowering and regulating the screen voltage could accomplish both of those things , it would be pretty easy mod with the availability of simple mosfet shunt regulators.

It is pretty clear no one has seen any need to regulate the screen supplies in the hybrids so as you say it is a non-problem and I think best if we drop this thread.

Terry -- K9TW

From: Bob Macklin <macklinbob@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Mon, June 20, 2011 12:46:47 PM
Subject: Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

You people at making a big deal out of a minor problem.

If distortion is occurring during SSB operation you cannot hear it.

In the past it has never been a problem.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "pwrapsengineer" <larry.shorthill@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 20, 2011 9:30 AM
Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

> If you take a look at the 6146B characteristic curves for plate current vs
> grid 1 voltages (RCA data sheet examined), you will see that for a fixed

> grid 1 voltage (say -10V) there is a plate current of about 200mA when the
> screen grid (grid 2) is held at 150V and this increases to 300mA when the
> screen grid is held at 200V. This means that if you set the bias on the
> tube with grid 1 to about 30-40mA while holding grid 2 to 175V and then
> you hold the same grid 1 voltage while modulating grid 2 from 150 to 200V
> you will see a variation in plate current from about 20mA to about 50mA.
> This variation causes a type of distortion by changing the operating point
> of the tube as a function of screen grid voltage. This is the problem with
> unstabilized screen grid voltages.
>
> I am not sure how much variation occurs in the actual operation of the
> 6146B in SSB but if the screen grid is bouncing around by more than a few
> volts during speech modulation, the resulting plate current is being
> distorted. In practice, it does not seem to be much of an issue.
> Bypassing the screen grid for audio frequencies at the impedance of the
> grid circuit would probably negate or minimize any real distortion and I
> haven't checked if this is done on the hybrids or if they are just
> bypassed for RF.
>
> Larry
> KS7J
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...>
> wrote:
>>
>> I think this is going to be one of those agree to disagree discussions.
>> Take a
>> look at what one noted expert has to say about importance of screen grid
>> regulation not only for linearity but for tube protection including how
>> Collins
>> did it with seperate high current supplies with choke input filters.
>>
>> http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf
>>
>> Terry -K9TW
>>
>>
>>
>>
>>
>> _____
>> From: w5rkl <w5rkl@...>
>> To: TS-520_820_530_830@yahoogroups.com
>> Sent: Sun, June 19, 2011 5:30:07 PM
>> Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>>
>>
>> I agree Bob!

>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@>
>> wrote:
>> >
>> > Consider how many transmitters were made with this basic final design
>> > with
>> > no problem from unregulated screen grids. THIS INCLUDES COLLINS!
>> >
>> > Bob Macklin
>> > K5MYJ
>> > Seattle, Wa.
>> > "Real Radios Glow In The Dark"
>> > ----- Original Message -----
>> > From: "w5rkl" <w5rkl@>
>> > To: <TS-520_820_530_830@yahoogroups.com>
>> > Sent: Sunday, June 19, 2011 2:21 PM
>> > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
>> >
>> >
>> > The question I posed to Andy, and anyone else for that matter, is not
>> > about
>> > setting the bias pot for a no signal 60ma but rather how and why the
>> > belief
>> > that the screen voltage causes non-linear operation in the amplifier?
>> >
>> > 73s
>> > Mike
>> > W5RKL
>>
>>
>>
>>
>> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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[Non-text portions of this message have been removed]

31976. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 19:20:36 UTC
From: andy_westcott2004
Topic: 31974 Message: 31976

--- In TS-520_820_530_830@yahoogroups.com, "sv9dru" <sv9dru@...> wrote:

> Do I risk any sudden or catastrophic failure with these caps?
>
>

If they were going to fail, it would be under receive conditions when the voltage across them is at a maximum. I would also have expected them to fail pretty soon after installation, which they evidently haven't.

The situation does represent a weak point and may give rise to problems in the future, but on the other hand the caps may last for many years.

31977. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 19:24:00 UTC
From: Jim S
Topic: 31874 Message: 31977

Terry, very few people that are contributing to the "not a problem"
signals on the bands today are doing so because they are using hybrids
with no screen voltage regulation. This is a common problem, which is
caused in almost every case by the "all knobs fully clockwise" syndrome
which is so prevalent on the bands today.

Regulating screen voltage could possibly result in lower distortion
products, but it is highly doubtful that the decrease would be even
noticeable under today's over the air conditions.

It has been a fairly interesting topic for discussion from a technical
standpoint, but I hardly think that the results would be worth the effort !

73,
Jim

On 6/20/2011 2:27 PM, Terry Wagoner wrote:
>
> Bob- It probably is a minor problem and unless valid testing/measurng
> is done
> no way to really quantify it. I dont have a spectrum analyzer so no
> way for me
> to look at 3rd/5th order products under varying screen voltages. I
> also have no
> evidence that anyone who has recently lost a 6146 tube determined that
> it was
> due to exceeding screen grid dissipation.
>
> It is not so much about "hearing" distortion, it is about IMD and what
> the
> adjacent stations on each side of your signal are "hearing". Tune
> across the
> bands and tune across some of the signals and see what is passing as
> "not a
> problem" in our crowded bands today.
>
> I am sorry I brought it up. As I said in my original post I am of course
> interested in clean signal and extending the life of these old 6146
> tubes that
> are available to us today. If lowering and regulating the screen
> voltage could
> accomplish both of those things , it would be pretty easy mod with the
> availability of simple mosfet shunt regulators.
>
> It is pretty clear no one has seen any need to regulate the screen
> supplies in

> the hybrids so as you say it is a non-problem and I think best if we
> drop this
> thread.
>
> Terry -- K9TW=======
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17750)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

31978. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 19:27:09 UTC
From: w5rkl
Topic: 31974 Message: 31978

Hello Marinos,

Your post has what appears to contain a typographical error. What does the following mean?

"68µF"

What are the capacitance value and voltage rating of each capacitor and how are the 4 capacitors wired together on the PC board?

The HV supply in the TS-530 is a voltage doubling supply. The capacitors are wired in "series".

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "sv9dru" <sv9dru@...> wrote:
>
> Hi to all,
> Just bought a TS-530s and found its HV caps neatly replaced by 4 new caps 68µF/400V each, mounted on a PCB with the associated bleeding resistors and ceramic caps. The PCB is very well installed in the place of the old HV caps.
> It seems to work fine and I get about 900V indication in the rig's meter and about 50V sagging on voice peaks while operating SSB @ max output.
>
> Do I need to be concerned about the 400V rating of these caps and replace them with 450-500V ones or just go by the old principle of "if it aint broken dont fix it" ??
> Do I risk any sudden or catastrophic failure with these caps?
>
> Any suggestions would be appreciated.
> 73,
> Marinos, sv9dru / ki4gin
>

31979. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 19:30:07 UTC
From: Bob Macklin
Topic: 31874 Message: 31979

I'm using a pair of Benton Harbor S-Line Twins and a pair of Drake 4-Line Twins with out any know problem.

Neither has final screen grid regulation.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: "Jim S" <jimstan@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Monday, June 20, 2011 12:24 PM
Subject: Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

> Terry, very few people that are contributing to the "not a problem"
> signals on the bands today are doing so because they are using hybrids
> with no screen voltage regulation. This is a common problem, which is
> caused in almost every case by the "all knobs fully clockwise" syndrome
> which is so prevalent on the bands today.
>
> Regulating screen voltage could possibly result in lower distortion
> products, but it is highly doubtful that the decrease would be even
> noticeable under today's over the air conditions.
>
> It has been a fairly interesting topic for discussion from a technical
> standpoint, but I hardly think that the results would be worth the effort
> !
>
> 73,
> Jim
>
> On 6/20/2011 2:27 PM, Terry Wagoner wrote:
>>
>> Bob- It probably is a minor problem and unless valid testing/measurng
>> is done
>> no way to really quantify it. I dont have a spectrum analyzer so no
>> way for me
>> to look at 3rd/5th order products under varying screen voltages. I
>> also have no
>> evidence that anyone who has recently lost a 6146 tube determined that
>> it was
>> due to exceeding screen grid dissipation.
>>
>> It is not so much about "hearing" distortion, it is about IMD and what
>> the

>> adjacent stations on each side of your signal are "hearing". Tune
>> across the
>> bands and tune across some of the signals and see what is passing as
>> "not a
>> problem" in our crowded bands today.
>>
>> I am sorry I brought it up. As I said in my original post I am of course
>> interested in clean signal and extending the life of these old 6146
>> tubes that
>> are available to us today. If lowering and regulating the screen
>> voltage could
>> accomplish both of those things , it would be pretty easy mod with the
>> availability of simple mosfet shunt regulators.
>>
>> It is pretty clear no one has seen any need to regulate the screen
>> supplies in
>> the hybrids so as you say it is a non-problem and I think best if we
>> drop this
>> thread.
>>
>> Terry -- K9TW=======
>>
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17750)
> http://www.pctools.com/
> =======
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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31980. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 19:32:54 UTC
From: Sander Wissing
Topic: 31980 Message: 31980

I would also have expected them to have failed in fairly short order.
They may have been hooked up in a series & parallel combination to get
a higher voltage rating. Is this maybe why they are mounted on a PC
board?

ZS6SSW Sander

31981. Re: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 20:28:40 UTC
From: Jeramy Ross
Topic: 31874 Message: 31981

There seems to be two points driving this whole discussion:

1) Tube life. Given that there is still a fairly sigificant number of these rigs out there with their original PA tubes on the air gives a good indication of tube life with the existing SG supply. My 820 is a good example of this. I'm the third owner. Both past owners used it nearly daily. Dial/meter lamps have been replaced multiple times as has the driver. The original PA tubes are still going strong in spite of the unregulated SG supply. Lengthy tune ups, and improper tune ups are far more likely to damage/shorten the life of your PA tubes.

2) Linearity and distortion products in the PA. Again, given the well earned reputation of these rigs having great signals and audio on the air would go against this being a worry. Transmitted IMD reports on PSK, when using a properly adjusted rig, are typically excellent. Waterfall snapshot reports sent after a QSO also show a great clean signal. Similar positive experiences have been discussed with other hybrid owners who persue digital mode operation with their hybrids. Again, this is with the SG supply as is.

Persue your experimentation as you wish. No one is saying not to, but I doubt any improvement (if any) in the two areas mentioned will prove worth the time and effort nor be noticed on the air.

Respectfully,
Jeramy W5XTL
On Jun 20, 2011 2:30 PM, "Bob Macklin" <macklinbob@...> wrote:

[Non-text portions of this message have been removed]

31982. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 20:32:40 UTC
From: w5rkl
Topic: 31874 Message: 31982

Larry,

How do you see the screens in the hybrids are modulated in the Kenwood hybrids? I would agree with you if the discussion was about DSB AM Plate Modulation where the screens and plates of the final tubes must be both modulated.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "pwrapsengineer" <larry.shorthill@...> wrote:
>
> If you take a look at the 6146B characteristic curves for plate current vs grid 1 voltages (RCA data sheet examined), you will see that for a fixed grid 1 voltage (say -10V) there is a plate current of about 200mA when the screen grid (grid 2) is held at 150V and this increases to 300mA when the screen grid is held at 200V. This means that if you set the bias on the tube with grid 1 to about 30-40mA while holding grid 2 to 175V and then you hold the same grid 1 voltage while modulating grid 2 from 150 to 200V you will see a variation in plate current from about 20mA to about 50mA. This variation causes a type of distortion by changing the operating point of the tube as a function of screen grid voltage. This is the problem with unstabilized screen grid voltages.
>
> I am not sure how much variation occurs in the actual operation of the 6146B in SSB but if the screen grid is bouncing around by more than a few volts during speech modulation, the resulting plate current is being distorted. In practice, it does not seem to be much of an issue. Bypassing the screen grid for audio frequencies at the impedance of the grid circuit would probably negate or minimize any real distortion and I haven't checked if this is done on the hybrids or if they are just bypassed for RF.
>
> Larry
> KS7J
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> >
> > I think this is going to be one of those agree to disagree discussions. Take a
> > look at what one noted expert has to say about importance of screen grid
> > regulation not only for linearity but for tube protection including how Collins
> > did it with seperate high current supplies with choke input filters.
> >
> > http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf
> >
> > Terry -K9TW
> >
> >

> >
> >
> >
> > _____
> > From: w5rkl <w5rkl@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Sun, June 19, 2011 5:30:07 PM
> > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
> >
> >
> > I agree Bob!
> >
> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> > >
> > > Consider how many transmitters were made with this basic final design with
> > > no problem from unregulated screen grids. THIS INCLUDES COLLINS!
> > >
> > > Bob Macklin
> > > K5MYJ
> > > Seattle, Wa.
> > > "Real Radios Glow In The Dark"
> > > ----- Original Message -----
> > > From: "w5rkl" <w5rkl@>
> > > To: <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Sunday, June 19, 2011 2:21 PM
> > > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
> > >
> > >
> > > The question I posed to Andy, and anyone else for that matter, is not about
> > > setting the bias pot for a no signal 60ma but rather how and why the belief
> > > that the screen voltage causes non-linear operation in the amplifier?
> > >
> > > 73s
> > > Mike
> > > W5RKL
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

31983. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 21:31:18 UTC
From: andy_westcott2004
Topic: 31874 Message: 31983

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> There seems to be two points driving this whole discussion
>

There is another point:
Satisfaction.
The knowledge that you have made a technical improvement no matter how insignificant they may be. The manufacturers obviously considered the small improvements (yet to be proved) were not worth the extra compnent cost, but that doesn't apply to the home experimenter.

The possibility of very slightly lower envelope distortion and slightly lowered tube dissipation are good enough excuses to mess about and experiment as I see it.

Amateur radio is supposed to be about this, after all. :)

31984. Cw filters for TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 21:19:49 UTC
From: marvinkleek@hotmail.com
Topic: 31984 Message: 31984

What's the difference in the YG-455C and the YK-88C filters?

31985. Display again

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 22:11:39 UTC
From: jmikeln
Topic: 31985 Message: 31985

Hi all,

I was pleasantly surprised to see all useful answers in this group! I wish you can direct me with my problem too.

I own TS-820S and for some reason (after a couple of years of no activity on the band), receiver receives signal on the bands OK. On 7 MHz for example however, display shows 5 MHz, at 14 MHz band it shows 12 MHz, on 21 MHz band shows 19 MHz. On 3.5 MHz and 1.8 MHz display shows correct frequency.

I did open the rig, checked connectors on counter mix & counter boards, have resoldered all vias there, checked the PLL unit's connectors, retuned coils for each band... but still not success. The only thing I did not get into it yet was coil pack.

Is it possible that my problem lays right there?

I am suspecting that within counter any of TTL chips is dead but how to identify it?

Thanks for your replies.

73 de Jure, S52CQ

31986. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 22:36:32 UTC
From: w5rkl
Topic: 31874 Message: 31986

Yes, the hobby is about experimenting but without experience and knowledge, the "experimenting" can result in a radio that no longer works, barely works, or works improperly at best.

There are a lot of modifications that people have done to their radios. Some are good and some are not so good, and then there's the one that's make you scratch your head and say, "What on earth was this person thinking???".

Whether you or anyone else modifies their radio, is entirely up to the owner. We, as members, can only give you and others what we believe is the right way to go and/or whether the modification will provide any measurable benefit at all.

Anyone who is modifying their radios such as in this case, should have the test equipment available to perform "before" and "after" test in order to determine whether the modification actually improved performance, did nothing to improve performance, or actually made the radio's performance become significantly less. If these steps are not taken then there's no way to determine this modification actually improved performance or not.

Good luck.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@> wrote:
> >
> > There seems to be two points driving this whole discussion
> >
>
> There is another point:
> Satisfaction.
> The knowledge that you have made a technical improvement no matter how insignificant they may be. The manufacturers obviously considered the small improvements (yet to be proved) were not worth the extra compnent cost, but that doesn't apply to the home experimenter.
>
> The possibility of very slightly lower envelope distortion and slightly lowered tube dissipation are good enough excuses to mess about and experiment as I see it.
>
> Amateur radio is supposed to be about this, after all. :)
>

31987. Re: [TS-520_820_530_830] Display again

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 22:46:25 UTC
From: Jeramy Ross
Topic: 31985 Message: 31987

Hello Jure,

Did you check the counter input levels (3-2, page 49 of the TS-820
service manual)? I have seen cases where it is barely enough on the
lower bands, and then below a workable threshold once you proceed up
the bands with the symptoms you describe.

73,
Jeramy W5XTL

On Mon, Jun 20, 2011 at 5:11 PM, jmikeln <jmikeln@...> wrote:
> Hi all,
>
> I was pleasantly surprised to see all useful answers in this group! I wish you can direct me with my problem too.
>
> I own TS-820S and for some reason (after a couple of years of no activity on the band), receiver receives signal on the bands OK. On 7 MHz for example however, display shows 5 MHz, at 14 MHz band it shows 12 MHz, on 21 MHz band shows 19 MHz. On 3.5 MHz and 1.8 MHz display shows correct frequency.
>
> I did open the rig, checked connectors on counter mix & counter boards, have resoldered all vias there, checked the PLL unit's connectors, retuned coils for each band... but still not success. The only thing I did not get into it yet was coil pack.
>
> Is it possible that my problem lays right there?
>
> I am suspecting that within counter any of TTL chips is dead but how to identify it?
>
> Thanks for your replies.
>
> 73 de Jure, S52CQ
>
>
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> Yahoo! Groups Links
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31988. Re: [TS-520_820_530_830] Cw filters for TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 22:52:38 UTC
From: Jeramy Ross
Topic: 31984 Message: 31988

The IF frequency. YK-88C is for the 8.83MHz IF (1st IF), and the
YG-455C is for the 455KHz IF (2nd IF). Both are 500Hz BW filters.

73,
Jeramy W5XTL

On Mon, Jun 20, 2011 at 4:19 PM, <marvinkleek@...> wrote:
> What's the difference in the YG-455C and the YK-88C filters?
>
>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>
>

31989. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-20 23:29:56 UTC
From: pwrapsengineer
Topic: 31874 Message: 31989

Mike, I didn't say the screen was modulated, only that if it were, say by poor or no regulation on the screen supply which is the case in these types of hybrids, then some distortion would occur. This modulation can come from interaction between speech power peaks within the power transformer itself, for example. The transformer has dynamic characteristics (fluctuations on HV supply, e.g.) as a function of speech. This in turn causes fluctuations on the screen supply. Peaks of plate voltage during speech lulls will cause a change in secondary emission on the plate which get reflected in voltage fluctuations caused by current changes in the screen resistor, etc. These operating point fluctuations during actual speech is what give rise to the possibility of this type of distortion. You will notice that I originally stated that it does not seem to be a problem in practice so I doubt that from a practical point of view there is any more than a marginal improvement in these radios by a decent shunt regulator on the screen. The tradeoffs in performance versus cost are always engineering design decisions and once the design is good enough, it makes little sense to refine the design. Such is the case with the Kenwood hybrids, which were not only good enough, they were better than their peers.

Back in the late 50's and early 60's Collins and Boeing were heavily involved with distortion experiments in SSB speech intelligibility. These experiments were done to prove the effectiveness of SSB in adverse situations and had less to do with IMD and interference related issues, only intelligibility. I am certain that Collins designed a lot of their products for the amateur market based on some of these studies, but also considering the interference aspects of what their designs were doing. They also determined that their products achieved the level of good enough.

Larry, KS7J

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Larry,
>
> How do you see the screens in the hybrids are modulated in the Kenwood hybrids? I would agree with you if the discussion was about DSB AM Plate Modulation where the screens and plates of the final tubes must be both modulated.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "pwrapsengineer" <larry.shorthill@> wrote:
> >
> > If you take a look at the 6146B characteristic curves for plate current vs grid 1 voltages (RCA data sheet examined), you will see that for a fixed grid 1 voltage (say -10V) there is a plate current of about 200mA when the screen grid (grid 2) is held at 150V and this increases to 300mA when the screen grid is held at 200V. This means that if you set the bias on the tube with grid 1 to about 30-40mA while holding grid 2 to 175V and then you

hold the same grid 1 voltage while modulating grid 2 from 150 to 200V you will see a variation in plate current from about 20mA to about 50mA. This variation causes a type of distortion by changing the operating point of the tube as a function of screen grid voltage. This is the problem with unstabilized screen grid voltages.
> >
> > I am not sure how much variation occurs in the actual operation of the 6146B in SSB but if the screen grid is bouncing around by more than a few volts during speech modulation, the resulting plate current is being distorted. In practice, it does not seem to be much of an issue. Bypassing the screen grid for audio frequencies at the impedance of the grid circuit would probably negate or minimize any real distortion and I haven't checked if this is done on the hybrids or if they are just bypassed for RF.
> >
> > Larry
> > KS7J
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@> wrote:
> > >
> > > I think this is going to be one of those agree to disagree discussions. Take a
> > > look at what one noted expert has to say about importance of screen grid
> > > regulation not only for linearity but for tube protection including how Collins
> > > did it with seperate high current supplies with choke input filters.
> > >
> > > http://techdoc.kvindesland.no/radio/PATX/20051105140039183.pdf
> > >
> > > Terry -K9TW
> > >
> > >
> > >
> > >
> > >
> > > _____
> > > From: w5rkl <w5rkl@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Sun, June 19, 2011 5:30:07 PM
> > > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
> > >
> > >
> > > I agree Bob!
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@> wrote:
> > > >
> > > > Consider how many transmitters were made with this basic final design with
> > > > no problem from unregulated screen grids. THIS INCLUDES COLLINS!
> > > >
> > > > Bob Macklin

> > > > K5MYJ
> > > > Seattle, Wa.
> > > > "Real Radios Glow In The Dark"
> > > > ----- Original Message -----
> > > > From: "w5rkl" <w5rkl@>
> > > > To: <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Sunday, June 19, 2011 2:21 PM
> > > > Subject: [TS-520_820_530_830] Re: Hybrid Screen Grid Regulation
> > > > >
> > > > >
> > > > > The question I posed to Andy, and anyone else for that matter, is not about
> > > > > setting the bias pot for a no signal 60ma but rather how and why the belief
> > > > > that the screen voltage causes non-linear operation in the amplifier?
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > >
> > > >
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
>

31990. Re: Display again

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 06:01:52 UTC
From: jmikeln
Topic: 31985 Message: 31990

Hi Jeramy,

thanks for quick reply. I will do that tonight!

73 de Jure, S52CQ

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> Hello Jure,
>
> Did you check the counter input levels (3-2, page 49 of the TS-820
> service manual)? I have seen cases where it is barely enough on the
> lower bands, and then below a workable threshold once you proceed up
> the bands with the symptoms you describe.
>
> 73,
> Jeramy W5XTL
>
> On Mon, Jun 20, 2011 at 5:11 PM, jmikeln <jmikeln@...> wrote:
> > Hi all,
> >
> > I was pleasantly surprised to see all useful answers in this group! I wish you can direct me with my problem too.
> >
> > I own TS-820S and for some reason (after a couple of years of no activity on the band), receiver receives signal on the bands OK. On 7 MHz for example however, display shows 5 MHz, at 14 MHz band it shows 12 MHz, on 21 MHz band shows 19 MHz. On 3.5 MHz and 1.8 MHz display shows correct frequency.
> >
> > I did open the rig, checked connectors on counter mix & counter boards, have resoldered all vias there, checked the PLL unit's connectors, retuned coils for each band... but still not success. The only thing I did not get into it yet was coil pack.
> >
> > Is it possible that my problem lays right there?
> >
> > I am suspecting that within counter any of TTL chips is dead but how to identify it?
> >
> > Thanks for your replies.
> >
> > 73 de Jure, S52CQ
> >
> >
> >
> > ------------------------------------
> >
> > Yahoo! Groups Links

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>

31991. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 13:28:32 UTC
From: sv9dru
Topic: 31980 Message: 31991

Thanks for the suggestions, just for the typo error, the caps are 2x 68uf 400V in parallel and tin series with the other pair of identical caps. That would be equivalent to 136uf 400V + 136uf 400V.

Have found some replacement caps of 100uf 450V each and plan to use 4 in place of the above just to increase their voltage rating. That would give 200uf + 200uf at 450V.
Any thoughts on on using double the capacity from the original 100+100 uf caps?

Marinos.

--- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@...> wrote:
>
> I would also have expected them to have failed in fairly short order.
> They may have been hooked up in a series & parallel combination to get
> a higher voltage rating. Is this maybe why they are mounted on a PC
> board?
>
> ZS6SSW Sander
>

31992. Re: Cw filters for TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 14:08:20 UTC
From: marvinkleek@hotmail.com
Topic: 31984 Message: 31992

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> The IF frequency. YK-88C is for the 8.83MHz IF (1st IF), and the
> YG-455C is for the 455KHz IF (2nd IF). Both are 500Hz BW filters.
>
> 73,
> Jeramy W5XTL
>
> On Mon, Jun 20, 2011 at 4:19 PM, <marvinkleek@...> wrote:
> > What's the difference in the YG-455C and the YK-88C filters?
> >
> >
> >
> > ----------Many thanks, Jeramy.
> >
> > Yahoo! Groups Links
> >
> >
> >
> >
>

31993. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 06:04:48 UTC
From: sv9dru
Topic: 31974 Message: 31993

Thanks for the suggestions and sorry for the typo error, I had the Greek letter "m" in front of the Farad which the server did not like too much.
So the caps are 68uF @ 400V each. Wired in parallel for each pair for a total of 136uF the pair and connected in series with the other pair.

Theoretically that should be equivalent to 136uF @ 400V X 2 instead of 100uF @ 500V X2 in the stock Ts530s.
My main concern is the voltage rating as the higher capacitance should be an advantage and not a risk.

I have located and bought some 100uF @ 450V caps from ebay which will fit at the existing PCB for a replacement, just to be on the safe side. With those I will have 200uF @ 450V X2 for the HI voltage doubling circuit.

Marinos.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Marinos,
>
> Your post has what appears to contain a typographical error. What does the following mean?
>
> "68µF"
>
> What are the capacitance value and voltage rating of each capacitor and how are the 4 capacitors wired together on the PC board?
>
> The HV supply in the TS-530 is a voltage doubling supply. The capacitors are wired in "series".
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "sv9dru" <sv9dru@> wrote:
> >
> > Hi to all,
> > Just bought a TS-530s and found its HV caps neatly replaced by 4 new caps 68µF/400V each, mounted on a PCB with the associated bleeding resistors and ceramic caps. The PCB is very well installed in the place of the old HV caps.
> > It seems to work fine and I get about 900V indication in the rig's meter and about 50V sagging on voice peaks while operating SSB @ max output.
> >
> > Do I need to be concerned about the 400V rating of these caps and replace them with 450-500V ones or just go by the old principle of "if it aint broken dont fix it" ??
> > Do I risk any sudden or catastrophic failure with these caps?

> >
> > Any suggestions would be appreciated.
> > 73,
> > Marinos, sv9dru / ki4gin
> >
>

31994. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 15:58:45 UTC
From: w5rkl
Topic: 31974 Message: 31994

Hi Marinos,

Unfortunately the total working voltage is too low for the HV supply. The typical standby voltage of the HV supply is 150VDC higher than the capacitor group you have.

You are correct, the total capacitance is 136ufd but the total working voltage is only "800VDC". Although the capacitors may have a 10% to 20% tolerance rating, a total working voltage of 800VDC is not nearly enough to safely use those capacitors in the HV supply. Therefore, I recommend you do not use the four 68ufd 400VDC capacitor combination as replacements for the original HV filter capacitors. Just because they haven't failed doesn't mean they will not fail. I'm sure some folks will say they have been using similar combinations without any problems but that's no indication that it's safe to use this combination.

Having said, that whether you continue to use this unsafe combination or not is entirely up to you. I can only recommend that you don't use them.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "sv9dru" <sv9dru@...> wrote:
>
> Thanks for the suggestions and sorry for the typo error, I had the Greek letter "m" in front of the Farad which the server did not like too much.
> So the caps are 68uF @ 400V each. Wired in parallel for each pair for a total of 136uF the pair and connected in series with the other pair.
>
> Theoretically that should be equivalent to 136uF @ 400V X 2 instead of 100uF @ 500V X2 in the stock Ts530s.
> My main concern is the voltage rating as the higher capacitance should be an advantage and not a risk.
>
> I have located and bought some 100uF @ 450V caps from ebay which will fit at the existing PCB for a replacement, just to be on the safe side. With those I will have 200uF @ 450V X2 for the HI voltage doubling circuit.
>
> Marinos.
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Marinos,
> >
> > Your post has what appears to contain a typographical error. What does the following mean?
> >
> > "68µF"
> >
> > What are the capacitance value and voltage rating of each capacitor and how are the 4 capacitors wired together on the PC board?

> >
> > The HV supply in the TS-530 is a voltage doubling supply. The capacitors are wired in "series".
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "sv9dru" <sv9dru@> wrote:
> > >
> > > Hi to all,
> > > Just bought a TS-530s and found its HV caps neatly replaced by 4 new caps 68μF/400V each, mounted on a PCB with the associated bleeding resistors and ceramic caps. The PCB is very well installed in the place of the old HV caps.
> > > It seems to work fine and I get about 900V indication in the rig's meter and about 50V sagging on voice peaks while operating SSB @ max output.
> > >
> > > Do I need to be concerned about the 400V rating of these caps and replace them with 450-500V ones or just go by the old principle of "if it aint broken dont fix it" ??
> > > Do I risk any sudden or catastrophic failure with these caps?
> > >
> > > Any suggestions would be appreciated.
> > > 73,
> > > Marinos, sv9dru / ki4gin
> > >
> >
>

31995. Re: Cw filters for TS-830s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 16:16:10 UTC
From: w5rkl
Topic: 31984 Message: 31995

Jeramy is right. The "88" and "455" indicate the IF frequency the filter's designed for.

This and additional answers/information pertaining to crystal filters used in the 830 are located in the 830 operator's manual, "Section 5. Optional Accessories" and in the 830 service manual's "Circuit Description" sections.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, marvinkleek@... wrote:
>
>
>
> --- In TS-520_820_530_830@...m, Jeramy Ross <jeramy@> wrote:
> >
> > The IF frequency. YK-88C is for the 8.83MHz IF (1st IF), and the
> > YG-455C is for the 455KHz IF (2nd IF). Both are 500Hz BW filters.
> >
> > 73,
> > Jeramy W5XTL
> >
> > On Mon, Jun 20, 2011 at 4:19 PM, <marvinkleek@> wrote:
> > > What's the difference in the YG-455C and the YK-88C filters?
> > >
> > >
> > >
> > > ----------Many thanks, Jeramy.
> > >
> > > Yahoo! Groups Links
> > >
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> >
>

31996. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 17:24:09 UTC
From: andy_westcott2004
Topic: 31974 Message: 31996

I would say you could fit the 450v 200uF caps in there, as long as the extra surge current didn't put the rectifiers at risk.

When you first fit these new caps assuming you do, this is what I would do first to ensure the dielectric was properly formed and not presenting too high a leakage current:

Switch on the rig for a few seconds then off again for 15 seconds or so. Do this a few times then leave it on for half a minute. SAFELY have a feel of the case of the caps (switched off and discharged) to see if any one is running warm. if not, power up the rig for a few minutes and do the same. If the temp of the caps is still cool, you should be OK.

Of course, should a cap overheat catastrophically you'll hear about it!

31997. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 17:42:03 UTC
From: sv9dru
Topic: 31974 Message: 31997

Points well taken, and I would be more than happy to return the HV caps to their original configuration using one of the recommended replacement pairs 120uf at 500v.
Unfortunately the previous owner, before installing the new PCB with the 4 68uf caps discarded the original supporting hardware so no way of installing the original caps with no rings etc...
Anyway, will try those 100uf at 450V x 4 and post the results.
If anything, they should be safer to use than the 400V ones already present in the rig now.

Thanks for the advice guys,
73
Marinos, sv9dru / ki4gin

--- In TS-520_820_530_830@yahoogroups.com, "andy_westcott2004" <andywestcottpublic@...> wrote:
>
> I would say you could fit the 450v 200uF caps in there, as long as the extra surge current didn't put the rectifiers at risk.
>
> When you first fit these new caps assuming you do, this is what I would do first to ensure the dielectric was properly formed and not presenting too high a leakage current:
>
> Switch on the rig for a few seconds then off again for 15 seconds or so. Do this a few times then leave it on for half a minute. SAFELY have a feel of the case of the caps (switched off and discharged) to see if any one is running warm. if not, power up the rig for a few minutes and do the same. If the temp of the caps is still cool, you should be OK.
>
> Of course, should a cap overheat catastrophically you'll hear about it!
>

31998. Re: [TS-520_820_530_830] Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 18:02:14 UTC
From: Jim S
Topic: 31974 Message: 31998

I agree with that statement! In industry, the normal thing has always been to use capacitors with a 100% margin on expected voltage vs. the value given on the capacitor. For a 800 volt working voltage, caps of 1500-1600 volts would probably be used. YMMV, but I would certainly use higher voltage rated caps!

73, Jim AG3Y

On 6/21/2011 11:58 AM, w5rkl wrote:
>
> Hi Marinos,
>
> Unfortunately the total working voltage is too low for the HV supply.
> The typical standby voltage of the HV supply is 150VDC higher than the
> capacitor group you have.
>
> You are correct, the total capacitance is 136ufd but the total working
> voltage is only "800VDC". Although the capacitors may have a 10% to
> 20% tolerance rating, a total working voltage of 800VDC is not nearly
> enough to safely use those capacitors in the HV supply. Therefore, I
> recommend you do not use the four 68ufd 400VDC capacitor combination
> as replacements for the original HV filter capacitors. Just because
> they haven't failed doesn't mean they will not fail. I'm sure some
> folks will say they have been using similar combinations without any
> problems but that's no indication that it's safe to use this combination.
>
> Having said, that whether you continue to use this unsafe combination
> or not is entirely up to you. I can only recommend that you don't use
> them.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "sv9dru" <sv9dru@...>
> wrote:
> >
> > Thanks for the suggestions and sorry for the typo error, I had the
> Greek letter "m" in front of the Farad which the server did not like
> too much.
> > So the caps are 68uF @ 400V each. Wired in parallel for each pair
> for a total of 136uF the pair and connected in series with the other pair.
> >
> > Theoretically that should be equivalent to 136uF @ 400V X 2 instead

> of 100uF @ 500V X2 in the stock Ts530s.
> > My main concern is the voltage rating as the higher capacitance
> should be an advantage and not a risk.
> >
> > I have located and bought some 100uF @ 450V caps from ebay which
> will fit at the existing PCB for a replacement, just to be on the safe
> side. With those I will have 200uF @ 450V X2 for the HI voltage
> doubling circuit.
> >
> > Marinos.
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Marinos,
> > >
> > > Your post has what appears to contain a typographical error. What
> does the following mean?
> > >
> > > "68µF"
> > >
> > > What are the capacitance value and voltage rating of each
> capacitor and how are the 4 capacitors wired together on the PC board?
> > >
> > > The HV supply in the TS-530 is a voltage doubling supply. The
> capacitors are wired in "series".
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "sv9dru" <sv9dru@> wrote:
> > > >
> > > > Hi to all,
> > > > Just bought a TS-530s and found its HV caps neatly replaced by 4
> new caps 68µF/400V each, mounted on a PCB with the associated
> bleeding resistors and ceramic caps. The PCB is very well installed in
> the place of the old HV caps.
> > > > It seems to work fine and I get about 900V indication in the
> rig's meter and about 50V sagging on voice peaks while operating SSB @
> max output.
> > > >
> > > > Do I need to be concerned about the 400V rating of these caps
> and replace them with 450-500V ones or just go by the old principle of
> "if it aint broken dont fix it" ??
> > > > Do I risk any sudden or catastrophic failure with these caps?
> > > >

> > > > Any suggestions would be appreciated.
> > > > 73,
> > > > Marinos, sv9dru / ki4gin
> > > >
> > >
> >
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>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17750)
> http://www.pctools.com
> <http://www.pctools.com/?cclick=EmailFooterClean_51>
> =======

```
=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17750)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]
```

31999. Re: [TS-520_820_530_830] Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 19:36:09 UTC
From: John Davidson
Topic: 31980 Message: 31999

My math shows the aggrigate value of the 4 caps in siries/parallel, to be 68 Microfarads at 800 working Volts !!!!!!

From: sv9dru <sv9dru@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 21, 2011 9:28:32 AM
Subject: [TS-520_820_530_830] Re: HV Caps voltage question

Thanks for the suggestions, just for the typo error, the caps are 2x 68uf 400V in parallel and tin series with the other pair of identical caps. That would be equivalent to 136uf 400V + 136uf 400V.

Have found some replacement caps of 100uf 450V each and plan to use 4 in place of the above just to increase their voltage rating. That would give 200uf + 200uf at 450V.
Any thoughts on on using double the capacity from the original 100+100 uf caps?

Marinos.

--- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@...> wrote:
>
> I would also have expected them to have failed in fairly short order.
> They may have been hooked up in a series & parallel combination to get
> a higher voltage rating. Is this maybe why they are mounted on a PC
> board?
>
> ZS6SSW Sander
>

[Non-text portions of this message have been removed]

32000. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 22:06:06 UTC
From: w5rkl
Topic: 31980 Message: 32000

Yes, you're right John. I wrote the wrong values down when I calculated the total capacitance.

If four 100ufd 450VDC capacitors were used in the same series parallel configuration, the total capacitance would be "100ufd" at 900VDC.

First pair of 100ufd in parallel simply add together
100 + 100 = 200 at 450VDC (C1)

Second pair of 100ufd in parallel, same, add together
100 + 100 = 200 at 450VDC (C2)

then use the capacitor's wired in series formula

C1 x C2 / C1 + C2

results in the total capacitance of;

200 x 200 / 200 + 200 = 100ufd at 950VDC

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@...> wrote:
>
> My math shows the aggrigate value of the 4 caps in siries/parallel, to be 68
> Microfarads at 800 working Volts !!!!!!
>
>
>
>
> _____
> From: sv9dru <sv9dru@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tue, June 21, 2011 9:28:32 AM
> Subject: [TS-520_820_530_830] Re: HV Caps voltage question
>
> Â
> Thanks for the suggestions, just for the typo error, the caps are 2x 68uf 400V
> in parallel and tin series with the other pair of identical caps. That would be
> equivalent to 136uf 400V + 136uf 400V.
>
> Have found some replacement caps of 100uf 450V each and plan to use 4 in place
> of the above just to increase their voltage rating. That would give 200uf +
> 200uf at 450V.
> Any thoughts on on using double the capacity from the original 100+100 uf caps?

>
> Marinos.
>
> --- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@>
> wrote:
> >
> > I would also have expected them to have failed in fairly short order.
> > They may have been hooked up in a series & parallel combination to get
> > a higher voltage rating. Is this maybe why they are mounted on a PC
> > board?
> >
> > ZS6SSW Sander
> >
>
>
>
>
> [Non-text portions of this message have been removed]
>

32001. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 22:08:20 UTC
From: w5rkl
Topic: 31980 Message: 32001

My last response ending saying

"200 x 200 / 200 + 200 = 100ufd at 950VD"

That should be "900VDC", not "950VDC"

sorry about that.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Yes, you're right John. I wrote the wrong values down when I calculated the total capacitance.
>
> If four 100ufd 450VDC capacitors were used in the same series parallel configuration, the total capacitance would be "100ufd" at 900VDC.
>
> First pair of 100ufd in parallel simply add together
> 100 + 100 = 200 at 450VDC (C1)
>
> Second pair of 100ufd in parallel, same, add together
> 100 + 100 = 200 at 450VDC (C2)
>
> then use the capacitor's wired in series formula
>
> C1 x C2 / C1 + C2
>
> results in the total capacitance of;
>
> 200 x 200 / 200 + 200 = 100ufd at 950VDC
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> >
> > My math shows the aggrigate value of the 4 caps in siries/parallel, to be 68
> > Microfarads at 800 working Volts !!!!!!
> >
> >

> >
> >
> > _____
> > From: sv9dru <sv9dru@>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Tue, June 21, 2011 9:28:32 AM
> > Subject: [TS-520_820_530_830] Re: HV Caps voltage question
> >
> > Â
> > Thanks for the suggestions, just for the typo error, the caps are 2x 68uf 400V
> > in parallel and tin series with the other pair of identical caps. That would be
> > equivalent to 136uf 400V + 136uf 400V.
> >
> > Have found some replacement caps of 100uf 450V each and plan to use 4 in place
> > of the above just to increase their voltage rating. That would give 200uf +
> > 200uf at 450V.
> > Any thoughts on on using double the capacity from the original 100+100 uf caps?
> >
> > Marinos.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@>
> > wrote:
> > >
> > > I would also have expected them to have failed in fairly short order.
> > > They may have been hooked up in a series & parallel combination to get
> > > a higher voltage rating. Is this maybe why they are mounted on a PC
> > > board?
> > >
> > > ZS6SSW Sander
> > >
> >
> >
> >
> >
> >
> > [Non-text portions of this message have been removed]
> >
>

32002. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-21 23:39:15 UTC
From: Bill
Topic: 31874 Message: 32002

Hi,

It's nice to see that even with some disagreement (regarding the value of this regulation) no smoke, no flames. The point about getting hard data is a good one and if somebody wants to measure the before and after performance that would be worthwhile. Especially if the procedures and results are posted so everybody has access to it and won't have to reinvent the wheel. Sometimes unexpected results are found that are completely unrelated to what the experimenter thought he was looking for.

In this late phase of my amateur career I am trying to acquire some test and measurement gear (actually more of it) so that I can investigate a number of myths and seat of the pants claims. I would like to see some hard numbers and then publish the steps, results, and conclusions. Is a Pullen mixer really superior? If so, how? Maybe under some conditions. What conditions? That sort of thing.

Go for it. I can't imagine anything worse will ever happen than the power FET will turn into popcorn and lose the screen voltage. The transmitter will simply stop.

73,

Bill KU8H

32003. Re: Hybrid Screen Grid Regulation

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 03:03:16 UTC
From: w5rkl
Topic: 31874 Message: 32003

I agree. Nothing is achieved by flames and disrespecting others. We are all here to learn and pass on what we know. The more we discuss topics the more we learn and pass on our knowledge. That is why I have been a member of this group for a long time and why I will continue to be a member. There is always something new to learn.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bill" <w_r_cromwell@...> wrote:
>
> Hi,
>
> It's nice to see that even with some disagreement (regarding the value of this regulation) no smoke, no flames. The point about getting hard data is a good one and if somebody wants to measure the before and after performance that would be worthwhile. Especially if the procedures and results are posted so everybody has access to it and won't have to reinvent the wheel. Sometimes unexpected results are found that are completely unrelated to what the experimenter thought he was looking for.
>
> In this late phase of my amateur career I am trying to acquire some test and measurement gear (actually more of it) so that I can investigate a number of myths and seat of the pants claims. I would like to see some hard numbers and then publish the steps, results, and conclusions. Is a Pullen mixer really superior? If so, how? Maybe under some conditions. What conditions? That sort of thing.
>
> Go for it. I can't imagine anything worse will ever happen than the power FET will turn into popcorn and lose the screen voltage. The transmitter will simply stop.
>
> 73,
>
> Bill KU8H
>

32004. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 05:45:45 UTC
From: sv9dru
Topic: 31980 Message: 32004

There is one more detail overlooked Mike. Since these caps are used in a voltage doubler configuration, they are acting as individual pairs rather than as one cap consistent of both pairs connected in series.
Each pair of parallel caps is being charged during an opposite half cycle of the rectified AC from the HV 2x400V secondary of the transformer, so each pair is acting by "itself" even though they seem to be connected in series.
So in this particular circuit there is 200uf at 450V (100+100 in parallel) used by each half of the full wave voltage doubler.

What is important though for both pairs is to withstand at least 400V each or at least 800V for their in series combination in order to safely handle the voltages present. Of course, one has to use a capacitor having a "comfortably" higher voltage rating than the max voltage being present in the circuit, in order to be on the safe side.
It makes sense what Jim AG3Y is saying about the industry standard in the voltage rating of caps, and that is probably the reason why the 400V ones present in my Ts530 have not exploded yet !!!

If we had 4 caps of the same capacitance (and voltage rating) connected in parallel and series 100+100 in series with another 100+100 pair, the total capacitance should be the same as 200+200 in series or 100uf total.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> My last response ending saying
>
> "200 x 200 / 200 + 200 = 100ufd at 950VD"
>
> That should be "900VDC", not "950VDC"
>
> sorry about that.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Yes, you're right John. I wrote the wrong values down when I calculated the total capacitance.
> >
> > If four 100ufd 450VDC capacitors were used in the same series parallel configuration, the total capacitance would be "100ufd" at 900VDC.
> >
> > First pair of 100ufd in parallel simply add together
> > 100 + 100 = 200 at 450VDC (C1)

> >
> > Second pair of 100ufd in parallel, same, add together
> > 100 + 100 = 200 at 450VDC (C2)
> >
> > then use the capacitor's wired in series formula
> >
> > C1 x C2 / C1 + C2
> >
> > results in the total capacitance of;
> >
> > 200 x 200 / 200 + 200 = 100ufd at 950VDC
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, John Davidson <k8jd@> wrote:
> > >
> > > My math shows the aggrigate value of the 4 caps in siries/parallel, to be 68
> > > Microfarads at 800 working Volts !!!!!!
> > >
> > >
> > >
> > >
> > > _____
> > > From: sv9dru <sv9dru@>
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Sent: Tue, June 21, 2011 9:28:32 AM
> > > Subject: [TS-520_820_530_830] Re: HV Caps voltage question
> > >
> > > Â
> > > Thanks for the suggestions, just for the typo error, the caps are 2x 68uf 400V
> > > in parallel and tin series with the other pair of identical caps. That would be
> > > equivalent to 136uf 400V + 136uf 400V.
> > >
> > > Have found some replacement caps of 100uf 450V each and plan to use 4 in place
> > > of the above just to increase their voltage rating. That would give 200uf +
> > > 200uf at 450V.
> > > Any thoughts on on using double the capacity from the original 100+100 uf caps?
> > >
> > > Marinos.
> > >
> > > --- In TS-520_820_530_830@...m, Sander Wissing <sander.wissing@>
> > > wrote:
> > > >
> > > > I would also have expected them to have failed in fairly short order.
> > > > They may have been hooked up in a series & parallel combination to get
> > > > a higher voltage rating. Is this maybe why they are mounted on a PC

> > > > board?
> > > >
> > > > ZS6SSW Sander
> > > >
> > >
> > >
> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
>

32005. TS-520 vs TS-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 09:08:13 UTC
From: on5py
Topic: 32005 Message: 32005

Hi group,

Just bought a 1976 vintage TS-520 that, after switch spraying, works very well.

I have both user's and service manual.

I have them for the following version, the TS-520s, and I noticed that, beside major differences - 160 meter, etc.. - there are also many minor mods aiming to better strong-signal performance.

Hence my question : is it worth tracing them and implementing them in the bare 520 ???

Any comment is VERY welcome !

Thanks & 73 - Daniel, ON5PY

32006. power supply

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 09:29:30 UTC
From: CRAIG
Topic: 32006 Message: 32006

I am looking for a dc supply that bolts on the back of the ts-520.
If anyone has one please let me know .

32007. Fwd: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 10:51:21 UTC
From: Chris Parnell
Topic: 31926 Message: 32007

OK..... well Mike (nor anyone else) answered this question... so...

One thing that springs to mind is that I did change the RF board that was faulty in my TS-830s for one from Bob Mansker (which he and I of course assume work ok) but thinking back, it's the time that my Power out was reduced to around 60-W..... So, Mike et all (if you could respond I'd appreciate it)...

Is the RF board a good place to start looking and if so, around what are?

Thanks
Chris, ZL1CDP

Begin forwarded message:

> From: Chris Parnell <cparnell1001@...>
> Date: 20 June 2011 10:10:55 AM NZST
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> Reply-To: TS-520_820_530_830@yahoogroups.com
>
> Mike,
>
> Any idea where would be a good place to start the voltage measurements?
>
> Cheers
> Chris
>
> On 19/06/2011, at 11:31 PM, w5rkl wrote:
>
>> Hi Chris,
>>
>> Based on the HV and power output levels you provided, 850VDC high voltage and 70 watts output, that equates to an IP current level of approximately 150ma. Therefore, with those levels the INPUT power in the final amplifier would be;
>>
>> .150 x 850 = 127.5 watts
>>
>> Since the 830 final amplifier has an efficiency rating of approximately 55%, power output would be
>>
>> 127.5 - 45% = 70.125 watts
>>
>> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit supplies are within specifications and operating as they should.
>>
>> I recommend you troubleshoot the 830's transmit signal path, take level measurements and

compare your findings with the 830 service manual Level Diagram on page 44.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>>>
>>> Hi Terry,
>>>
>>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the voltages... Mike did respond saying that if my IP is around 150mA (which it is), then the voltages would be about right for 60-70W output.
>>>
>>> My 830 was working "OK" originally, although the alignment was miles off.
>>> Then I had an issue with a tube that failed in the final unit, and it caused a number of issues.. one of which was NO output etc.
>>>
>>> I swapped the RF board as the one that came with the unit was broke in a number of areas, so I purchased one from Bob Mansker and swapped it.
>>> To which I decided to re-align the radio.
>>>
>>> On doing so, I noticed that the Speech Processor wouldn't align and the output was 50 -70W maximum. - It still is the same, although RX is excellent now.
>>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW, but I was hoping to get the radio at 100W and factory aligned (as close as can be).
>>> I purchased a new front fascia and it looks great.. needs to work great now :-)
>>>
>>> Cheers
>>> Chris
>>>
>>>
>>>
>>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
>>>
>>>> Chris--No one ever accused me of being very smart, but I will never fail due to lack of effort!
>>>>
>>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC position, that when you flip to send the meter pegs off scale right hand side of the meter. Is this true?
>>>>
>>>> 2. The expected response would be for the meter to deflect to the far end of the ALC black box scale or somewhere close either side of the Max ALC range and not peg.
>>>>
>>>> 3. I dont believe this has anything to do with your Processor or Comp Level setting. Comp level pot is not in the circuit when Processor is off.
>>>>
>>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had difficulty doing this step as written and you had not completed it yet. I suggest you go back and repeat this step.

>>>>
>>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7. VR-6 is easy and VR-7 is a little tricky. When you complete this step you should be able to flip to send with 10 mv signal injected and get max ALC reading and not peg the meter full scale or any ALC indication very far past the black border. If that is not how you left this step then this is likely your problem.
>>>>
>>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor off. When meter pegs hard right reduce mic gain slightly to just get if off the peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be able to move meter indication down to the ALC box max border or S9.
>>>>
>>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before returning to Step 32. Make sure Step 31 is as accurate as you ca.
>>>>
>>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on the AF board.
>>>>
>>>> Good Luck-Terry K9TW
>>>>
>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@> wrote:
>>>>>
>>>>> Hi Terry,
>>>>>
>>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike an email off list with some voltage measurements.
>>>>>
>>>>> Cheers
>>>>> Chris
>>>>>
>>>>>
>>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>>>>>
>>>>>> Chris--
>>>>>>
>>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
>>>>>> together on our rigs and see at what step we differ. Not sure if we could have
>>>>>> clear enough real time video or not for this to work. Not sure about our time
>>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
>>>>>>
>>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
>>>>>> rigs for a living? As you know I had never performed this step until you asked
>>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
>>>>>> generator. I have just done selected steps.
>>>>>>
>>>>>> Terry
>>>>>>
>>>>>> _____
>>>>>> From: Chris Parnell <cparnell1001@>

>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>
>>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
>>>>>> have no attenuation in there)...
>>>>>>
>>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
>>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
>>>>>> So... re-did the whole thing and of course, its more in line with your "Mic Gain
>>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
>>>>>> with regards to ALC readings.
>>>>>>
>>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
>>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the meter.
>>>>>>
>>>>>> I may record a small video and send it to you... easier to see what I mean and
>>>>>> what i'm doing.
>>>>>>
>>>>>> Turning the Mic gain up and down of course makes a difference, but the point is,
>>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
>>>>>>
>>>>>> Cheers
>>>>>> Chris
>>>>>>
>>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
>>>>>>
>>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
>>>>>>> test signals.
>>>>>>>
>>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
>>>>>>
>>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
>>>>>>> where I can get a good match at far right end of ALC black box.
>>>>>>>
>>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
>>>>>>>
>>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
>>>>>>>
>>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
>>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
>>>>>>>
>>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
>>>>>>>
>>>>>>> signal injected? I found it a little touchy. When you first reported no meter
>>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
>>>>>>> starting to get confused regards what your problem is.
>>>>>>>
>>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
>>>>>>> troubleshooting with Mike.

>>>>>>>
>>>>>>> Terry
>>>>>>>
>>>>>>> _____
>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>
>>>>>>> Hi Terry / Mike.....
>>>>>>>
>>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
>>>>>>> piece of kit.
>>>>>>> Here's what I see when I follow your instructions:
>>>>>>>
>>>>>>>> I use a spare mic connector and clipped the generator output to it with
>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
>>>>>>>>
>>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
>>>>>>> the
>>>>>>>
>>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
>>>>>>>
>>>>>>>> I have the mic gain set exactly at
>>>>>>>> No. 4 position.
>>>>>>>>
>>>>>>> Same here
>>>>>>>
>>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
>>>>>>>> switches. Let it warm up a little.
>>>>>>>>
>>>>>>> Same here
>>>>>>>
>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>>>>>>> Wave
>>>>>>>
>>>>>>>
>>>>>>>> Tek generator to exactly 10 mv
>>>>>>>>
>>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>>>>>>>
>>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>>>>>>>> place meter switch in ALC position.
>>>>>>>>
>>>>>>>
>>>>>>> Same here
>>>>>>>
>>>>>>>>
>>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
>>>>>>>

>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>
>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
>>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
>>>>>>>
>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
>>>>>>> s-meter scale, it's S9+40dB +).
>>>>>>>
>>>>>>>>
>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>>>>>>> position
>>>>>>>
>>>>>>>>
>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>
>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
>>>>>>>
>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
>>>>>>> I'm saying and seeing.
>>>>>>>
>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
>>>>>>> PROC ON, which on the S-Meter is S-9.
>>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
>>>>>>> minimum.
>>>>>>>
>>>>>>>>
>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
>>>>>>
>>>>>>>> black ALC box.
>>>>>>>>
>>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
>>>>>>>
>>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
>>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
>>>>>>>
>>>>>>>> It could be adjusted a little to get a match if I had the covers
>>>>>>>> off, but close enough.
>>>>>>>>
>>>>>>>
>>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
>>>>>>> them
>>>>>>>
>>>>>>> with the PROC ON.
>>>>>>>
>>>>>>>> I switch the meter from ALC to Comp and it indicates just
>>>>>>>> a little above 20db on the Comp scale.
>>>>>>>>
>>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I

>>>>>>> adjust L26 for 20dB reading.
>>>>>>>
>>>>>>> I will need to do some component checking in the circuit around the Processor
>>>>>>> as
>>>>>>>
>>>>>>> Mike and yourself have recommended.
>>>>>>>
>>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I mentioned.
>>>>>>>
>>>>>>> Thanks
>>>>>>> Chris, ZL1CDP
>>>>>>>
>>>>>>>>
>>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
>>>>>>> as
>>>>>>>
>>>>>>>
>>>>>>>> found condition for my daily operator is very close to being right on the
>>>>>>> same
>>>>>>>
>>>>>>>
>>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
>>>>>>> on
>>>>>>>
>>>>>>>>
>>>>>>>> and off.
>>>>>>>>
>>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
>>>>>>>
>>>>>>>> some more and if I come up with something will write.
>>>>>>>>
>>>>>>>> Whatever you do you should not have to increase mic gain position or increase
>>>>>>>
>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
>>>>>>> your
>>>>>>>
>>>>>>>>
>>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
>>>>>>> I
>>>>>>>
>>>>>>>
>>>>>>>> wouldnt think much higher.
>>>>>>>>
>>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
>>>>>>>
>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>>>>>>
>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
>>>>>>> Good
>>>>>>>

>>>>>>>
>>>>>>>> luck Terry
>>>>>>>>
>>>>>>>> _____
>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>
>>>>>>>> Hi Terry,
>>>>>>>>
>>>>>>>> The only difference from my original post is that I increased the "gain" on
>>>>>>> the
>>>>>>>
>>>>>>>>
>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>>>>>>> why...
>>>>>>>>
>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>>>>>>>>
>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>
>>>>>>>>
>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
>>>>>>> right
>>>>>>>
>>>>>>>>
>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>>>>>>>>
>>>>>>>> Hope this makes sense..
>>>>>>>>
>>>>>>>> Cheers
>>>>>>>> Chris
>>>>>>>>
>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>
>>>>>>>>> Chris--This appears different than what you originally reported of getting
>>>>>>> no
>>>>>>>
>>>>>>>>
>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
>>>>>>
>>>>>>>>> Where

>>>>>>>>>
>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
>>>>>>> hard
>>>>>>>
>>>>>>>>
>>>>>>>>> on
>>>>>>>>>
>>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
>>>>>>>
>>>>>>>> the
>>>>>>>>
>>>>>>>>>
>>>>>>>>> peg.
>>>>>>>>>
>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
>>>>>>
>>>>>>>> off
>>>>>>>>
>>>>>>>>
>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
>>>>>>> back
>>>>>>>
>>>>>>>
>>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
>>>>>>>
>>>>>>>> to
>>>>>>>>
>>>>>>>>
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>
>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>>>>>
>>>>>>>> without
>>>>>>>
>>>>>>>

>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>
>>>>>>>>> Chris
>>>>>>>>> Sent from my iPhone
>>>>>>>>>
>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
>>>>>>>>>
>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>
>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>
>>>>>>>>>> Following to the letter the service manual and then taking into account
>>>>>>>> your
>>>>>>>>
>>>>>>>>
>>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
>>>>>>> of
>>>>>>>
>>>>>>>>
>>>>>>>>>
>>>>>>>>> ALC
>>>>>>>>>
>>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
>>>>>>>> meter)
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>>>>
>>>>>>>>>>
>>>>>>>>>> Thanks
>>>>>>>>>> Chris
>>>>>>>>>>
>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>
>>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>>
>>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
>>>>>>> have
>>>>>>>
>>>>>>>>
>>>>>>>>>
>>>>>>>>> same
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
>>>>>>>> adjust
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> mic

>>>>>>>>>>
>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
>>>>>>>
>>>>>>>> Tune
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>>>>>>
>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
>>>>>>>
>>>>>>>> can
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> move
>>>>>>>>>>
>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
>>>>>>>
>>>>>>>> will
>>>>>>>>>
>>>>>>>>>> be
>>>>>>>>>>
>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
>>>>>>> is
>>>>>>>
>>>>>>>>>
>>>>>>>> to
>>>>>>>>>
>>>>>>>>>> set
>>>>>>>>>>
>>>>>>>>>> audio generator output higher as others suggested. I chose to just
>>>>>>>>> increase
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> mic gain until I got an indication. After I found that point I no
>>>>>>> longer
>>>>>>>
>>>>>>>
>>>>>>>>>> needed
>>>>>>>>>>
>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>>>>>
>>>>>>>> would
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
>>>>>>> good
>>>>>>>
>>>>>>>
>>>>>>>>>> matched
>>>>>>>>>>

>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>
>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>>>>>>> then
>>>>>>>
>>>>>>>> ON
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>> same point? that's what it states from memory... point of exercise is
>>>>>>> to
>>>>>>>
>>>>>>>
>>>>>>>>> have
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
>>>>>>> equal
>>>>>>>
>>>>>>>
>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
>>>>>>
>>>>>>>> with
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>>>>>>> I
>>>>>>>
>>>>>>>>
>>>>>>>>> no
>>>>>>>>>
>>>>>>>>>

>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
>>>>>>> any
>>>>>>>
>>>>>>>
>>>>>>>>>> lower on
>>>>>>>>>>
>>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>> <cparnell1001@>
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Thanks Terry....
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
>>>>>>> NZ
>>>>>>>
>>>>>>>
>>>>>>>>>> time.
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
>>>>>>>>> switch
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> in
>>>>>>>>>>
>>>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>>> 20db
>>>>>>>>>
>>>>>>>>>>>> on
>>>>>>>>>>
>>>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
>>>>>>> box.
>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> Less
>>>>>>>>>>
>>>>>>>>>>>>> decay time to mess with. Terry

>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
>>>>>>>> <wagstw46@>
>>>>>>>>
>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>>>>>>>> Step A:
>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
>>>>>>
>>>>>>>> max
>>>>>>>>
>>>>>>>>
>>>>>>>>>>>> clockwise.
>>>>>>>>>>>>
>>>>>>>>>>>>>>> You are in USB mode.
>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
>>>>>>
>>>>>>>> end
>>>>>>>>
>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>>>> black bordered box.
>>>>>>>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>>>>
>>>>>>>> between
>>>>>>>>>>
>>>>>>>>>>>> 1000 and
>>>>>>>>>>>>
>>>>>>>>>>>>>>> 1100.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
>>>>>>>> you
>>>>>>>>
>>>>>>>>>> expect
>>>>>>>>>>
>>>>>>>>>>>> the ALC
>>>>>>>>>>>>

>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
>>>>>>> the
>>>>>>>
>>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>>> to peg
>>>>>>>>>>>
>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
>>>>>>>
>>>>>>>>> what
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> would you
>>>>>>>>>>>
>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Step B:
>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
>>>>>>
>>>>>>>> gain
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> not
>>>>>>>>>>
>>>>>>>>>>>> touched
>>>>>>>>>>>
>>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
>>>>>>>> when
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> you
>>>>>>>>>>
>>>>>>>>>>>> flip to
>>>>>>>>>>>
>>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
>>>>>>> any
>>>>>>>
>>>>>>>>>
>>>>>>>>>> ALC
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> meter
>>>>>>>>>>>
>>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
>>>>>>>
>>>>>>>>> sensitive
>>>>>>>>>>

>>>>>>>>>>>> and
>>>>>>>>>>>>
>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>>>>>>> scale.
>>>>>>>
>>>>>>>>
>>>>>>>>>> Quickly
>>>>>>>>>>
>>>>>>>>>>>> turn
>>>>>>>>>>>>
>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>>>>>>
>>>>>>>>> box.
>>>>>>>>>
>>>>>>>>>> Mic
>>>>>>>>>>
>>>>>>>>>>>> gain
>>>>>>>>>>>>
>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
>>>>>>
>>>>>>>> far
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> end of
>>>>>>>>>>
>>>>>>>>>>>> ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
>>>>>>>
>>>>>>>>> times
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> until you
>>>>>>>>>>>>
>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>>>>>>> This
>>>>>>>
>>>>>>>
>>>>>>>>>>>> adjustment is
>>>>>>>>>>>>
>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
>>>>>>> tends
>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> peg
>>>>>>>>>>
>>>>>>>>>>>> hard
>>>>>>>>>>>>

>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
>>>>>>
>>>>>>>>> around
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>> max
>>>>>>>>>>>
>>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>>>>>>> meter
>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> Comp
>>>>>>>>>>
>>>>>>>>>>>> you
>>>>>>>>>>>
>>>>>>>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>>>>> alignment
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>>>>>>>>> (Heater
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> on
>>>>>>>>>>>
>>>>>>>>>>>> etc), but
>>>>>>>>>>>
>>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>>>>>>> "align"
>>>>>>>
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> speech

>>>>>>>>>>>>
>>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>>>>>>>
>>>>>>>> the
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> AG
>>>>>>>>>>
>>>>>>>>>>>> output to
>>>>>>>>>>>>
>>>>>>>>>>>>>>> 10 mV
>>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>>>>>>> maximum
>>>>>>>
>>>>>>>>
>>>>>>>>>>>> on-scale ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
>>>>>>>>>> on-scaled).
>>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
>>>>>>>
>>>>>>>>> turn
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> Proc ON
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>>>>>>> meter
>>>>>>>
>>>>>>>> at
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> this
>>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
>>>>>>> reading.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
>>>>>>>>> pages
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> 40&41. As
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
>>>>>>
>>>>>>>>>> switch
>>>>>>>>>>
>>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>> LEAVE
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
>>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>>
>>>>>>>>>>>> off of the
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>>>>>>>> step
>>>>>>>>
>>>>>>>>
>>>>>>>>>>>> conditions still
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> being in force?
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>>>>>>>> "max
>>>>>>>>
>>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>>
>>>>>>>>>>>> reading on
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
>>>>>>>> reading.
>>>>>>>>
>>>>>>>>
>>>>>>>>>> That
>>>>>>>>>>

>>>>>>>>>>
>>>>>>>>>>> would be on
>>>>>>>>>>>
>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
>>>>>>> indication
>>>>>>>
>>>>>>>>
>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>> 20db
>>>>>>>>>>
>>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>>>>>>> with
>>>>>>>
>>>>>>>>> a
>>>>>>>>>
>>>>>>>>>>> multi-scale
>>>>>>>>>>>
>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
>>>>>>> meter
>>>>>>>
>>>>>>>
>>>>>>>>>> scale.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
>>>>>>>
>>>>>>>>> mic
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> gain
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
>>>>>>> 1200
>>>>>>>
>>>>>>>>>
>>>>>>>>>> and
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> peaked L27.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>>>>>>> would
>>>>>>>
>>>>>>>
>>>>>>>>> say
>>>>>>>>>

>>>>>>>>>
>>>>>>>>>>> something
>>>>>>>>>>>
>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
>>>>>>>> box".
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Just
>>>>>>>>>>
>>>>>>>>>>> make it
>>>>>>>>>>>
>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
>>>>>> read.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>> switch on
>>>>>>>>>>>
>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>>>>>>> -K9TW
>>>>>>>
>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>
>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>>>>>
>>>>>>>>> chance
>>>>>>>>>
>>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>> check
>>>>>>>>>>>
>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day

>>>>>>> so
>>>>>>>
>>>>>>>> I
>>>>>>>>
>>>>>>>>
>>>>>>>>> will
>>>>>>>>>
>>>>>>>>>> give it a
>>>>>>>>>>
>>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>
>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>
>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>>>>>>> in
>>>>>>>
>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>> 830
>>>>>>>>>
>>>>>>>>>> at the
>>>>>>>>>>
>>>>>>>>>>> weekend?
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> Cheers
>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>
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>>>>>>>>>>>
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>>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>
>>>>>>>>>>>> ------------------------------------

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>>>>>>>>>>>>>>> Yahoo! Groups Links
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>>>>>>>>>>>> Yahoo! Groups Links
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>>>>>>>>
>>>>>>>>> ----------
>>>>>>>>
>>>>>>>>> Yahoo! Groups Links
>>>>>>>>
>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>
>>>>>>>>
>>>>>>>>
>>>>>>>
>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
>>>>>>>

>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
>>>>>>>> about
>>>>>>>>
>>>>>>>> out of ideas.
>>>>>>>>
>>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
>>>>>>
>>>>>>>> rig. I just unplugged the mic and brought the test equipment to the operating
>>>>>>>
>>>>>>>> position.
>>>>>>>>
>>>>>>>> I use a spare mic connector and clipped the generator output to it with
>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
>>>>>>>> heater
>>>>>>>>
>>>>>>>> switches. Let it warm up a little.
>>>>>>>>
>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>>>>>>> Wave
>>>>>>>
>>>>>>>
>>>>>>>> Tek generator to exactly 10 mv.
>>>>>>>>
>>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>>>>>>>> place meter switch in ALC position.
>>>>>>>>
>>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
>>>>>>>
>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>
>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>>>>>>> position
>>>>>>>
>>>>>>>>
>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>
>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
>>>>>>
>>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
>>>>>>> covers
>>>>>>>
>>>>>>>>
>>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
>>>>>>>> just
>>>>>>>>
>>>>>>>> a little above 20db on the Comp scale.

>>>>>>>>
>>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
>>>>>>> as
>>>>>>>
>>>>>>>
>>>>>>>> found condition for my daily operator is very close to being right on the
>>>>>>> same
>>>>>>>
>>>>>>>
>>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
>>>>>>> on
>>>>>>>
>>>>>>>>
>>>>>>>> and off.
>>>>>>>>
>>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
>>>>>>>
>>>>>>>> some more and if I come up with something will write.
>>>>>>>>
>>>>>>>> Whatever you do you should not have to increase mic gain position or increase
>>>>>>>
>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
>>>>>>> your
>>>>>>>
>>>>>>>>
>>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
>>>>>>> I
>>>>>>>
>>>>>>>
>>>>>>>> wouldnt think much higher.
>>>>>>>>
>>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
>>>>>>>
>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>>>>>>
>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
>>>>>>> Good
>>>>>>>
>>>>>>>
>>>>>>>> luck Terry
>>>>>>>>
>>>>>>>> _____
>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>
>>>>>>>> Hi Terry,
>>>>>>>>
>>>>>>>> The only difference from my original post is that I increased the "gain" on

>>>>>>> the
>>>>>>>
>>>>>>>>
>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>>>>>>> why...
>>>>>>>>
>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to compensate.
>>>>>>>>
>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>
>>>>>>>>
>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
>>>>>>> right
>>>>>>>
>>>>>>>>
>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>>>>>>>>
>>>>>>>> Hope this makes sense..
>>>>>>>>
>>>>>>>> Cheers
>>>>>>>> Chris
>>>>>>>>
>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>
>>>>>>>>> Chris--This appears different than what you originally reported of getting
>>>>>>> no
>>>>>>>
>>>>>>>>
>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
>>>>>>
>>>>>>> Where
>>>>>>>>
>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
>>>>>>> hard
>>>>>>>
>>>>>>>>
>>>>>>>>> on
>>>>>>>>>
>>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
>>>>>>>
>>>>>>>> the
>>>>>>>>
>>>>>>>>>

>>>>>>>>> peg.
>>>>>>>>>
>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
>>>>>>
>>>>>>>> off
>>>>>>>>
>>>>>>>>
>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
>>>>>>> back
>>>>>>>
>>>>>>>
>>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
>>>>>>>
>>>>>>>> to
>>>>>>>>
>>>>>>>>
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>
>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>>>>>
>>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
>>>>>>> without
>>>>>>>
>>>>>>>
>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>
>>>>>>>>> Chris
>>>>>>>>> Sent from my iPhone
>>>>>>>>>
>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
>>>>>>>>>
>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>
>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>
>>>>>>>>>> Following to the letter the service manual and then taking into account

>>>>>>>> your
>>>>>>>>
>>>>>>>>
>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
>>>>>>> of
>>>>>>>
>>>>>>>>
>>>>>>>> ALC
>>>>>>>>
>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
>>>>>>>> meter)
>>>>>>>>
>>>>>>>>
>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>>>>
>>>>>>>>>
>>>>>>>>> Thanks
>>>>>>>>> Chris
>>>>>>>>>
>>>>>>>>> Sent from my iPhone
>>>>>>>>>
>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>
>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
>>>>>>> have
>>>>>>>
>>>>>>>
>>>>>>>> same
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
>>>>>>>> adjust
>>>>>>>>
>>>>>>>>
>>>>>>>>> mic
>>>>>>>>>
>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
>>>>>>>
>>>>>>>> Tune
>>>>>>>>
>>>>>>>>
>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>>>>>>
>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
>>>>>>>
>>>>>>>> can
>>>>>>>>

>>>>>>>>>
>>>>>>>>>> move
>>>>>>>>>>
>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
>>>>>>>
>>>>>>>>> will
>>>>>>>>>
>>>>>>>>>> be
>>>>>>>>>>
>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
>>>>>>> is
>>>>>>>
>>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>> set
>>>>>>>>>>
>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
>>>>>>>> increase
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> mic gain until I got an indication. After I found that point I no
>>>>>>> longer
>>>>>>>
>>>>>>>
>>>>>>>>> needed
>>>>>>>>>>
>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>>>>>
>>>>>>>>> would
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
>>>>>>> good
>>>>>>>
>>>>>>>
>>>>>>>>> matched
>>>>>>>>>>
>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>
>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>>>>>>> then

>>>>>>>
>>>>>>>> ON
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>> same point? that's what it states from memory... point of exercise is
>>>>>>> to
>>>>>>>
>>>>>>>
>>>>>>>>> have
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
>>>>>>> equal
>>>>>>>
>>>>>>>
>>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
>>>>>>
>>>>>>>> with
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>>>>>>> I
>>>>>>>
>>>>>>>>
>>>>>>>>> no
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
>>>>>>> any
>>>>>>>
>>>>>>>
>>>>>>>>>> lower on
>>>>>>>>>>
>>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>> <cparnell1001@>
>>>>>>>>>

>>>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry....
>>>>>>>>>>>
>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
>>>>>>> NZ
>>>>>>>
>>>>>>>
>>>>>>>>>> time.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
>>>>>>>> switch
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> in
>>>>>>>>>
>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>>> 20db
>>>>>>>>>
>>>>>>>>>> on
>>>>>>>>>
>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
>>>>>>> box.
>>>>>>>
>>>>>>>>
>>>>>>>>>> Less
>>>>>>>>>
>>>>>>>>>> decay time to mess with. Terry
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
>>>>>>>> <wagstw46@>
>>>>>>>>
>>>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>>
>>>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>>>> Step A:
>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
>>>>>>

>>>>>>>> max
>>>>>>>>
>>>>>>>>
>>>>>>>>>>>> clockwise.
>>>>>>>>>>>>
>>>>>>>>>>>>>>> You are in USB mode.
>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
>>>>>>>
>>>>>>>>> end
>>>>>>>>>
>>>>>>>>>> of
>>>>>>>>>>
>>>>>>>>>>> the
>>>>>>>>>>>
>>>>>>>>>>>> ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> black bordered box.
>>>>>>>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>>>>>
>>>>>>>>>> between
>>>>>>>>>>>
>>>>>>>>>>>> 1000 and
>>>>>>>>>>>>
>>>>>>>>>>>>>>> 1100.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
>>>>>>>>> you
>>>>>>>>>
>>>>>>>>>>> expect
>>>>>>>>>>>
>>>>>>>>>>>> the ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>> meter
>>>>>>>>>>>
>>>>>>>>>>>> to peg
>>>>>>>>>>>>
>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
>>>>>>>>>
>>>>>>>>>>> what
>>>>>>>>>>>

>>>>>>>>>
>>>>>>>>>>> would you
>>>>>>>>>>>
>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Step B:
>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
>>>>>>
>>>>>>>> gain
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> not
>>>>>>>>>>
>>>>>>>>>>> touched
>>>>>>>>>>>
>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
>>>>>>>> when
>>>>>>>>
>>>>>>>>
>>>>>>>>>> you
>>>>>>>>>>
>>>>>>>>>>> flip to
>>>>>>>>>>>
>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
>>>>>>> any
>>>>>>>
>>>>>>>>
>>>>>>>>> ALC
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> meter
>>>>>>>>>>>
>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
>>>>>>>
>>>>>>>>>> sensitive
>>>>>>>>>>
>>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>>>>>>> scale.
>>>>>>>
>>>>>>>>
>>>>>>>>>> Quickly
>>>>>>>>>>
>>>>>>>>>>> turn
>>>>>>>>>>>
>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>>>>>>

>>>>>>>>> box.
>>>>>>>>>
>>>>>>>>>> Mic
>>>>>>>>>>
>>>>>>>>>>> gain
>>>>>>>>>>>
>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
>>>>>>
>>>>>>>> far
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> end of
>>>>>>>>>>
>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
>>>>>>>>
>>>>>>>>> times
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> until you
>>>>>>>>>>>
>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>>>>>>>> This
>>>>>>>>
>>>>>>>>
>>>>>>>>> adjustment is
>>>>>>>>>>>
>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
>>>>>>>> tends
>>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> peg
>>>>>>>>>>
>>>>>>>>>>> hard
>>>>>>>>>>>
>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
>>>>>>
>>>>>>>>> around
>>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>> max
>>>>>>>>>>>
>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>>>>>>>> meter
>>>>>>>>
>>>>>>>>> to

>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Comp
>>>>>>>>>>
>>>>>>>>>>> you
>>>>>>>>>>>
>>>>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>>>>
>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>>>>> alignment
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>>>>>>>> (Heater
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> on
>>>>>>>>>>
>>>>>>>>>>> etc), but
>>>>>>>>>>>
>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>>>>>>> "align"
>>>>>>>
>>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> speech
>>>>>>>>>>>
>>>>>>>>>>>> processor based on this step at the top of page 41:-
>>>>>>>>>>>>
>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>>>>>>>
>>>>>>>> the
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> AG
>>>>>>>>>>
>>>>>>>>>>> output to
>>>>>>>>>>>

>>>>>>>>>>>>>>> 10 mV
>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>>>>>>> maximum
>>>>>>>
>>>>>>>>
>>>>>>>>>>>> on-scale ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
>>>>>>>>>> on-scaled).
>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
>>>>>>>
>>>>>>>>> turn
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> Proc ON
>>>>>>>>>>>>
>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>>>>>>> meter
>>>>>>>
>>>>>>>>> at
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> this
>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
>>>>>>> reading.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
>>>>>>>>> pages
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> 40&41. As
>>>>>>>>>>>>
>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
>>>>>>
>>>>>>>>> switch
>>>>>>>>>
>>>>>>>>>> and
>>>>>>>>>>
>>>>>>>>>>> LEAVE
>>>>>>>>>>>
>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>> off of the
>>>>>>>>>>>
>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>>>>>>> step
>>>>>>>
>>>>>>>
>>>>>>>>>>> conditions still
>>>>>>>>>>>
>>>>>>>>>>>>>>>> being in force?
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>>>>>>> "max
>>>>>>>
>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>> reading on
>>>>>>>>>>>
>>>>>>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
>>>>>>> reading.
>>>>>>>
>>>>>>>
>>>>>>>>> That
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> would be on
>>>>>>>>>>>
>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
>>>>>>> indication
>>>>>>>
>>>>>>>>
>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>>> 20db
>>>>>>>>>>
>>>>>>>>>>>> and

>>>>>>>>>>>>
>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>>>>>>> with
>>>>>>>
>>>>>>>> a
>>>>>>>>
>>>>>>>>
>>>>>>>>>>> multi-scale
>>>>>>>>>>>>
>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
>>>>>>> meter
>>>>>>>
>>>>>>>
>>>>>>>>>> scale.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
>>>>>>>
>>>>>>>> mic
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> gain
>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
>>>>>>> 1200
>>>>>>>
>>>>>>>>
>>>>>>>>> and
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> peaked L27.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>>>>>>> would
>>>>>>>
>>>>>>>
>>>>>>>>> say
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> something
>>>>>>>>>>>>
>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
>>>>>>>> box".
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Just
>>>>>>>>>>
>>>>>>>>>>>> make it
>>>>>>>>>>>>
>>>>>>>>>>>>>>> very clear what meter position and what scale you are to

>>>>>> read.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>>> switch on
>>>>>>>>>>>
>>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>>>>>>> -K9TW
>>>>>>>
>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>
>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>>>>>>
>>>>>>>>>> chance
>>>>>>>>>>
>>>>>>>>>>>> to
>>>>>>>>>>>
>>>>>>>>>>>> check
>>>>>>>>>>>
>>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>>>>>>>>> so
>>>>>>>>>
>>>>>>>>>>>>> I
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>> will
>>>>>>>>>>>
>>>>>>>>>>>>>> give it a
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

>>>>>>
>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>>>>>>> in
>>>>>>>
>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>> 830
>>>>>>>>>>
>>>>>>>>>>>> at the
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> weekend?
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>>>>>>>
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>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>
>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>
>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>
>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>
>>>>>>>>>>>
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>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>
>>>>>>>>> ----------------------------------
>>>>>>>>>
>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>
>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>
>>>>>>>>
>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>> ----------------------------------
>>>>>>>>
>>>>>>>> Yahoo! Groups Links
>>>>>>>>
>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>
>>>>>>>
>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>
>>>>>>> ----------------------------------
>>>>>>>
>>>>>>> Yahoo! Groups Links

>>>>>>
>>>>>> [Non-text portions of this message have been removed]
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>>>>> [Non-text portions of this message have been removed]
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>>> [Non-text portions of this message have been removed]
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> [Non-text portions of this message have been removed]
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>
>
> ------------------------------------
>
> Yahoo! Groups Links
>
>
>

[Non-text portions of this message have been removed]

32008. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 10:56:14 UTC
From: Chris Parnell
Topic: 31926 Message: 32008

Is the RF board a good place to start looking and if so, around what area

is what it was meant to read.

73
Chris ZL1CDP

On 22/06/2011, at 10:51 PM, Chris Parnell wrote:

> Is the RF board a good place to start looking and if so, around what are?

[Non-text portions of this message have been removed]

32009. Re: TS520S bad reception audio

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 11:47:26 UTC
From: Joao
Topic: 31853 Message: 32009

i fixed it. it was a semi loose transistor on the af board.

now its fine and dandy.

cheerio

--- In TS-520_820_530_830@yahoogroups.com, "Joao" <phoenixproject@...> wrote:
>
> hello there.
>
> the reception on my 520s is a little wrong.
>
> the audio is there, no problem, it just sounds like very thin (almost
>
> no low freqs),
>
> and sometimes it pops and comes back to normal.
>
> maybe any of you guys has had this sort of problem and can point
>
> in the right direction.
>
> ill try to open the thing soon, when i have some patience.
>
>
>
> john
>

32010. Re: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 11:46:32 UTC
From: Terry Wagoner
Topic: 31926 Message: 32010

Chris--Are you saying you cannot load to any higher than 150ma IP?

If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV on RF board are good place to look with your RF VTVM. Terry

---

From: Chris Parnell <cparnell1001@...>
To: TS830 <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, June 22, 2011 6:51:21 AM
Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment

OK..... well Mike (nor anyone else) answered this question... so...

One thing that springs to mind is that I did change the RF board that was faulty in my TS-830s for one from Bob Mansker (which he and I of course assume work ok) but thinking back, it's the time that my Power out was reduced to around 60-W..... So, Mike et all (if you could respond I'd appreciate it)...

Is the RF board a good place to start looking and if so, around what are?

Thanks
Chris, ZL1CDP

Begin forwarded message:

> From: Chris Parnell <cparnell1001@...>
> Date: 20 June 2011 10:10:55 AM NZST
> To: TS-520_820_530_830@yahoogroups.com
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> Reply-To: TS-520_820_530_830@yahoogroups.com
>
> Mike,
>
> Any idea where would be a good place to start the voltage measurements?
>
> Cheers
> Chris
>
> On 19/06/2011, at 11:31 PM, w5rkl wrote:
>
>> Hi Chris,
>>
>> Based on the HV and power output levels you provided, 850VDC high voltage and
>>70 watts output, that equates to an IP current level of approximately 150ma.
>>Therefore, with those levels the INPUT power in the final amplifier would be;
>>
>> .150 x 850 = 127.5 watts

>>
>> Since the 830 final amplifier has an efficiency rating of approximately 55%,
>>power output would be
>>
>> 127.5 - 45% = 70.125 watts
>>
>> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
>>supplies are within specifications and operating as they should.
>>
>> I recommend you troubleshoot the 830's transmit signal path, take level
>>measurements and compare your findings with the 830 service manual Level Diagram
>>on page 44.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>>wrote:
>>>
>>> Hi Terry,
>>>
>>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
>>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
>>>then the voltages would be about right for 60-70W output.
>>>
>>> My 830 was working "OK" originally, although the alignment was miles off.
>>> Then I had an issue with a tube that failed in the final unit, and it caused a
>>>number of issues.. one of which was NO output etc.
>>>
>>> I swapped the RF board as the one that came with the unit was broke in a number
>>>of areas, so I purchased one from Bob Mansker and swapped it.
>>> To which I decided to re-align the radio.
>>>
>>> On doing so, I noticed that the Speech Processor wouldn't align and the output
>>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
>>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
>>>but I was hoping to get the radio at 100W and factory aligned (as close as can
>>>be).
>>> I purchased a new front fascia and it looks great.. needs to work great now
>>:-)
>>>
>>> Cheers
>>> Chris
>>>
>>>
>>>
>>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
>>>
>>>> Chris--No one ever accused me of being very smart, but I will never fail due to

>>>>lack of effort!
>>>>
>>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
>>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
>>>>position, that when you flip to send the meter pegs off scale right hand side of
>>>>the meter. Is this true?
>>>>
>>>> 2. The expected response would be for the meter to deflect to the far end of
>>>>the ALC black box scale or somewhere close either side of the Max ALC range and
>>>>not peg.
>>>>
>>>> 3. I dont believe this has anything to do with your Processor or Comp Level
>>>>setting. Comp level pot is not in the circuit when Processor is off.
>>>>
>>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
>>>>difficulty doing this step as written and you had not completed it yet. I
>>>>suggest you go back and repeat this step.
>>>>
>>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
>>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
>>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
>>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
>>>>not peg the meter full scale or any ALC indication very far past the black
>>>>border. If that is not how you left this step then this is likely your problem.
>>>>
>>>>
>>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
>>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
>>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
>>>>able to move meter indication down to the ALC box max border or S9.
>>>>
>>>>
>>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
>>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
>>>>
>>>>
>>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
>>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
>>>>the AF board.
>>>>
>>>>
>>>> Good Luck-Terry K9TW
>>>>
>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>>>wrote:
>>>>>
>>>>> Hi Terry,
>>>>>
>>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
>>>>>an email off list with some voltage measurements.

>>>>>
>>>>> Cheers
>>>>> Chris
>>>>>
>>>>>
>>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>>>>>
>>>>>> Chris--
>>>>>>
>>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
>>>>>> together on our rigs and see at what step we differ. Not sure if we could have
>>>>>
>>>>>> clear enough real time video or not for this to work. Not sure about our time
>>>>
>>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
>>>>>>
>>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
>>>>
>>>>>> rigs for a living? As you know I had never performed this step until you asked
>>>>>
>>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
>>>>>
>>>>>> generator. I have just done selected steps.
>>>>>>
>>>>>> Terry
>>>>>>
>>>>>> _____
>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>
>>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
>>>>
>>>>>> have no attenuation in there)...
>>>>>>
>>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
>>>>>>
>>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
>>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
>>>>>>Gain
>>>>>>
>>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
>>>>>>
>>>>>> with regards to ALC readings.
>>>>>>
>>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
>>>>>>
>>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
>>meter.

>>>>>>
>>>>>> I may record a small video and send it to you... easier to see what I mean and
>>>>>
>>>>>> what i'm doing.
>>>>>>
>>>>>> Turning the Mic gain up and down of course makes a difference, but the point
>>>>>>is,
>>>>>>
>>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
>>>>>>
>>>>>> Cheers
>>>>>> Chris
>>>>>>
>>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
>>>>>>
>>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
>>>>
>>>>>>> test signals.
>>>>>>>
>>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
>>>>>>
>>>>>>
>>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
>>>>>
>>>>>>> where I can get a good match at far right end of ALC black box.
>>>>>>>
>>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
>>>>>>>
>>>>>>>
>>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
>>>>>>>
>>>>>>>
>>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
>>>>>
>>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
>>>>>>>
>>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
>>>>>>>
>>>>>>>
>>>>>>> signal injected? I found it a little touchy. When you first reported no meter
>>>>>
>>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
>>>
>>>>>>> starting to get confused regards what your problem is.
>>>>>>>
>>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
>>
>>>>>>> troubleshooting with Mike.
>>>>>>>
>>>>>>> Terry

>>>>>>>
>>>>>>> _____
>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>
>>>>>>> Hi Terry / Mike.....
>>>>>>>
>>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
>>>
>>>>>>> piece of kit.
>>>>>>> Here's what I see when I follow your instructions:
>>>>>>>
>>>>>>>>> I use a spare mic connector and clipped the generator output to it with

>>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
>>>>>>>>>
>>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
>>>>
>>>>>>> the
>>>>>>>
>>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
>>>>>>>
>>>>>>>>> I have the mic gain set exactly at
>>>>>>>>> No. 4 position.
>>>>>>>>>
>>>>>>> Same here
>>>>>>>
>>>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
>>>>>>>>> switches. Let it warm up a little.
>>>>>>>>>
>>>>>>> Same here
>>>>>>>
>>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>>
>>>>>>> Wave
>>>>>>>
>>>>>>>
>>>>>>>>> Tek generator to exactly 10 mv
>>>>>>>>>
>>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>>>>>>>
>>>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>>
>>>>>>>>> place meter switch in ALC position.
>>>>>>>>>
>>>>>>>
>>>>>>> Same here
>>>>>>>

>>>>>>>>
>>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
>>>>>>
>>>>>>>
>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>
>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
>>>>>
>>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
>>>>>>>
>>>>>>>
>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
>>>>
>>>>>>> s-meter scale, it's S9+40dB +).
>>>>>>>
>>>>>>>>
>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>>>>>>> position
>>>>>>>
>>>>>>>>
>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>
>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
>>>>>>>
>>>>>>>
>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
>>>
>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
>>>>>
>>>>>>> I'm saying and seeing.
>>>>>>>
>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
>>
>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
>>>>>
>>>>>>> PROC ON, which on the S-Meter is S-9.
>>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at

>>>>>>> minimum.
>>>>>>>
>>>>>>>>
>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
>>>>>
>>>>>>
>>>>>>>> black ALC box.
>>>>>>>>
>>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
>>>>>>>
>>>>>>>
>>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of

>>>>>
>>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
>>>>>>>
>>>>>>>> It could be adjusted a little to get a match if I had the covers
>>>>>>>> off, but close enough.
>>>>>>>>
>>>>>>>
>>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
>>>
>>>>>>> them
>>>>>>>
>>>>>>> with the PROC ON.
>>>>>>>
>>>>>>>> I switch the meter from ALC to Comp and it indicates just
>>>>>>>> a little above 20db on the Comp scale.
>>>>>>>>
>>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
>>>
>>>>>>> adjust L26 for 20dB reading.
>>>>>>>
>>>>>>> I will need to do some component checking in the circuit around the Processor
>>>>>
>>>>>>> as
>>>>>>>
>>>>>>> Mike and yourself have recommended.
>>>>>>>
>>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
>mentioned.
>>>>>>>
>>>>>>> Thanks
>>>>>>> Chris, ZL1CDP
>>>>>>>
>>>>>>>>
>>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
>>>>
>>>>>>> as
>>>>>>>
>>>>>>>
>>>>>>>> found condition for my daily operator is very close to being right on the
>>
>>>>>>> same
>>>>>>>
>>>>>>>
>>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
>>>>>
>>>>>>> on
>>>>>>>
>>>>>>>>
>>>>>>>> and off.
>>>>>>>>

>>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
>>>>>>
>>>>>>>
>>>>>>>> some more and if I come up with something will write.
>>>>>>>>
>>>>>>>> Whatever you do you should not have to increase mic gain position or increase
>>>>>>
>>>>>>>
>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
>>>
>>>>>>> your
>>>>>>>
>>>>>>>>
>>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
>>>>>
>>>>>>> I
>>>>>>>
>>>>>>>
>>>>>>>> wouldnt think much higher.
>>>>>>>>
>>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
>>>>>>
>>>>>>>
>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>>>>>
>>>>>>
>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
>>
>>>>>>> Good
>>>>>>>
>>>>>>>
>>>>>>>> luck Terry
>>>>>>>>
>>>>>>>> _____
>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>
>>>>>>>> Hi Terry,
>>>>>>>>
>>>>>>>> The only difference from my original post is that I increased the "gain" on
>>>>
>>>>>>> the
>>>>>>>
>>>>>>>>
>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure

>>>>>>> why...
>>>>>>>>
>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>>>>compensate.
>>>>>>>>
>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>
>>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>
>>>>>>>>
>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
>>
>>>>>>>> right
>>>>>>>>
>>>>>>>>
>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>>>>>>>>
>>>>>>>> Hope this makes sense..
>>>>>>>>
>>>>>>>> Cheers
>>>>>>>> Chris
>>>>>>>>
>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>
>>>>>>>>> Chris--This appears different than what you originally reported of getting
>>>>
>>>>>>>> no
>>>>>>>>
>>>>>>>>
>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
>>>>
>>>>>>>>>
>>>>>>>>> Where
>>>>>>>>>
>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
>>
>>>>>>>> hard
>>>>>>>>
>>>>>>>>
>>>>>>>>> on
>>>>>>>>>
>>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
>>>>>
>>>>>>>>
>>>>>>>> the
>>>>>>>>

>>>>>>>>>
>>>>>>>>> peg.
>>>>>>>>>
>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
>>>>
>>>>>>
>>>>>>>>> off
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
>
>>>>>>> back
>>>>>>>
>>>>>>>
>>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
>>>>>
>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>
>>>>>>>
>>>>>>>>> in
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>
>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>>>
>>>>>>
>>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
>>>>>>> without
>>>>>>>
>>>>>>>
>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>
>>>>>>>>> Chris
>>>>>>>>> Sent from my iPhone
>>>>>>>>>
>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:

>>>>>>>>>
>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>
>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>
>>>>>>>>>> Following to the letter the service manual and then taking into account
>>
>>>>>>>> your
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
>>>>
>>>>>>> of
>>>>>>>>
>>>>>>>>>
>>>>>>>>> ALC
>>>>>>>>>
>>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
>>
>>>>>>>> meter)
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>
>>>>>>
>>>>>>>>>>
>>>>>>>>>> Thanks
>>>>>>>>>> Chris
>>>>>>>>>>
>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>
>>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>>
>>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
>>>>>>> have
>>>>>>>>
>>>>>>>>
>>>>>>>>> same
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
>>>>>>>> adjust
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> mic
>>>>>>>>>>
>>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to

>>>
>>>>>>>
>>>>>>>>> Tune
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>>>>>>>
>>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
>>>
>>>>>>>
>>>>>>>>> can
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> move
>>>>>>>>>>>
>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
>>>
>>>>>>>
>>>>>>>>> will
>>>>>>>>>>
>>>>>>>>>>> be
>>>>>>>>>>>
>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
>>
>>>>>>> is
>>>>>>>>
>>>>>>>>>
>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>> set
>>>>>>>>>>>
>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
>>>>>>>>> increase
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> mic gain until I got an indication. After I found that point I no
>>>>>>> longer
>>>>>>>>
>>>>>>>>
>>>>>>>>>>> needed
>>>>>>>>>>>
>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>
>>>>>>
>>>>>>>>> would
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
>>>>>>> good
>>>>>>>>

>>>>>>>
>>>>>>>>>> matched
>>>>>>>>>>
>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>
>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>>>>>>> then
>>>>>>>
>>>>>>>> ON
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>>> same point? that's what it states from memory... point of exercise is
>
>>>>>>> to
>>>>>>>
>>>>>>>
>>>>>>>>> have
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
>>>>>>> equal
>>>>>>>
>>>>>>>
>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
>>
>>>>>>
>>>>>>>> with
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>>>

>>>>>>> I
>>>>>>>
>>>>>>>>
>>>>>>>>> no
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go

>>>>>>> any
>>>>>>>
>>>>>>>
>>>>>>>>>> lower on
>>>>>>>>>>
>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>> <cparnell1001@>
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry....
>>>>>>>>>>>>
>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
>>>>>>> NZ
>>>>>>>
>>>>>>>
>>>>>>>>>> time.
>>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>>>>>>
>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
>>>>>>>> switch
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> in
>>>>>>>>>>
>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
>
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>>> 20db
>>>>>>>>>
>>>>>>>>>> on

>>>>>>>>>>
>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC

>>>>>>> box.
>>>>>>>
>>>>>>>>
>>>>>>>>> Less
>>>>>>>>>
>>>>>>>>>>> decay time to mess with. Terry
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
>>>>>>>>> <wagstw46@>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>>>>>>> Step A:
>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
>>>>>>
>>>>>>>>> max
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> clockwise.
>>>>>>>>>>>
>>>>>>>>>>>>>> You are in USB mode.
>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
>>>>>>
>>>>>>>>> end
>>>>>>>>>
>>>>>>>>>> of
>>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>>> black bordered box.
>>>>>>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>>>>
>>>>>>>>> between
>>>>>>>>>>
>>>>>>>>>>> 1000 and
>>>>>>>>>>>
>>>>>>>>>>>>>> 1100.

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
>>>>>>> you
>>>>>>>
>>>>>>>>
>>>>>>>>>> expect
>>>>>>>>>>
>>>>>>>>>>>> the ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
>>>>>>> the
>>>>>>>
>>>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>>> to peg
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
>>>>>>>
>>>>>>>>>>> what
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> would you
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Step B:
>>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
>>>>>>
>>>>>>>>> gain
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> not
>>>>>>>>>>
>>>>>>>>>>>> touched
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
>>>>>>>>> when
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> you
>>>>>>>>>>
>>>>>>>>>>>> flip to
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
>>>>>>> any
>>>>>>>
>>>>>>>>>
>>>>>>>>>> ALC
>>>>>>>>>>

>>>>>>>>>>
>>>>>>>>>>> meter
>>>>>>>>>>>
>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
>>>>>>>
>>>>>>>>>> sensitive
>>>>>>>>>>
>>>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>>>>>>> scale.
>>>>>>>
>>>>>>>>
>>>>>>>>>> Quickly
>>>>>>>>>>
>>>>>>>>>>>> turn
>>>>>>>>>>>
>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>>>>>>
>>>>>>>>> box.
>>>>>>>>>
>>>>>>>>>> Mic
>>>>>>>>>>
>>>>>>>>>>>> gain
>>>>>>>>>>>
>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
>>>>>>>
>>>>>>>> far
>>>>>>>>
>>>>>>>>
>>>>>>>>>> end of
>>>>>>>>>>
>>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
>>>>>>>
>>>>>>>>> times
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> until you
>>>>>>>>>>>
>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>>>>>>> This
>>>>>>>
>>>>>>>
>>>>>>>>>>>> adjustment is
>>>>>>>>>>>
>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter

>>>>>>> tends
>>>>>>>
>>>>>>>> to
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> peg
>>>>>>>>>>
>>>>>>>>>>> hard
>>>>>>>>>>>
>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
>>>>>>
>>>>>>>> around
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>> max
>>>>>>>>>>>
>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>>>>>>> meter
>>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> Comp
>>>>>>>>>>
>>>>>>>>>>> you
>>>>>>>>>>>
>>>>>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>>>>
>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> _____
>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>>>>> alignment
>>>>>>>>>>>>>
>>>>>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>>>>>
>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>>>>>>>>> (Heater
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> on
>>>>>>>>>>
>>>>>>>>>>> etc), but

>>>>>>>>>>>>
>>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>>>>>>> "align"
>>>>>>>
>>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> speech
>>>>>>>>>>>
>>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> AG
>>>>>>>>>>>
>>>>>>>>>>>> output to
>>>>>>>>>>>>
>>>>>>>>>>>>>>> 10 mV
>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>>>>>>> maximum
>>>>>>>
>>>>>>>>>
>>>>>>>>>> on-scale ALC
>>>>>>>>>>>
>>>>>>>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
>>>>>>>>>> on-scaled).
>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
>>>>>>>
>>>>>>>>> turn
>>>>>>>>>
>>>>>>>>>>> the
>>>>>>>>>>>
>>>>>>>>>>>> Proc ON
>>>>>>>>>>>>
>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>>>>>>> meter
>>>>>>>
>>>>>>>>> at
>>>>>>>>>

>>>>>>>>>
>>>>>>>>>> this
>>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
>>>>>>> reading.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
>>>>>>>> pages
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>>> 40&41. As
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
>>>>>>
>>>>>>>>> switch
>>>>>>>>>
>>>>>>>>>>> and
>>>>>>>>>>
>>>>>>>>>>>>> LEAVE
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
>>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>>>> off of the
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>>>>>>> step
>>>>>>>
>>>>>>>
>>>>>>>>>>>>> conditions still
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> being in force?
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>>>>>>> "max
>>>>>>>
>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>>>> reading on

>>>>>>>>>>>>
>>>>>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
>>>>>>> reading.
>>>>>>>
>>>>>>>
>>>>>>>>> That
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> would be on
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
>>>>>>> indication
>>>>>>>
>>>>>>>>
>>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>>> 20db
>>>>>>>>>>>
>>>>>>>>>>>>> and
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>>>>>>> with
>>>>>>>
>>>>>>>>> a
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> multi-scale
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
>>>>>>> meter
>>>>>>>
>>>>>>>
>>>>>>>>>> scale.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
>>>>>>>
>>>>>>>>> mic
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> gain
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
>>>>>>> 1200
>>>>>>>
>>>>>>>>>
>>>>>>>>>> and
>>>>>>>>>>

>>>>>>>>>>
>>>>>>>>>>> peaked L27.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>>>>>>> would
>>>>>>>
>>>>>>>
>>>>>>>>> say
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> something
>>>>>>>>>>>
>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
>>>>>>>> box".
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Just
>>>>>>>>>>
>>>>>>>>>>>> make it
>>>>>>>>>>>
>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
>>>>>> read.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>>> switch on
>>>>>>>>>>>
>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>>>>>>> -K9TW
>>>>>>>
>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>
>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>>>>>
>>>>>>>>> chance
>>>>>>>>>
>>>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>>> check
>>>>>>>>>>>

>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>>>>>>> so
>>>>>>>
>>>>>>>> I
>>>>>>>>
>>>>>>>>
>>>>>>>>> will
>>>>>>>>>
>>>>>>>>>> give it a
>>>>>>>>>>
>>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@...m, Chris Parnell
>>>>>>
>>>>>>>> <cparnell1001@>
>>>>>>>>>>
>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>>>>>>> in
>>>>>>>
>>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>> 830
>>>>>>>>>>
>>>>>>>>>>> at the
>>>>>>>>>>>
>>>>>>>>>>>>> weekend?
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>
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>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>>>>>>>

>>>>>>>> Yahoo! Groups Links
>>>>>>>>
>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>
>>>>>>>>
>>>>>>>>
>>>>>>>
>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
>>>>>>>
>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
>>>
>>>>>>>> about
>>>>>>>>
>>>>>>>> out of ideas.
>>>>>>>>
>>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
>>>>>
>>>>>>
>>>>>>>> rig. I just unplugged the mic and brought the test equipment to the operating
>>>>>>
>>>>>>>
>>>>>>>> position.
>>>>>>>>
>>>>>>>> I use a spare mic connector and clipped the generator output to it with

>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
>>>>
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
>>
>>>>>>>> heater
>>>>>>>>
>>>>>>>> switches. Let it warm up a little.
>>>>>>>>
>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
>>
>>>>>>> Wave
>>>>>>>
>>>>>>>
>>>>>>>> Tek generator to exactly 10 mv.
>>>>>>>>
>>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
>>>>
>>>>>>>> place meter switch in ALC position.
>>>>>>>>
>>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
>>>>>>
>>>>>>>

>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>
>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
>>>>>>> position
>>>>>>>
>>>>>>>>
>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>
>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
>>>>>
>>>>>>
>>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
>
>>>>>>> covers
>>>>>>>
>>>>>>>>
>>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
>>>>
>>>>>>>> just
>>>>>>>>
>>>>>>>> a little above 20db on the Comp scale.
>>>>>>>>
>>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
>>>>
>>>>>>> as
>>>>>>>
>>>>>>>
>>>>>>>> found condition for my daily operator is very close to being right on the
>>
>>>>>>> same
>>>>>>>
>>>>>>>
>>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
>>>>>
>>>>>>> on
>>>>>>>
>>>>>>>>
>>>>>>>> and off.
>>>>>>>>
>>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
>>>>>>
>>>>>>>
>>>>>>>> some more and if I come up with something will write.
>>>>>>>>
>>>>>>>> Whatever you do you should not have to increase mic gain position or increase
>>>>>>
>>>>>>>
>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
>>>
>>>>>>> your

>>>>>>>
>>>>>>>>
>>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
>>>>>
>>>>>>> I
>>>>>>>
>>>>>>>
>>>>>>>> wouldnt think much higher.
>>>>>>>>
>>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
>>>>>>
>>>>>>>
>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
>>>>>
>>>>>>
>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
>>
>>>>>>> Good
>>>>>>>
>>>>>>>
>>>>>>>> luck Terry
>>>>>>>>
>>>>>>>> _____
>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>
>>>>>>>> Hi Terry,
>>>>>>>>
>>>>>>>> The only difference from my original post is that I increased the "gain" on
>>>>
>>>>>>> the
>>>>>>>
>>>>>>>>
>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure

>>>>>>> why...
>>>>>>>>
>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>>>>compensate.
>>>>>>>>
>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>

>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
>>
>>>>>>> right
>>>>>>>
>>>>>>>>>
>>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
>>>>>>>>>
>>>>>>>>> Hope this makes sense..
>>>>>>>>>
>>>>>>>>> Cheers
>>>>>>>>> Chris
>>>>>>>>>
>>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>>
>>>>>>>>>> Chris--This appears different than what you originally reported of getting
>>>>
>>>>>>> no
>>>>>>>
>>>>>>>>>
>>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
>>>>
>>>>>>
>>>>>>>>>> Where
>>>>>>>>>
>>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
>>
>>>>>>> hard
>>>>>>>
>>>>>>>>>
>>>>>>>>>> on
>>>>>>>>>
>>>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
>>>>>
>>>>>>>
>>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>> peg.
>>>>>>>>>
>>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
>>>>
>>>>>>
>>>>>>>>>> off
>>>>>>>>>
>>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
>

>>>>>>> back
>>>>>>>
>>>>>>>
>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
>>>>>
>>>>>>>
>>>>>>>> to
>>>>>>>>
>>>>>>>>
>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
>>>>>
>>>>>>>
>>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
>>>>>>>>>
>>>>>>>>> _____
>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>
>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
>>>>
>>>>>>
>>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
>>>>>>> without
>>>>>>>
>>>>>>>
>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>
>>>>>>>>> Chris
>>>>>>>>> Sent from my iPhone
>>>>>>>>>
>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
>>>>>>>>>
>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>
>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>
>>>>>>>>>> Following to the letter the service manual and then taking into account
>>
>>>>>>>>> your
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection

>>>>
>>>>>>> of
>>>>>>>
>>>>>>>>
>>>>>>>>> ALC
>>>>>>>>>
>>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
>>
>>>>>>>> meter)
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
>>>
>>>>>>
>>>>>>>>>>
>>>>>>>>>> Thanks
>>>>>>>>>> Chris
>>>>>>>>>>
>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>
>>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>>
>>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
>>>>>>> have
>>>>>>>
>>>>>>>
>>>>>>>>> same
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
>>>>>>>> adjust
>>>>>>>>
>>>>>>>>
>>>>>>>>>> mic
>>>>>>>>>>
>>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
>>>
>>>>>>>
>>>>>>>>> Tune
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
>>>>>>>>>>>
>>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
>>>
>>>>>>>
>>>>>>>> can

>>>>>>>>
>>>>>>>>>
>>>>>>>>>> move
>>>>>>>>>
>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
>>>
>>>>>>>
>>>>>>>>> will
>>>>>>>>>
>>>>>>>>>> be
>>>>>>>>>
>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
>>
>>>>>>> is
>>>>>>>
>>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>> set
>>>>>>>>>
>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
>>>>>>>> increase
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> mic gain until I got an indication. After I found that point I no
>>>>>>> longer
>>>>>>>
>>>>>>>
>>>>>>>>> needed
>>>>>>>>>
>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
>>
>>>>>>
>>>>>>>>> would
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
>>>>>>> good
>>>>>>>
>>>>>>>
>>>>>>>>> matched
>>>>>>>>>
>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>
>>>>>>>>>>> _____
>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>

>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>
>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
>>>>>>> then
>>>>>>>
>>>>>>>> ON
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> to
>>>>>>>>>>
>>>>>>>>>>> same point? that's what it states from memory... point of exercise is
>
>>>>>>> to
>>>>>>>
>>>>>>>
>>>>>>>>> have
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
>>>>>>> equal
>>>>>>>
>>>>>>>
>>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
>>
>>>>>>
>>>>>>>> with
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
>>>
>>>>>>> I
>>>>>>>
>>>>>>>>
>>>>>>>>> no
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go

>>>>>>> any
>>>>>>>
>>>>>>>

>>>>>>>>>> lower on
>>>>>>>>>>
>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>> <cparnell1001@>
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> wrote:
>>>>>>>>>>>
>>>>>>>>>>> Thanks Terry....
>>>>>>>>>>>
>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
>>>>>>> NZ
>>>>>>>
>>>>>>>
>>>>>>>>>>> time.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
>>>>>>>> switch
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> in
>>>>>>>>>>
>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
>
>>>>>>> at
>>>>>>>
>>>>>>>
>>>>>>>>>> 20db
>>>>>>>>>
>>>>>>>>>>> on
>>>>>>>>>>
>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC

>>>>>>> box.
>>>>>>>
>>>>>>>>
>>>>>>>>>>> Less
>>>>>>>>>>
>>>>>>>>>>> decay time to mess with. Terry
>>>>>>>>>>>
>>>>>>>>>>>>

>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
>>>>>>>> <wagstw46@>
>>>>>>>>
>>>>>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>>>>>>>> Step A:
>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
>>>>>>
>>>>>>>> max
>>>>>>>>
>>>>>>>>
>>>>>>>>>>> clockwise.
>>>>>>>>>>>
>>>>>>>>>>>>>>> You are in USB mode.
>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
>>>>>>
>>>>>>>> end
>>>>>>>>
>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>>>> black bordered box.
>>>>>>>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
>>>>>>
>>>>>>>> between
>>>>>>>>>
>>>>>>>>>>> 1000 and
>>>>>>>>>>>
>>>>>>>>>>>>>>> 1100.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
>>>>>>> you
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> expect
>>>>>>>>>>
>>>>>>>>>>>> the ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
>>>>>>> the

>>>>>>>
>>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>>> to peg
>>>>>>>>>>>>
>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
>>>>>>>>
>>>>>>>>> what
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> would you
>>>>>>>>>>>>
>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Step B:
>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
>>>>>>>>>>
>>>>>>>>> gain
>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> not
>>>>>>>>>>>>
>>>>>>>>>>>>>> touched
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
>>>>>>>>>> when
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>> you
>>>>>>>>>>>>>
>>>>>>>>>>>>>> flip to
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
>>>>>>>>>>> any
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>> ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> sensitive
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>>>>>>> scale.
>>>>>>>
>>>>>>>>
>>>>>>>>>> Quickly
>>>>>>>>>>
>>>>>>>>>>>> turn
>>>>>>>>>>>
>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
>>>>>>>
>>>>>>>>> box.
>>>>>>>>>
>>>>>>>>>> Mic
>>>>>>>>>>
>>>>>>>>>>>> gain
>>>>>>>>>>>
>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
>>>>>>
>>>>>>>> far
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> end of
>>>>>>>>>>
>>>>>>>>>>>> ALC
>>>>>>>>>>>
>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
>>>>>>>
>>>>>>>>> times
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> until you
>>>>>>>>>>>
>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>>>>>>> This
>>>>>>>
>>>>>>>
>>>>>>>>>>>> adjustment is
>>>>>>>>>>>
>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
>>>>>>> tends
>>>>>>>
>>>>>>>>> to
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>>> peg
>>>>>>>>>>
>>>>>>>>>>>> hard
>>>>>>>>>>>
>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
>>>>>>

>>>>>>>>> around
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>> max
>>>>>>>>>>>
>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>>>>>>> meter
>>>>>>>
>>>>>>>> to
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Comp
>>>>>>>>>>
>>>>>>>>>>> you
>>>>>>>>>>>
>>>>>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>>>>>
>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> _____
>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>>>>> alignment
>>>>>>>>>>>>>
>>>>>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>>>>>
>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>>>>>>>> (Heater
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> on
>>>>>>>>>>
>>>>>>>>>>> etc), but
>>>>>>>>>>>
>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>>>>>>> "align"
>>>>>>>
>>>>>>>>
>>>>>>>>> the
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> speech
>>>>>>>>>>>
>>>>>>>>>>>>> processor based on this step at the top of page 41:-

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
>>>>>>>
>>>>>>>> the
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> AG
>>>>>>>>>>
>>>>>>>>>>>> output to
>>>>>>>>>>>>
>>>>>>>>>>>>>> 10 mV
>>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>>>>>>> maximum
>>>>>>>
>>>>>>>>
>>>>>>>>>>>> on-scale ALC
>>>>>>>>>>>>
>>>>>>>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
>>>>>>>>>> on-scaled).
>>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
>>>>>>>
>>>>>>>>> turn
>>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>
>>>>>>>>>>>> Proc ON
>>>>>>>>>>>>
>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>>>>>>> meter
>>>>>>>
>>>>>>>>> at
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> this
>>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
>>>>>>> reading.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
>>>>>>>> pages
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>> 40&41. As
>>>>>>>>>>>>
>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
>>>>>>
>>>>>>>>> switch
>>>>>>>>>
>>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>>> LEAVE
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>>>> off of the
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>>>>>>> step
>>>>>>>
>>>>>>>
>>>>>>>>>>>>> conditions still
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> being in force?
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>>>>>>> "max
>>>>>>>
>>>>>>>
>>>>>>>>>> meter
>>>>>>>>>>
>>>>>>>>>>>>> reading on
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
>>>>>>> reading.
>>>>>>>
>>>>>>>
>>>>>>>>> That
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>>> would be on

>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
>>>>>>> indication
>>>>>>>
>>>>>>>>
>>>>>>>>> of
>>>>>>>>>
>>>>>>>>>> 20db
>>>>>>>>>>
>>>>>>>>>>>> and
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>>>>>>> with
>>>>>>>
>>>>>>>>> a
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>>> multi-scale
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
>>>>>>> meter
>>>>>>>
>>>>>>>>
>>>>>>>>>> scale.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
>>>>>>>
>>>>>>>>> mic
>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> gain
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
>>>>>>> 1200
>>>>>>>
>>>>>>>>>
>>>>>>>>>> and
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> peaked L27.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>>>>>>> would
>>>>>>>
>>>>>>>>>
>>>>>>>>>> say
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> something

>>>>>>>>>>>>
>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
>>>>>>>> box".
>>>>>>>>
>>>>>>>>>
>>>>>>>>>> Just
>>>>>>>>>>
>>>>>>>>>>>> make it
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
>>>>>> read.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
>>>>>>>>
>>>>>>>>>> heater
>>>>>>>>>>
>>>>>>>>>>>> switch on
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>>>>>>>> -K9TW
>>>>>>>>
>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
>>>>>>>
>>>>>>>>>> chance
>>>>>>>>>>
>>>>>>>>>>>> to
>>>>>>>>>>>
>>>>>>>>>>>>> check
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>>>>>>>> so
>>>>>>>>

>>>>>>>> I
>>>>>>>>
>>>>>>>>
>>>>>>>>>> will
>>>>>>>>>>
>>>>>>>>>>>> give it a
>>>>>>>>>>>>
>>>>>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>
>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>>>>>>> in
>>>>>>>>
>>>>>>>>
>>>>>>>>>> the
>>>>>>>>>>>
>>>>>>>>>>> 830
>>>>>>>>>>>
>>>>>>>>>>>> at the
>>>>>>>>>>>>
>>>>>>>>>>>>>>> weekend?
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
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> Yahoo! Groups Links
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32011. Re: [TS-520_820_530_830] Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 12:35:47 UTC
From: Jim S
Topic: 31980 Message: 32011

On 6/22/2011 1:45 AM, sv9dru wrote:
>
> There is one more detail overlooked Mike. Since these caps are used in
> a voltage doubler configuration, they are acting as individual pairs
> rather than as one cap consistent of both pairs connected in series.
> Each pair of parallel caps is being charged during an opposite half
> cycle of the rectified AC from the HV 2x400V secondary of the
> transformer, so each pair is acting by "itself" even though they seem
> to be connected in series.
> So in this particular circuit there is 200uf at 450V (100+100 in
> parallel) used by each half of the full wave voltage doubler.
>
> What is important though for both pairs is to withstand at least 400V
> each or at least 800V for their in series combination in order to
> safely handle the voltages present. Of course, one has to use a
> capacitor having a "comfortably" higher voltage rating than the max
> voltage being present in the circuit, in order to be on the safe side.
> It makes sense what Jim AG3Y is saying about the industry standard in
> the voltage rating of caps, and that is probably the reason why the
> 400V ones present in my Ts530 have not exploded yet !!!
>

<snip>

Note: I did NOT say that caps that have a 400v rating are good for 800 volts. I'm not sure if you understood it that way, or not. I meant that in industry, if the engineers expected to see 400 volts at a certain point in the circuit, they would specify that caps good for at least 800 volts would be used in that place ! There is quite a bit of difference in the meaning, and that is what I intended to point out.

I would not think that the circuit as I understand it to be constructed would be very safe. In addition to the series-parallel version of the caps, equalizing resistors, and spike suppression capacitors should be utilized , in order to keep the voltage drops across each cap under control.

And BTW, this "industry" I am talking about would typically be the broadcast industry, or the military, where cost is much less of a factor than it is in the consumer industry. That would be reasons why corners would not tend to be cut quite as much as they would be in the consumer trade!

Hope this clarifies what I was trying to say.

73, Jim AG3Y

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17760)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

32012. Fwd: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 13:03:29 UTC
From: w5rkl
Topic: 31926 Message: 32012

Hi Chris,

I agree with Terry. Knowing that you replaced the RF board and since RF drive is produced on the RF board, it stands to reason the RF board is the place to start.

I do not believe, at this point, the problem exists elsewhere. This does not mean the problem could be elsewhere after you do some troubleshooting. Don't guess because more than likely you will be wrong. Think about what the problem is and if necessary, review the 830 operators and service manual's "Circuit Description" sections to refresh your memory on how the 830 processes both receive and transmit signals. Again, don't guess.

Review the 830 service manual transmit Level Diagram on page 44. Compare the levels in your 830 to the levels in the 830 service manual. This will give you an idea of what's going on in the 830 as far as transmit levels are concerned. Don't forget there are some common circuit that affect both transmit and receive.

If you have not yet done so, measure the voltages on the RF board, especially on the driver tube. Use the 830 high resolution schematic I sent you. The voltages in question are the red voltages. Compare your voltages to the high resolution schematic voltages.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--Are you saying you cannot load to any higher than 150ma IP?
>
> If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> on RF board are good place to look with your RF VTVM. Terry
>
>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Wed, June 22, 2011 6:51:21 AM
> Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
>
>
> OK..... well Mike (nor anyone else) answered this question... so...
>
> One thing that springs to mind is that I did change the RF board that was faulty
> in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> but thinking back, it's the time that my Power out was reduced to around
> 60-W..... So, Mike et all (if you could respond I'd appreciate it)...

>
>
> Is the RF board a good place to start looking and if so, around what are?
>
> Thanks
> Chris, ZL1CDP
>
> Begin forwarded message:
>
> > From: Chris Parnell <cparnell1001@...>
> > Date: 20 June 2011 10:10:55 AM NZST
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > Reply-To: TS-520_820_530_830@yahoogroups.com
> >
> > Mike,
> >
> > Any idea where would be a good place to start the voltage measurements?
> >
> > Cheers
> > Chris
> >
> > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> >
> >> Hi Chris,
> >>
> >> Based on the HV and power output levels you provided, 850VDC high voltage and
> >>70 watts output, that equates to an IP current level of approximately 150ma.
> >>Therefore, with those levels the INPUT power in the final amplifier would be;
> >>
> >> .150 x 850 = 127.5 watts
> >>
> >> Since the 830 final amplifier has an efficiency rating of approximately 55%,
> >>power output would be
> >>
> >> 127.5 - 45% = 70.125 watts
> >>
> >> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
> >>supplies are within specifications and operating as they should.
> >>
> >> I recommend you troubleshoot the 830's transmit signal path, take level
> >>measurements and compare your findings with the 830 service manual Level Diagram
> >>on page 44.
> >>
> >> 73s
> >> Mike
> >> W5RKL
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >>wrote:

> >>>
> >>> Hi Terry,
> >>>
> >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
> >>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
> >>>then the voltages would be about right for 60-70W output.
> >>>
> >>> My 830 was working "OK" originally, although the alignment was miles off.
> >>> Then I had an issue with a tube that failed in the final unit, and it caused a
> >>>number of issues.. one of which was NO output etc.
> >>>
> >>> I swapped the RF board as the one that came with the unit was broke in a number
> >>>of areas, so I purchased one from Bob Mansker and swapped it.
> >>> To which I decided to re-align the radio.
> >>>
> >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> >>>be).
> >>> I purchased a new front fascia and it looks great.. needs to work great now
> >>:-)
> >>>
> >>> Cheers
> >>> Chris
> >>>
> >>>
> >>>
> >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> >>>
> >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> >>>>lack of effort!
> >>>>
> >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> >>>>position, that when you flip to send the meter pegs off scale right hand side of
> >>>>the meter. Is this true?
> >>>>
> >>>> 2. The expected response would be for the meter to deflect to the far end of
> >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> >>>>not peg.
> >>>>
> >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> >>>>setting. Comp level pot is not in the circuit when Processor is off.
> >>>>
> >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> >>>>difficulty doing this step as written and you had not completed it yet. I
> >>>>suggest you go back and repeat this step.
> >>>>
> >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the

> >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> >>>>not peg the meter full scale or any ALC indication very far past the black
> >>>>border. If that is not how you left this step then this is likely your problem.
> >>>>
> >>>>
> >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> >>>>able to move meter indication down to the ALC box max border or S9.
> >>>>
> >>>>
> >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
> >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> >>>>
> >>>>
> >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> >>>>the AF board.
> >>>>
> >>>>
> >>>> Good Luck-Terry K9TW
> >>>>
> >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >>>wrote:
> >>>>>
> >>>>> Hi Terry,
> >>>>>
> >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
> >>>>>an email off list with some voltage measurements.
> >>>>>
> >>>>> Cheers
> >>>>> Chris
> >>>>>
> >>>>>
> >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> >>>>>
> >>>>>> Chris--
> >>>>>>
> >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
> >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> >>>>>
> >>>>>> clear enough real time video or not for this to work. Not sure about our time
> >>>>
> >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> >>>>>>
> >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> >>>>
> >>>>>> rigs for a living? As you know I had never performed this step until you asked

> >>>>>
> >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> >>>>>
> >>>>>> generator. I have just done selected steps.
> >>>>>>
> >>>>>> Terry
> >>>>>>
> >>>>>> _____
> >>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>
> >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> >>>>
> >>>>>> have no attenuation in there)...
> >>>>>>
> >>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
> >>>>>>
> >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> >>>>>>Gain
> >>>>>>
> >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> >>>>>>
> >>>>>> with regards to ALC readings.
> >>>>>>
> >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> >>>>>>
> >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> >>meter.
> >>>>>>
> >>>>>> I may record a small video and send it to you... easier to see what I mean and
> >>>>>
> >>>>>> what i'm doing.
> >>>>>>
> >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> >>>>>>is,
> >>>>>>
> >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> >>>>>>
> >>>>>> Cheers
> >>>>>> Chris
> >>>>>>
> >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> >>>>>>
> >>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> >>>>
> >>>>> test signals.
> >>>>>

> >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
> >>>>>>
> >>>>>>
> >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> >>>>>
> >>>>>>> where I can get a good match at far right end of ALC black box.
> >>>>>>>
> >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
> >>>>>>>
> >>>>>>>
> >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> >>>>>>>
> >>>>>>>
> >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
> >>>>>
> >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> >>>>>>>
> >>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
> >>>>>>>
> >>>>>>>
> >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> >>>>>
> >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> >>>
> >>>>>>> starting to get confused regards what your problem is.
> >>>>>>>
> >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> >>
> >>>>>>> troubleshooting with Mike.
> >>>>>>>
> >>>>>>> Terry
> >>>>>>>
> >>>>>>> _____
> >>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>
> >>>>>>> Hi Terry / Mike.....
> >>>>>>>
> >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> >>>
> >>>>>>> piece of kit.
> >>>>>>> Here's what I see when I follow your instructions:
> >>>>>>>
> >>>>>>>>> I use a spare mic connector and clipped the generator output to it with
>
> >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> >>>>>>>>
> >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to

> >>>>
> >>>>>>> the
> >>>>>>>
> >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> >>>>>>>
> >>>>>>>> I have the mic gain set exactly at
> >>>>>>>> No. 4 position.
> >>>>>>>>
> >>>>>>> Same here
> >>>>>>>
> >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> >>>>>>>> switches. Let it warm up a little.
> >>>>>>>>
> >>>>>>> Same here
> >>>>>>>
> >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >>
> >>>>>>> Wave
> >>>>>>>
> >>>>>>>
> >>>>>>>> Tek generator to exactly 10 mv
> >>>>>>>>
> >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> >>>>>>>
> >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> >>
> >>>>>>>> place meter switch in ALC position.
> >>>>>>>>
> >>>>>>>
> >>>>>>> Same here
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> >>>>>>
> >>>>>>>
> >>>>>>>> end of the black ALC box. Maybe a needles worth.
> >>>>>>>>
> >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> >>>>>
> >>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> >>>>>>>
> >>>>>>>
> >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> >>>>
> >>>>>>> s-meter scale, it's S9+40dB +).
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >>>>>>> position
> >>>>>>>

> >>>>>>>>
> >>>>>>>> and I have not touched mic gain pot.
> >>>>>>>>
> >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> >>>>>>>
> >>>>>>>
> >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> >>>
> >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> >>>>>
> >>>>>>> I'm saying and seeing.
> >>>>>>>
> >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> >>
> >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> >>>>>
> >>>>>>> PROC ON, which on the S-Meter is S-9.
> >>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
>
> >>>>>>> minimum.
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> >>>>>
> >>>>>>
> >>>>>>>> black ALC box.
> >>>>>>>>
> >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> >>>>>>>
> >>>>>>>
> >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> >>>>>
> >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> >>>>>>>
> >>>>>>>>
> >>>>>>>> It could be adjusted a little to get a match if I had the covers
> >>>>>>>> off, but close enough.
> >>>>>>>>
> >>>>>>>>
> >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> >>>
> >>>>>>> them
> >>>>>>>
> >>>>>>> with the PROC ON.
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> >>>>>>>> a little above 20db on the Comp scale.
> >>>>>>>>
> >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> >>>
> >>>>>>> adjust L26 for 20dB reading.

> >>>>>>>
> >>>>>>> I will need to do some component checking in the circuit around the Processor
> >>>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>> Mike and yourself have recommended.
> >>>>>>>
> >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> >mentioned.
> >>>>>>>
> >>>>>>> Thanks
> >>>>>>> Chris, ZL1CDP
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> >>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>>
> >>>>>>>> found condition for my daily operator is very close to being right on the
> >>
> >>>>>>> same
> >>>>>>>
> >>>>>>>
> >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> >>>>>
> >>>>>>> on
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and off.
> >>>>>>>>
> >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> >>>>>>
> >>>>>>>
> >>>>>>>> some more and if I come up with something will write.
> >>>>>>>>
> >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> >>>>>>
> >>>>>>>
> >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> >>>
> >>>>>>> your
> >>>>>>>
> >>>>>>>>
> >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> >>>>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>
> >>>>>>>> wouldnt think much higher.

> >>>>>>>>
> >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> >>>>>>
> >>>>>>>
> >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >>>>>
> >>>>>>
> >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> >>
> >>>>>>> Good
> >>>>>>>
> >>>>>>>
> >>>>>>>> luck Terry
> >>>>>>>>
> >>>>>>>> _____
> >>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Hi Terry,
> >>>>>>>>
> >>>>>>>> The only difference from my original post is that I increased the "gain" on
> >>>>
> >>>>>>> the
> >>>>>>>
> >>>>>>>>
> >>>>>>>> input (Mic gain), therefore got an ALC reading.
> >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> >>>>>>> why...
> >>>>>>>>
> >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> >>>>compensate.
> >>>>>>>>
> >>>>>>>>>> Based on what you are reporting I would expect it to
> >>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>> in
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >>>>>>>>>>
> >>>>>>>>
> >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> >>
> >>>>>>> right
> >>>>>>>
> >>>>>>>>

> >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >>>>>>>>
> >>>>>>>> Hope this makes sense..
> >>>>>>>>
> >>>>>>>> Cheers
> >>>>>>>> Chris
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >>>>>>>>
> >>>>>>>>> Chris--This appears different than what you originally reported of getting
> >>>>
> >>>>>>> no
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> >>>>
> >>>>>>
> >>>>>>>>> Where
> >>>>>>>>>
> >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> >>
> >>>>>>> hard
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> on
> >>>>>>>>>
> >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> >>>>>
> >>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> peg.
> >>>>>>>>>
> >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >>>>
> >>>>>>
> >>>>>>>>> off
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> >
> >>>>>>> back
> >>>>>>>
> >>>>>>>
> >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> >>>>>
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>

> >>>>>>>>
> >>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>> in
> >>>>>>>>
> >>>>>>>>
> >>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> >>>>>>>>
> >>>>>>>> _____
> >>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >>>>
> >>>>>>
> >>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> >>>>>>> without
> >>>>>>>
> >>>>>>>
> >>>>>>>> PROC NOT engaged, just Mic.
> >>>>>>>>
> >>>>>>>> Chris
> >>>>>>>> Sent from my iPhone
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> >>>>>>>>
> >>>>>>>>> Hi Terry, in a nutshell,
> >>>>>>>>>
> >>>>>>>>> It doesn't weigh up here.
> >>>>>>>>>
> >>>>>>>>> Following to the letter the service manual and then taking into account
> >>
> >>>>>>>> your
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> >>>>
> >>>>>>> of
> >>>>>>>
> >>>>>>>>
> >>>>>>>> ALC
> >>>>>>>>
> >>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> >>

> >>>>>>>> meter)
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> deflection without PROC engaged, just Mic.
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >>>
> >>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Thanks
> >>>>>>>>>> Chris
> >>>>>>>>>>
> >>>>>>>>>> Sent from my iPhone
> >>>>>>>>>>
> >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> >>>>>>>>>>
> >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> >>>>>>> have
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> same
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> >>>>>>>>> adjust
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> mic
> >>>>>>>>>>
> >>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> >>>
> >>>>>>>
> >>>>>>>>>> Tune
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> >>>>>>>>>>
> >>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> >>>
> >>>>>>>
> >>>>>>>>>> can
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> move
> >>>>>>>>>>
> >>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> >>>
> >>>>>>>
> >>>>>>>>>> will

> >>>>>>>>>
> >>>>>>>>>> be
> >>>>>>>>>>
> >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> >>
> >>>>>>> is
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>> set
> >>>>>>>>>>
> >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> >>>>>>>> increase
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> >>>>>>> longer
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> needed
> >>>>>>>>>>
> >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> >>
> >>>>>>
> >>>>>>>>> would
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> >>>>>>> good
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> matched
> >>>>>>>>>>
> >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> >>>>>>>>>>
> >>>>>>>>>>> _____
> >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>>>
> >>>>>>>>>>> Thanks Terry,
> >>>>>>>>>>>
> >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >>>>>>> then
> >>>>>>>
> >>>>>>>>> ON
> >>>>>>>>>
> >>>>>>>>>

> >>>>>>>>>> to
> >>>>>>>>>>
> >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> >
> >>>>>>> to
> >>>>>>>
> >>>>>>>
> >>>>>>>>> have
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> >>>>>>>>>>>
> >>>>>>>>>>> Cheers
> >>>>>>>>>>> Chris
> >>>>>>>>>>>
> >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >>>>>>>>>>>
> >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> >>>>>>> equal
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> >>
> >>>>>>
> >>>>>>>>> with
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> no
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> >
> >>>>>>> any
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> lower on
> >>>>>>>>>>
> >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>> <cparnell1001@>
> >>>>>>>>>

> >>>>>>>>>>
> >>>>>>>>>>> wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Thanks Terry....
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> >>>>>>> NZ
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> time.
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>> Chris
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> >>>>>>>> switch
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> in
> >>>>>>>>>
> >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> >
> >>>>>>> at
> >>>>>>>
> >>>>>>>
> >>>>>>>>> 20db
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>
> >>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> >
> >>>>>>> box.
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> Less
> >>>>>>>>>
> >>>>>>>>>>> decay time to mess with. Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> >>>>>>>> <wagstw46@>
> >>>>>>>>
> >>>>>>>>>> wrote:
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> Chris--OK you are telling me the following:
> >>>>>>>>>>>>> Step A:

> >>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> >>>>>>
> >>>>>>>> max
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>>>> clockwise.
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> You are in USB mode.
> >>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> >>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> >>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> >>>>>>
> >>>>>>>> end
> >>>>>>>>
> >>>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> black bordered box.
> >>>>>>>>>>>>>>> 6. You return to Stand-by.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> >>>>>>
> >>>>>>>>>> between
> >>>>>>>>>>
> >>>>>>>>>>>> 1000 and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> 1100.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> >>>>>>>> you
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> expect
> >>>>>>>>>>
> >>>>>>>>>>>> the ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> >>>>>>>> the
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>>> to peg
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> >>>>>>>>

> >>>>>>>>> what
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> would you
> >>>>>>>>>>>
> >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Step B:
> >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> >>>>>>
> >>>>>>>> gain
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> not
> >>>>>>>>>>
> >>>>>>>>>>> touched
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> >>>>>>>>> when
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> you
> >>>>>>>>>>
> >>>>>>>>>>> flip to
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> >>>>>>> any
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> meter
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> >>>>>>>
> >>>>>>>>>> sensitive
> >>>>>>>>>>
> >>>>>>>>>>> and
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >>>>>>> scale.
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> Quickly
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> turn
> >>>>>>>>>>>

> >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> >>>>>>>
> >>>>>>>>> box.
> >>>>>>>>>
> >>>>>>>>>> Mic
> >>>>>>>>>>
> >>>>>>>>>>>> gain
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> >>>>>>
> >>>>>>>> far
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> end of
> >>>>>>>>>>
> >>>>>>>>>>>> ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> >>>>>>>
> >>>>>>>>> times
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> until you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> >>>>>>> This
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> adjustment is
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> >>>>>>> tends
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> peg
> >>>>>>>>>>
> >>>>>>>>>>>> hard
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> >>>>>>
> >>>>>>>>> around
> >>>>>>>>>
> >>>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> max
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> >>>>>>> meter

> >>>>>>>
> >>>>>>>> to
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> Comp
> >>>>>>>>>>
> >>>>>>>>>>>> you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> should see about 20db on Comp Scale.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Terry
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> _____
> >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >>>>>>> alignment
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> >>>>>>>> (Heater
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>>> etc), but
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> >>>>>>> "align"
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> speech
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >>>>>>>
> >>>>>>>> the
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> AG
> >>>>>>>>>>

> >>>>>>>>>>>> output to
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> 10 mV
> >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> >>>>>>> maximum
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>>>> on-scale ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> >>>>>>>>>> on-scaled).
> >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> >>>>>>>
> >>>>>>>>> turn
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> Proc ON
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> and
> >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> at
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> this
> >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> >>>>>>> reading.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> >>>>>>>>> pages
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> 40&41. As
> >>>>>>>>>>>>

> >>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> >>>>>>
> >>>>>>>>> switch
> >>>>>>>>>
> >>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>> LEAVE
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>> off of the
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >>>>>>> step
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> conditions still
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> being in force?
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> >>>>>>> "max
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>> reading on
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> the Compression Scale".
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> >>>>>>> reading.
> >>>>>>>
> >>>>>>>
> >>>>>>>>> That
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> would be on
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> >>>>>>> indication
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>>> 20db

> >>>>>>>>>>
> >>>>>>>>>>>> and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> >>>>>>> with
> >>>>>>>
> >>>>>>>>> a
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> multi-scale
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> >>>>>>> meter
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> scale.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> >>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> gain
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> >>>>>>> 1200
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>> peaked L27.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> >>>>>>> would
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> say
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> something
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> >>>>>>>>> box".
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Just
> >>>>>>>>>>>
> >>>>>>>>>>>> make it

> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> >>>>>> read.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>>> switch on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> >>>>>>> -K9TW
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>>>>> <cparnell1001@>
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Ok Terry, thank you.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> >>>>>>
> >>>>>>>>> chance
> >>>>>>>>>
> >>>>>>>>>>> to
> >>>>>>>>>>>
> >>>>>>>>>>>> check
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> >>>>>>> so
> >>>>>>>
> >>>>>>>>> I
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> will
> >>>>>>>>>>>
> >>>>>>>>>>>> give it a
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> try today and report back. Terry

> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>
> >>>>>>>>>>>> <cparnell1001@>
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> >>>>>>> in
> >>>>>>>
> >>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>> 830
> >>>>>>>>>>
> >>>>>>>>>>>> at the
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> weekend?
> >>>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> >>>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> ----------
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>

> >>>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>
> >>>>>>>>>>>>> ------------------------------------
> >>>>>>>>>>>
> >>>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>
> >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>
> >>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>
> >>>>>>>>>> ------------------------------------
> >>>>>>>>>
> >>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>
> >>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> >>>>>>>>
> >>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
> >>>
> >>>>>>>> about
> >>>>>>>>
> >>>>>>>> out of ideas.
> >>>>>>>>
> >>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
> >>>>>
> >>>>>>>> rig. I just unplugged the mic and brought the test equipment to the operating

> >>>>>>
> >>>>>>>
> >>>>>>>> position.
> >>>>>>>>
> >>>>>>>> I use a spare mic connector and clipped the generator output to it with
>
> >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> >>>>
> >>>>>>> at
> >>>>>>>
> >>>>>>>
> >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> >>
> >>>>>>>> heater
> >>>>>>>>
> >>>>>>>> switches. Let it warm up a little.
> >>>>>>>>
> >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >>
> >>>>>>> Wave
> >>>>>>>
> >>>>>>>
> >>>>>>>> Tek generator to exactly 10 mv.
> >>>>>>>>
> >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> >>>>
> >>>>>>>> place meter switch in ALC position.
> >>>>>>>>
> >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> >>>>>>
> >>>>>>>
> >>>>>>>> end of the black ALC box. Maybe a needles worth.
> >>>>>>>>
> >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >>>>>>> position
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and I have not touched mic gain pot.
> >>>>>>>>
> >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> >>>>>
> >>>>>>
> >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> >
> >>>>>>> covers
> >>>>>>>
> >>>>>>>>
> >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> >>>>
> >>>>>>>> just

> >>>>>>>>
> >>>>>>>> a little above 20db on the Comp scale.
> >>>>>>>>
> >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> >>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>>
> >>>>>>>> found condition for my daily operator is very close to being right on the
> >>
> >>>>>>> same
> >>>>>>>
> >>>>>>>
> >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> >>>>>
> >>>>>>> on
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and off.
> >>>>>>>>
> >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> >>>>>>
> >>>>>>>
> >>>>>>>> some more and if I come up with something will write.
> >>>>>>>>
> >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> >>>>>>
> >>>>>>>
> >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> >>>
> >>>>>>> your
> >>>>>>>
> >>>>>>>>
> >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> >>>>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>
> >>>>>>>> wouldnt think much higher.
> >>>>>>>>
> >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> >>>>>>
> >>>>>>>
> >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >>>>>
> >>>>>>
> >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> >>
> >>>>>>> Good
> >>>>>>>

> >>>>>>>
> >>>>>>>> luck Terry
> >>>>>>>>
> >>>>>>>> _____
> >>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Hi Terry,
> >>>>>>>>
> >>>>>>>> The only difference from my original post is that I increased the "gain" on
> >>>>
> >>>>>>> the
> >>>>>>>
> >>>>>>>>
> >>>>>>>> input (Mic gain), therefore got an ALC reading.
> >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> >>>>>>> why...
> >>>>>>>>
> >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> >>>>compensate.
> >>>>>>>>
> >>>>>>>>> Based on what you are reporting I would expect it to
> >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>> in
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >>>>>>>>>
> >>>>>>>>
> >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> >>
> >>>>>>> right
> >>>>>>>
> >>>>>>>>
> >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >>>>>>>>
> >>>>>>>> Hope this makes sense..
> >>>>>>>>
> >>>>>>>> Cheers
> >>>>>>>> Chris
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >>>>>>>>
> >>>>>>>>> Chris--This appears different than what you originally reported of getting
> >>>>

> >>>>>>> no
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> >>>>
> >>>>>>
> >>>>>>>>> Where
> >>>>>>>>>
> >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> >>
> >>>>>>> hard
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> on
> >>>>>>>>>
> >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> >>>>>
> >>>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>> peg.
> >>>>>>>>>>
> >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >>>>
> >>>>>>
> >>>>>>>>> off
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> >
> >>>>>>> back
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> >>>>>
> >>>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>>
> >>>>>>>>> in
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Chris Parnell <cparnell1001@>

> >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>
> >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >>>>
> >>>>>>
> >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> >>>>>>> without
> >>>>>>>
> >>>>>>>
> >>>>>>>>> PROC NOT engaged, just Mic.
> >>>>>>>>>
> >>>>>>>>> Chris
> >>>>>>>>> Sent from my iPhone
> >>>>>>>>>
> >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> >>>>>>>>>
> >>>>>>>>>> Hi Terry, in a nutshell,
> >>>>>>>>>>
> >>>>>>>>>> It doesn't weigh up here.
> >>>>>>>>>>
> >>>>>>>>>> Following to the letter the service manual and then taking into account
> >>
> >>>>>>>> your
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> >>>>
> >>>>>>> of
> >>>>>>>
> >>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>
> >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> >>
> >>>>>>>> meter)
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> deflection without PROC engaged, just Mic.
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >>>
> >>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Thanks

> >>>>>>>>>> Chris
> >>>>>>>>>>
> >>>>>>>>>> Sent from my iPhone
> >>>>>>>>>>
> >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> >>>>>>>>>>
> >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> >>>>>>> have
> >>>>>>>
> >>>>>>>
> >>>>>>>> same
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> >>>>>>>> adjust
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> >>>
> >>>>>>>
> >>>>>>>> Tune
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> >>>>>>>>>
> >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> >>>
> >>>>>>>
> >>>>>>>> can
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> move
> >>>>>>>>>
> >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> >>>
> >>>>>>>
> >>>>>>>> will
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> be
> >>>>>>>>>
> >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> >>
> >>>>>>> is
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>> set

> >>>>>>>>>>
> >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> >>>>>>>> increase
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> >>>>>>> longer
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> needed
> >>>>>>>>>>
> >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> >>
> >>>>>>
> >>>>>>>>> would
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> >>>>>>> good
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> matched
> >>>>>>>>>>
> >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> >>>>>>>>>>>
> >>>>>>>>>>> _____
> >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>>>
> >>>>>>>>>>> Thanks Terry,
> >>>>>>>>>>>
> >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >>>>>>> then
> >>>>>>>
> >>>>>>>> ON
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> to
> >>>>>>>>>>
> >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> >
> >>>>>>> to
> >>>>>>>
> >>>>>>>
> >>>>>>>>> have
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> ALC reading same position with Proc ON and OFF.

> >>>>>>>>>>>
> >>>>>>>>>>> Cheers
> >>>>>>>>>>> Chris
> >>>>>>>>>>>
> >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >>>>>>>>>>>
> >>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> >>>>>>> equal
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> >>
> >>>>>>
> >>>>>>>> with
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> no
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
>
> >>>>>>> any
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> lower on
> >>>>>>>>>>
> >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>> <cparnell1001@>
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Thanks Terry....
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> >>>>>>> NZ
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> time.
> >>>>>>>>>>>>>

> >>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> >>>>>>>> switch
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> in
> >>>>>>>>>>
> >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> >
> >>>>>> at
> >>>>>>
> >>>>>>
> >>>>>>>> 20db
> >>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
>
> >>>>>> box.
> >>>>>>
> >>>>>>>
> >>>>>>>> Less
> >>>>>>>>>>
> >>>>>>>>>>> decay time to mess with. Terry
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> >>>>>>>> <wagstw46@>
> >>>>>>>>
> >>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
> >>>>>>>>>>>>>>>>>> Step A:
> >>>>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> >>>>>>
> >>>>>>>> max
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> clockwise.
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> You are in USB mode.
> >>>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> >>>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> >>>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.

> >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> >>>>>>
> >>>>>>>> end
> >>>>>>>>
> >>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> ALC
> >>>>>>>>>>>
> >>>>>>>>>>>>> black bordered box.
> >>>>>>>>>>>>>> 6. You return to Stand-by.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> >>>>>>
> >>>>>>>>>> between
> >>>>>>>>>>
> >>>>>>>>>>> 1000 and
> >>>>>>>>>>>
> >>>>>>>>>>>>> 1100.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> >>>>>>> you
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> expect
> >>>>>>>>>>
> >>>>>>>>>>> the ALC
> >>>>>>>>>>>
> >>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> >>>>>>> the
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>> to peg
> >>>>>>>>>>>
> >>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> >>>>>>>
> >>>>>>>>> what
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> would you
> >>>>>>>>>>>
> >>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Step B:
> >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> >>>>>>
> >>>>>>>>> gain

> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> not
> >>>>>>>>>>
> >>>>>>>>>>>> touched
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> >>>>>>>> when
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> you
> >>>>>>>>>>
> >>>>>>>>>>>> flip to
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> >>>>>>> any
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> meter
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> >>>>>>>
> >>>>>>>>>> sensitive
> >>>>>>>>>>
> >>>>>>>>>>>> and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >>>>>>> scale.
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> Quickly
> >>>>>>>>>>
> >>>>>>>>>>>> turn
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> >>>>>>>
> >>>>>>>>> box.
> >>>>>>>>>
> >>>>>>>>>> Mic
> >>>>>>>>>>
> >>>>>>>>>>>> gain
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> >>>>>>
> >>>>>>>>> far

> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> end of
> >>>>>>>>>>
> >>>>>>>>>>>> ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> >>>>>>>
> >>>>>>>>> times
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> until you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> >>>>>>> This
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> adjustment is
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> >>>>>>> tends
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> peg
> >>>>>>>>>>
> >>>>>>>>>>>> hard
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> >>>>>>
> >>>>>>>>> around
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> max
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Comp
> >>>>>>>>>>
> >>>>>>>>>>>> you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Terry

> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> _____
> >>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> >>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >>>>>>> alignment
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Hi Terry, thanks for this.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> >>>>>>>> (Heater
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>>> etc), but
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> >>>>>>> "align"
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> speech
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >>>>>>>
> >>>>>>>> the
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> AG
> >>>>>>>>>>
> >>>>>>>>>>>> output to
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> 10 mV
> >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> >>>>>>> maximum
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> on-scale ALC
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> >>>>>>>>>>>>>>>

> >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> >>>>>>>>>> on-scaled).
> >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> >>>>>>>
> >>>>>>>>> turn
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> Proc ON
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> and
> >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> at
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> this
> >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> >>>>>>> reading.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> >>>>>>>>> pages
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> 40&41. As
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> >>>>>>>
> >>>>>>>>> switch
> >>>>>>>>>
> >>>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>> LEAVE
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the

> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>>> off of the
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >>>>>>> step
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> conditions still
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> being in force?
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> >>>>>>> "max
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>>> reading on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> the Compression Scale".
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> >>>>>>> reading.
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> That
> >>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> would be on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> >>>>>>> indication
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> of
> >>>>>>>>>>
> >>>>>>>>>>>> 20db
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> >>>>>>> with
> >>>>>>>
> >>>>>>>>>> a
> >>>>>>>>>>
> >>>>>>>>>>>> multi-scale
> >>>>>>>>>>>>

> >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> >>>>>>> meter
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> scale.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> >>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> gain
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> >>>>>>> 1200
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> and
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> peaked L27.
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> >>>>>>> would
> >>>>>>>
> >>>>>>>
> >>>>>>>>> say
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> something
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> >>>>>>>>> box".
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> Just
> >>>>>>>>>>
> >>>>>>>>>>>> make it
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> >>>>>> read.
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>>> switch on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry

> >>>>>>> -K9TW
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>>>>>>>>>
(Message over 64 KB, truncated)

32013. Re: HV Caps voltage question

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 13:33:37 UTC
From: sv9dru
Topic: 31980 Message: 32013

Yes indeed I did misunderstood that statement Jim. Thanks for the correction.

--- In TS-520_820_530_830@yahoogroups.com, Jim S <jimstan@...> wrote:
>
>
>
> On 6/22/2011 1:45 AM, sv9dru wrote:
> >
> > There is one more detail overlooked Mike. Since these caps are used in
> > a voltage doubler configuration, they are acting as individual pairs
> > rather than as one cap consistent of both pairs connected in series.
> > Each pair of parallel caps is being charged during an opposite half
> > cycle of the rectified AC from the HV 2x400V secondary of the
> > transformer, so each pair is acting by "itself" even though they seem
> > to be connected in series.
> > So in this particular circuit there is 200uf at 450V (100+100 in
> > parallel) used by each half of the full wave voltage doubler.
> >
> > What is important though for both pairs is to withstand at least 400V
> > each or at least 800V for their in series combination in order to
> > safely handle the voltages present. Of course, one has to use a
> > capacitor having a "comfortably" higher voltage rating than the max
> > voltage being present in the circuit, in order to be on the safe side.
> > It makes sense what Jim AG3Y is saying about the industry standard in
> > the voltage rating of caps, and that is probably the reason why the
> > 400V ones present in my Ts530 have not exploded yet !!!
> >
>
> <snip>
>
> Note: I did NOT say that caps that have a 400v rating are good for 800
> volts. I'm not sure if you understood it that way, or not. I meant that
> in industry, if the engineers expected to see 400 volts at a certain
> point in the circuit, they would specify that caps good for at least 800
> volts would be used in that place ! There is quite a bit of difference
> in the meaning, and that is what I intended to point out.
>
> I would not think that the circuit as I understand it to be constructed
> would be very safe. In addition to the series-parallel version of the
> caps, equalizing resistors, and spike suppression capacitors should be
> utilized , in order to keep the voltage drops across each cap under
> control.
>
> And BTW, this "industry" I am talking about would typically be the
> broadcast industry, or the military, where cost is much less of a factor

> than it is in the consumer industry. That would be reasons why corners
> would not tend to be cut quite as much as they would be in the consumer
> trade!
>
> Hope this clarifies what I was trying to say.
>
> 73, Jim AG3Y
>
>
>
>
> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17760)
> http://www.pctools.com/
> =======
>
>
> [Non-text portions of this message have been removed]
>

32014. Re: [TS-520_820_530_830] power supply

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 16:16:39 UTC
From: John Davidson
Topic: 32006 Message: 32014

My 520 has one and I ran mobile with it for a few years back in the 70's.
I have not used DC power for over 30 years so I may be willing to remove it and ship for the right price.
What is your callsign>>??.

From: CRAIG <rightflyer60@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wed, June 22, 2011 5:29:30 AM
Subject: [TS-520_820_530_830] power supply

I am looking for a dc supply that bolts on the back of the ts-520.
If anyone has one please let me know .

[Non-text portions of this message have been removed]

32015. Re: [TS-520_820_530_830] TS-520 vs TS-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 17:15:11 UTC
From: Joseph Stiles
Topic: 32005 Message: 32015

Daniel,

Good to hear that just a bit of "spraying" got you going. Even being "minor mods" as you stated, from my experience it's been more trouble than it's worth. My reasons are: If you have to remove any board...better have a good way to unwrap and then re-wrap all those wires. I guarantee... YOU WILL BREAK SOME even with the proper tool. These wires have been in the same position for...what....35+ years! I just have found it not worth my time if the rig works well...aligned and tuned correctly...but I guess that's what this hobby is all about...but..also be aware of those carbon tuning slugs on the ANT/MIX/XMIT boards.....they are fragile...and will crack/break if you look at them wrong! Find a good non-contaminating lube that will not melt or swell plastic or turn "gooey." I have used a synthetic lube with "teflon" and a needle point applicator...and have ONLY broken 3! They are very hard to find...well....good luck.....

73's joe wb7uqu

From: on5py <ON5PY1967@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 22, 2011 2:08 AM
Subject: [TS-520_820_530_830] TS-520 vs TS-520s

Hi group,

Just bought a 1976 vintage TS-520 that, after switch spraying, works very well.

I have both user's and service manual.

I have them for the following version, the TS-520s, and I noticed that, beside major differences - 160 meter, etc.. - there are also many minor mods aiming to better strong-signal performance.

Hence my question : is it worth tracing them and implementing them in the bare 520 ???

Any comment is VERY welcome !

Thanks & 73 - Daniel, ON5PY

[Non-text portions of this message have been removed]

32016. Re: [TS-520_820_530_830] TS-520 vs TS-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 18:38:42 UTC
From: Jim S
Topic: 32005 Message: 32016

I believe I should mention here that wire-wrap wires are NOT MEANT to be re-wrapped once the original wrap is un-done. You should always solder the re-wrapped connection, as it is no longer "gas-tight" and will eventually oxidize and possibly form a bad connection that will be the devil to find!

Just the "word to the wise", from one who did wire-wrap for years !

73, Jim AG3Y

On 6/22/2011 1:15 PM, Joseph Stiles wrote:
>
> Daniel,
>
> Good to hear that just a bit of "spraying" got you going. Even
> being "minor mods" as you stated, from my experience it's been more
> trouble than it's worth. My reasons are: If you have to remove any
> board...better have a good way to unwrap and then re-wrap all those
> wires. I guarantee... YOU WILL BREAK SOME even with the proper tool.
> These wires have been in the same position for...what....35+ years! I
> just have found it not worth my time if the rig works well...aligned
> and tuned correctly...but I guess that's what this hobby is all about..
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.26, Virus/Spyware Database: 6.17760)
http://www.pctools.com/
=======

[Non-text portions of this message have been removed]

32017. can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 19:38:05 UTC
From: Joseph Stiles
Topic: 32017 Message: 32017

Greetings group,

  A member of this group contacted me stating that he could not read my post(s) due to "non-text stuff" being included in the msg. Has anybody else had this problem??

                      73's   joe wb7uqu

[Non-text portions of this message have been removed]

32018. Re: [TS-520_820_530_830] can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 19:45:21 UTC
From: n6wk@n6wk.com
Topic: 32017 Message: 32018

No problems here.

Gordon

On 6/22/2011 12:38 PM, Joseph Stiles wrote:
>
> Greetings group,
>
> A member of this group contacted me stating that he could not read my
> post(s) due to "non-text stuff" being included in the msg. Has anybody
> else had this problem??
>
> 73's joe wb7uqu
>
> [Non-text portions of this message have been removed]
>
>

32019. Re: [TS-520_820_530_830] can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 20:04:04 UTC
From: David King
Topic: 32017 Message: 32019

Nope

Sent via DROID on Verizon Wireless

-----Original message-----
From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, Jun 22, 2011 19:38:05 GMT+00:00
Subject: [TS-520_820_530_830] can't read post

Greetings group,

  A member of this group contacted me stating that he could not read my post(s) due to "non-text stuff" being included in the msg. Has anybody else had this problem??

                      73's   joe wb7uqu

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

32020. TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 19:54:51 UTC
From: Fun
Topic: 32020 Message: 32020

I have an opportunity to purchase(in person) Kenwood TS-530SP. I will be able to test/operate it prior to purchase.

The following describes the condition of the rig:
1. When was the last time the rig was in operation?

Maybe 18 years? I turned it on last nite and heard sounds from the speaker.

2. What does the rig come with? mike , cord , etc.

See mike and cord in the photo I sent to you.

3. Cosmetic condition - clean or marred(scratches)?

Clean.

4. Operating manuals/instructions, original box included?

Instruction manual - I sent photo - we never got a box from the man who sold to us.

Since the TS-530 is over 20 years old, outside of possible replacement of the PA tubes, what other technical concerns/problems might
be anticipated. I am aware that this rig is a hybrid with tubes in the power output where you would have to have to adjust the Load,
Plate , and Drive. I intend to read the manual before examining the rig.
Thanks, 73 , KC2TBA, Fun

32021. Re: [TS-520_820_530_830] TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 20:40:54 UTC
From: Joseph Stiles
Topic: 32020 Message: 32021

Hey Fun,

Most of the time the HV(high voltage) capacitors may be "sagging" a bit in supplying full voltage for full output...look for about a minimum of 780(key down) or so volts..900 or so at "idle"...you can check with the front panel meter...use the meter selector switch.."HV" and flip the send switch...do this with a dummy load/antenna connected as you should check this also after you "tune-up" to see how much voltage you have. Replacement cap. kits are readily available. If rig suffers from "high plate current" and low power output the cathode resistors can be at fault....a few cents to fix...and some time...usually caused by excessive time "tuning-up." Output should be nominal of 100W(slightly lower on the higher freq bands) with around 200-250mA of plate current. Don't go just replacing the PA tubes 'cause they are old...check for proper output/function first. I have only had to replace 2 sets of PA tubes on "other rigs." I still have an 820S with
the original S2001A's PA tubes...still going strong. These rigs are pretty tough...but do get abused. Also, you might notice some "scratchy" pots...easy to clean with some good tuner cleaner/lube and "canned air." Maybe you can use the antenna to see if it actually does receive signals...and not just "noise." If you decide to buy it..get it home...read the manual(s) to get used to tuning them up. You may also want to have some more fun by removing all the connectors one by one and clean them up (connector and board side)...they do get oxidized and can cause signal flow problems...do this by reconnecting/disconnecting several times with some cleaner wetting the pins. Good luck.....

73's Joe
WB7UQU

From: Fun <fhlall.pearlriver@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 22, 2011 12:54 PM
Subject: [TS-520_820_530_830] TS-530SP QUESTION

I have an opportunity to purchase(in person) Kenwood TS-530SP. I will be able to test/operate it prior to purchase.

The following describes the condition of the rig:
1. When was the last time the rig was in operation?

Maybe 18 years? I turned it on last nite and heard sounds from the speaker.

2. What does the rig come with? mike , cord , etc.

See mike and cord in the photo I sent to you.

3. Cosmetic condition - clean or marred(scratches)?

Clean.

4. Operating manuals/instructions, original box included?

Instruction manual - I sent photo - we never got a box from the man who sold to us.

Since the TS-530 is over 20 years old, outside of possible replacement of the PA tubes, what other technical concerns/problems might
be anticipated. I am aware that this rig is a hybrid with tubes in the power output where you would have to have to adjust the Load,
Plate , and Drive. I intend to read the manual before examining the rig.
Thanks, 73 , KC2TBA, Fun

[Non-text portions of this message have been removed]

32022. Re: [TS-520_820_530_830] TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 21:00:43 UTC
From: Terry Wagoner
Topic: 32020 Message: 32022

I know everyone recommends the "connector clean and wipe" and it is probably needed, but be darned carefully pulling connectors off to clean them.

Try not to rock them side to side as you apply upward pressure. If you have to rock them try to do it gently end to end.

It is very easy to crack a foil pad from its trace and not even see it. Can give you fits troubleshooting. Then you are in to making jumpers and trying to extend solder flows to bridge breaks and all those kinds of cobble jobs to save the board. Just my experience. Terry -K9TW

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@...m" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, June 22, 2011 4:40:54 PM
Subject: Re: [TS-520_820_530_830] TS-530SP QUESTION

Hey Fun,

Most of the time the HV(high voltage) capacitors may be "sagging" a bit in supplying full voltage for full output...look for about a minimum of 780(key down) or so volts..900 or so at "idle"...you can check with the front panel meter...use the meter selector switch.."HV" and flip the send switch...do this with a dummy load/antenna connected as you should check this also after you "tune-up" to see how much voltage you have. Replacement cap. kits are readily available. If rig suffers from "high plate current" and low power output the cathode resistors can be at fault....a few cents to fix...and some time...usually caused by excessive time "tuning-up." Output should be nominal of 100W(slightly lower on the higher freq bands) with around 200-250mA of plate current. Don't go just replacing the PA tubes 'cause they are old...check for proper output/function first. I have only had to replace 2 sets of PA tubes on "other rigs." I still have an 820S with the original S2001A's PA tubes...still going strong. These rigs are pretty tough...but do get abused. Also, you might notice some "scratchy" pots...easy to clean with some good tuner cleaner/lube and "canned air." Maybe you can use the antenna to see if it actually does receive signals...and not just "noise." If you decide to buy it..get it home...read the manual(s) to get used to tuning them up. You may also want to have some more fun by removing all the connectors one by one and clean them up (connector and board side)...they do get oxidized and can cause signal flow problems...do this by reconnecting/disconnecting several times with some cleaner wetting the pins. Good luck.....

73's Joe
WB7UQU

From: Fun <fhlall.pearlriver@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 22, 2011 12:54 PM
Subject: [TS-520_820_530_830] TS-530SP QUESTION

I have an opportunity to purchase(in person) Kenwood TS-530SP. I will be able to test/operate it prior to purchase.

The following describes the condition of the rig:
1. When was the last time the rig was in operation?

Maybe 18 years? I turned it on last nite and heard sounds from the speaker.

2. What does the rig come with? mike , cord , etc.

See mike and cord in the photo I sent to you.

3. Cosmetic condition - clean or marred(scratches)?

Clean.

4. Operating manuals/instructions, original box included?

Instruction manual - I sent photo - we never got a box from the man who sold to us.

Since the TS-530 is over 20 years old, outside of possible replacement of the PA tubes, what other technical concerns/problems might
be anticipated. I am aware that this rig is a hybrid with tubes in the power output where you would have to have to adjust the Load,
Plate , and Drive. I intend to read the manual before examining the rig.
Thanks, 73 , KC2TBA, Fun

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

32023. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-22 22:47:40 UTC
From: Chris Parnell
Topic: 31926 Message: 32023

Hi Terry,

The voltages at the tubes seem a little low from memory, I will measure them again tonight. The Driver tube voltages (from memory) looked ok though... but again, I will double check tonight.

Terry, the situation is that if I tune for maximum power out (about 60 - 70 W), then the IP is around 140-160mA.
If I adjust for 225mA my output power is almost non existent, hence me wanting to get this thing resolved.

Cheers
Chris

On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:

> Chris--Are you saying you cannot load to any higher than 150ma IP?
>
> If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> on RF board are good place to look with your RF VTVM. Terry
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS830 <TS-520_820_530_830@yahoogroups.com>
> Sent: Wed, June 22, 2011 6:51:21 AM
> Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
>
> OK..... well Mike (nor anyone else) answered this question... so...
>
> One thing that springs to mind is that I did change the RF board that was faulty
> in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> but thinking back, it's the time that my Power out was reduced to around
> 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
>
> Is the RF board a good place to start looking and if so, around what are?
>
> Thanks
> Chris, ZL1CDP
>
> Begin forwarded message:
>
> > From: Chris Parnell <cparnell1001@...>
> > Date: 20 June 2011 10:10:55 AM NZST
> > To: TS-520_820_530_830@yahoogroups.com
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > Reply-To: TS-520_820_530_830@yahoogroups.com

> >
> > Mike,
> >
> > Any idea where would be a good place to start the voltage measurements?
> >
> > Cheers
> > Chris
> >
> > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> >
>> Hi Chris,
>>
>> Based on the HV and power output levels you provided, 850VDC high voltage and
>>70 watts output, that equates to an IP current level of approximately 150ma.
>>Therefore, with those levels the INPUT power in the final amplifier would be;
>>
>> .150 x 850 = 127.5 watts
>>
>> Since the 830 final amplifier has an efficiency rating of approximately 55%,
>>power output would be
>>
>> 127.5 - 45% = 70.125 watts
>>
>> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
>>supplies are within specifications and operating as they should.
>>
>> I recommend you troubleshoot the 830's transmit signal path, take level
>>measurements and compare your findings with the 830 service manual Level Diagram
>>on page 44.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>>wrote:
>>>
>>> Hi Terry,
>>>
>>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
>>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
>>>then the voltages would be about right for 60-70W output.
>>>
>>> My 830 was working "OK" originally, although the alignment was miles off.
>>> Then I had an issue with a tube that failed in the final unit, and it caused a
>>>number of issues.. one of which was NO output etc.
>>>
>>> I swapped the RF board as the one that came with the unit was broke in a number
>>>of areas, so I purchased one from Bob Mansker and swapped it.
>>> To which I decided to re-align the radio.

> >>>
> >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> >>>be).
> >>> I purchased a new front fascia and it looks great.. needs to work great now
> >>:-)
> >>>
> >>> Cheers
> >>> Chris
> >>>
> >>>
> >>>
> >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> >>>
> >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> >>>>lack of effort!
> >>>>
> >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> >>>>position, that when you flip to send the meter pegs off scale right hand side of
> >>>>the meter. Is this true?
> >>>>
> >>>> 2. The expected response would be for the meter to deflect to the far end of
> >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> >>>>not peg.
> >>>>
> >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> >>>>setting. Comp level pot is not in the circuit when Processor is off.
> >>>>
> >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> >>>>difficulty doing this step as written and you had not completed it yet. I
> >>>>suggest you go back and repeat this step.
> >>>>
> >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
> >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> >>>>not peg the meter full scale or any ALC indication very far past the black
> >>>>border. If that is not how you left this step then this is likely your problem.
> >>>>
> >>>>
> >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> >>>>able to move meter indication down to the ALC box max border or S9.
> >>>>
> >>>>
> >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before

> >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> >>>>
> >>>>
> >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> >>>>the AF board.
> >>>>
> >>>>
> >>>> Good Luck-Terry K9TW
> >>>>
> >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >>>wrote:
> >>>>>
> >>>>> Hi Terry,
> >>>>>
> >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
> >>>>>an email off list with some voltage measurements.
> >>>>>
> >>>>> Cheers
> >>>>> Chris
> >>>>>
> >>>>>
> >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> >>>>>
> >>>>>> Chris--
> >>>>>>
> >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
> >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> >>>>>
> >>>>>> clear enough real time video or not for this to work. Not sure about our time
> >>>>
> >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> >>>>>>
> >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> >>>>
> >>>>>> rigs for a living? As you know I had never performed this step until you asked
> >>>>>
> >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> >>>>>
> >>>>>> generator. I have just done selected steps.
> >>>>>>
> >>>>>> Terry
> >>>>>>
> >>>>>> _____
> >>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>
> >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I

> >>>>
> >>>>>> have no attenuation in there)...
> >>>>>>
> >>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
> >>>>>>
> >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> >>>>>>Gain
> >>>>>>
> >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> >>>>>>
> >>>>>> with regards to ALC readings.
> >>>>>>
> >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> >>>>>>
> >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> >>meter.
> >>>>>>
> >>>>>> I may record a small video and send it to you... easier to see what I mean and
> >>>>>
> >>>>>> what i'm doing.
> >>>>>>
> >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> >>>>>>is,
> >>>>>>
> >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> >>>>>>
> >>>>>> Cheers
> >>>>>> Chris
> >>>>>>
> >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> >>>>>>
> >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> >>>>
> >>>>>>> test signals.
> >>>>>>>
> >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
> >>>>>>
> >>>>>>
> >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> >>>>>
> >>>>>>> where I can get a good match at far right end of ALC black box.
> >>>>>>>
> >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
> >>>>>>>
> >>>>>>>
> >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> >>>>>>>
> >>>>>>>
> >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to

> >>>>>
> >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> >>>>>>>
> >>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
> >>>>>>>
> >>>>>>>
> >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> >>>>>
> >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> >>>
> >>>>>>> starting to get confused regards what your problem is.
> >>>>>>>
> >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> >>
> >>>>>>> troubleshooting with Mike.
> >>>>>>>
> >>>>>>> Terry
> >>>>>>>
> >>>>>>> _____
> >>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>
> >>>>>>> Hi Terry / Mike.....
> >>>>>>>
> >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> >>>
> >>>>>>> piece of kit.
> >>>>>>> Here's what I see when I follow your instructions:
> >>>>>>>
> >>>>>>>>> I use a spare mic connector and clipped the generator output to it with
>
> >>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> >>>>>>>>
> >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
> >>>>
> >>>>>>> the
> >>>>>>>
> >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> >>>>>>>
> >>>>>>>>> I have the mic gain set exactly at
> >>>>>>>>> No. 4 position.
> >>>>>>>>
> >>>>>>> Same here
> >>>>>>>
> >>>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> >>>>>>>>> switches. Let it warm up a little.
> >>>>>>>>
> >>>>>>> Same here

> >>>>>>>
> >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >>
> >>>>>>> Wave
> >>>>>>>
> >>>>>>>
> >>>>>>>> Tek generator to exactly 10 mv
> >>>>>>>>
> >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> >>>>>>>
> >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> >>
> >>>>>>>> place meter switch in ALC position.
> >>>>>>>>
> >>>>>>>
> >>>>>>> Same here
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> >>>>>>
> >>>>>>>
> >>>>>>>> end of the black ALC box. Maybe a needles worth.
> >>>>>>>>
> >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> >>>>>
> >>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> >>>>>>>
> >>>>>>>
> >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> >>>>
> >>>>>>> s-meter scale, it's S9+40dB +).
> >>>>>>>
> >>>>>>>>
> >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >>>>>>> position
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and I have not touched mic gain pot.
> >>>>>>>>
> >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> >>>>>>>
> >>>>>>>
> >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> >>>
> >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> >>>>>
> >>>>>>> I'm saying and seeing.
> >>>>>>>
> >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> >>

> >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> >>>>>
> >>>>>>> PROC ON, which on the S-Meter is S-9.
> >>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
>
> >>>>>>> minimum.
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> >>>>>
> >>>>>>
> >>>>>>>>> black ALC box.
> >>>>>>>>
> >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> >>>>>>>
> >>>>>>>
> >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> >>>>>
> >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> >>>>>>>
> >>>>>>>>> It could be adjusted a little to get a match if I had the covers
> >>>>>>>>> off, but close enough.
> >>>>>>>>
> >>>>>>>
> >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> >>>
> >>>>>>> them
> >>>>>>>
> >>>>>>> with the PROC ON.
> >>>>>>>
> >>>>>>>>> I switch the meter from ALC to Comp and it indicates just
> >>>>>>>>> a little above 20db on the Comp scale.
> >>>>>>>>
> >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> >>>
> >>>>>>> adjust L26 for 20dB reading.
> >>>>>>>
> >>>>>>> I will need to do some component checking in the circuit around the Processor
> >>>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>> Mike and yourself have recommended.
> >>>>>>>
> >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> >mentioned.
> >>>>>>>
> >>>>>>> Thanks
> >>>>>>> Chris, ZL1CDP
> >>>>>>>
> >>>>>>>>

> >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> >>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>>
> >>>>>>>> found condition for my daily operator is very close to being right on the
> >>
> >>>>>>> same
> >>>>>>>
> >>>>>>>
> >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> >>>>>
> >>>>>>> on
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and off.
> >>>>>>>>
> >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> >>>>>>
> >>>>>>>
> >>>>>>>> some more and if I come up with something will write.
> >>>>>>>>
> >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> >>>>>>
> >>>>>>>
> >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> >>>
> >>>>>>> your
> >>>>>>>
> >>>>>>>>
> >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> >>>>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>
> >>>>>>>> wouldnt think much higher.
> >>>>>>>>
> >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> >>>>>>
> >>>>>>>
> >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >>>>>
> >>>>>>
> >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> >>
> >>>>>>> Good
> >>>>>>>
> >>>>>>>
> >>>>>>>> luck Terry
> >>>>>>>>

> >>>>>>>> _____
> >>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Hi Terry,
> >>>>>>>>
> >>>>>>>> The only difference from my original post is that I increased the "gain" on
> >>>>
> >>>>>>> the
> >>>>>>>
> >>>>>>>>
> >>>>>>>> input (Mic gain), therefore got an ALC reading.
> >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> >>>>>>> why...
> >>>>>>>>
> >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> >>>>compensate.
> >>>>>>>>
> >>>>>>>>> Based on what you are reporting I would expect it to
> >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>> in
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >>>>>>>>>
> >>>>>>>>
> >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> >>
> >>>>>>> right
> >>>>>>>
> >>>>>>>>
> >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >>>>>>>>
> >>>>>>>> Hope this makes sense..
> >>>>>>>>
> >>>>>>>> Cheers
> >>>>>>>> Chris
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >>>>>>>>
> >>>>>>>>> Chris--This appears different than what you originally reported of getting
> >>>>
> >>>>>>> no
> >>>>>>>
> >>>>>>>>

> >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> >>>>
> >>>>>>
> >>>>>>>>> Where
> >>>>>>>>>
> >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> >>
> >>>>>>> hard
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> on
> >>>>>>>>>
> >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> >>>>>
> >>>>>>>
> >>>>>>>>> the
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> peg.
> >>>>>>>>>
> >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >>>>
> >>>>>>
> >>>>>>>>> off
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> >
> >>>>>>> back
> >>>>>>>
> >>>>>>>
> >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> >>>>>
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>>> in
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"

> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >>>>
> >>>>>>
> >>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> >>>>>>> without
> >>>>>>>
> >>>>>>>
> >>>>>>>> PROC NOT engaged, just Mic.
> >>>>>>>>
> >>>>>>>> Chris
> >>>>>>>> Sent from my iPhone
> >>>>>>>>
> >>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> >>>>>>>>
> >>>>>>>>> Hi Terry, in a nutshell,
> >>>>>>>>>
> >>>>>>>>> It doesn't weigh up here.
> >>>>>>>>>
> >>>>>>>>> Following to the letter the service manual and then taking into account
> >>
> >>>>>>>> your
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> >>>>
> >>>>>>> of
> >>>>>>>
> >>>>>>>>
> >>>>>>>> ALC
> >>>>>>>>
> >>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> >>
> >>>>>>>> meter)
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> deflection without PROC engaged, just Mic.
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >>>
> >>>>>>
> >>>>>>>>>
> >>>>>>>>> Thanks
> >>>>>>>>> Chris
> >>>>>>>>>
> >>>>>>>>> Sent from my iPhone

> >>>>>>>>>>
> >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> >>>>>>>>>>
> >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> >>>>>>> have
> >>>>>>>
> >>>>>>>
> >>>>>>>> same
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> >>>>>>>> adjust
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> >>>
> >>>>>>>
> >>>>>>>> Tune
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> >>>>>>>>>
> >>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> >>>
> >>>>>>>
> >>>>>>>> can
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> move
> >>>>>>>>>
> >>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> >>>
> >>>>>>>
> >>>>>>>> will
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> be
> >>>>>>>>>
> >>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> >>
> >>>>>>> is
> >>>>>>>
> >>>>>>>>
> >>>>>>>> to
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> set
> >>>>>>>>>
> >>>>>>>>>> audio generator output higher as others suggested. I chose to just
> >>>>>>>> increase

> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> >>>>>>> longer
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> needed
> >>>>>>>>>>
> >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> >>
> >>>>>>
> >>>>>>>>> would
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> >>>>>>> good
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> matched
> >>>>>>>>>>
> >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> >>>>>>>>>>>
> >>>>>>>>>>> _____
> >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>>>
> >>>>>>>>>>> Thanks Terry,
> >>>>>>>>>>>
> >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >>>>>>> then
> >>>>>>>
> >>>>>>>>> ON
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> to
> >>>>>>>>>>
> >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> >
> >>>>>>> to
> >>>>>>>
> >>>>>>>
> >>>>>>>>> have
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> >>>>>>>>>>>
> >>>>>>>>>>> Cheers
> >>>>>>>>>>> Chris

> >>>>>>>>>>>
> >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >>>>>>>>>>>
> >>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> >>>>>>> equal
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> >>
> >>>>>>
> >>>>>>> with
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>
> >>>>>>>>> no
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
>
> >>>>>>> any
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> lower on
> >>>>>>>>>>
> >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>> <cparnell1001@>
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Thanks Terry....
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> >>>>>>> NZ
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> time.
> >>>>>>>>>>>>
> >>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>> Chris
> >>>>>>>>>>>>

> >>>>>>>>>>>>>
> >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> >>>>>>>>> switch
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> in
> >>>>>>>>>>>
> >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> >
> >>>>>>> at
> >>>>>>>
> >>>>>>>
> >>>>>>>>> 20db
> >>>>>>>>>
> >>>>>>>>>>> on
> >>>>>>>>>>>
> >>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
>
> >>>>>>> box.
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> Less
> >>>>>>>>>>>
> >>>>>>>>>>>> decay time to mess with. Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> >>>>>>>>> <wagstw46@>
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>> Chris--OK you are telling me the following:
> >>>>>>>>>>>>>> Step A:
> >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> >>>>>>
> >>>>>>>>> max
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> clockwise.
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> You are in USB mode.
> >>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> >>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> >>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> >>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> >>>>>>
> >>>>>>>>> end

> >>>>>>>>
> >>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> ALC
> >>>>>>>>>>>
> >>>>>>>>>>>> black bordered box.
> >>>>>>>>>>>> 6. You return to Stand-by.
> >>>>>>>>>>>>
> >>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> >>>>>>
> >>>>>>>>>> between
> >>>>>>>>>>
> >>>>>>>>>>> 1000 and
> >>>>>>>>>>>
> >>>>>>>>>>>> 1100.
> >>>>>>>>>>>>
> >>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> >>>>>>> you
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> expect
> >>>>>>>>>>
> >>>>>>>>>>> the ALC
> >>>>>>>>>>>
> >>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> >>>>>>> the
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>> to peg
> >>>>>>>>>>>
> >>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> >>>>>>>
> >>>>>>>>>> what
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> would you
> >>>>>>>>>>>
> >>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> >>>>>>>>>>>>
> >>>>>>>>>>>> Step B:
> >>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> >>>>>>
> >>>>>>>>> gain
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> not

> >>>>>>>>>>
> >>>>>>>>>>> touched
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> >>>>>>>> when
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> you
> >>>>>>>>>>
> >>>>>>>>>>> flip to
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> >>>>>>> any
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> meter
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> >>>>>>>
> >>>>>>>>>> sensitive
> >>>>>>>>>>
> >>>>>>>>>>> and
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >>>>>>> scale.
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> Quickly
> >>>>>>>>>>
> >>>>>>>>>>> turn
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> >>>>>>>
> >>>>>>>>> box.
> >>>>>>>>>
> >>>>>>>>>> Mic
> >>>>>>>>>>
> >>>>>>>>>>> gain
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> >>>>>>
> >>>>>>>> far
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> end of

> >>>>>>>>>>
> >>>>>>>>>>> ALC
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> >>>>>>>
> >>>>>>>>> times
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> until you
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> >>>>>>> This
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> adjustment is
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> >>>>>>> tends
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> peg
> >>>>>>>>>>
> >>>>>>>>>>> hard
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> >>>>>>
> >>>>>>>>> around
> >>>>>>>>>
> >>>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> max
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> Comp
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> you
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Terry
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>

> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> _____
> >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >>>>>>> alignment
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> >>>>>>>> (Heater
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>> etc), but
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> >>>>>>> "align"
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> speech
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >>>>>>>
> >>>>>>>> the
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> AG
> >>>>>>>>>>
> >>>>>>>>>>> output to
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> 10 mV
> >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> >>>>>>> maximum
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> on-scale ALC
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> >>>>>>>>>> on-scaled).
> >>>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV.....

> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> >>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> >>>>>>>
> >>>>>>>>> turn
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> Proc ON
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> and
> >>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> >>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> at
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> this
> >>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> >>>>>>> reading.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> >>>>>>>> pages
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> 40&41. As
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> >>>>>>
> >>>>>>>>> switch
> >>>>>>>>>
> >>>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>>> LEAVE
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>

> >>>>>>>>>>>> off of the
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >>>>>>> step
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> conditions still
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> being in force?
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> >>>>>>> "max
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> meter
> >>>>>>>>>>>
> >>>>>>>>>>>>>> reading on
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> the Compression Scale".
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> >>>>>>> reading.
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> That
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>>>> would be on
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> >>>>>>> indication
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> of
> >>>>>>>>>>
> >>>>>>>>>>>> 20db
> >>>>>>>>>>>
> >>>>>>>>>>>>>> and
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> >>>>>>> with
> >>>>>>>
> >>>>>>>>>> a
> >>>>>>>>>>
> >>>>>>>>>>>>>> multi-scale
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> >>>>>>> meter
> >>>>>>>

> >>>>>>>
> >>>>>>>>>> scale.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> >>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> gain
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> >>>>>>>> 1200
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>>
> >>>>>>>>>>>> peaked L27.
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> >>>>>>>> would
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> say
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> something
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> >>>>>>>>> box".
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Just
> >>>>>>>>>>>
> >>>>>>>>>>>> make it
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> >>>>>>> read.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> >>>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>>
> >>>>>>>>>>>> switch on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> >>>>>>>> -K9TW
> >>>>>>>>
> >>>>>>>>>

> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>>>>> <cparnell1001@>
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> Ok Terry, thank you.
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> >>>>>>
> >>>>>>>>> chance
> >>>>>>>>>
> >>>>>>>>>>> to
> >>>>>>>>>>>
> >>>>>>>>>>>>> check
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> >>>>>>> so
> >>>>>>>
> >>>>>>>>> I
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> will
> >>>>>>>>>>>
> >>>>>>>>>>>>> give it a
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> try today and report back. Terry
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>
> >>>>>>>>>>>>> <cparnell1001@>
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> >>>>>>> in
> >>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> 830

> >>>>>>>>>>
> >>>>>>>>>>> at the
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> weekend?
> >>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> >>>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> ----------
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
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> >>>>>>>>>>>>>>>> ----------
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Yahoo! Groups Links
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]

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> >>>>>>>>>
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> >>>>>>>>
> >>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>
> >>>>>>>>> ------------------------------------
> >>>>>>>>
> >>>>>>>>> Yahoo! Groups Links
> >>>>>>>>
> >>>>>>>>> [Non-text portions of this message have been removed]
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>
> >>>>>>>
> >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> >>>>>>>
> >>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
> >>>
> >>>> about
> >>>>>>>>
> >>>>>>>> out of ideas.
> >>>>>>>>
> >>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
> >>>>>
> >>>>>> rig. I just unplugged the mic and brought the test equipment to the operating
> >>>>>>
> >>>>>>>
> >>>>>>>> position.
> >>>>>>>>
> >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> >
> >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> >>>>
> >>>>> at
> >>>>>>>
> >>>>>>>>
> >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> >>
> >>>> heater

> >>>>>>>>
> >>>>>>>> switches. Let it warm up a little.
> >>>>>>>>
> >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> >>
> >>>>>>> Wave
> >>>>>>>
> >>>>>>>
> >>>>>>>> Tek generator to exactly 10 mv.
> >>>>>>>>
> >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> >>>>
> >>>>>>>> place meter switch in ALC position.
> >>>>>>>>
> >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> >>>>>>
> >>>>>>>
> >>>>>>>> end of the black ALC box. Maybe a needles worth.
> >>>>>>>>
> >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> >>>>>>> position
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and I have not touched mic gain pot.
> >>>>>>>>
> >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> >>>>>
> >>>>>>
> >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> >
> >>>>>>> covers
> >>>>>>>
> >>>>>>>>
> >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> >>>>
> >>>>>>>> just
> >>>>>>>>
> >>>>>>>> a little above 20db on the Comp scale.
> >>>>>>>>
> >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> >>>>
> >>>>>>> as
> >>>>>>>
> >>>>>>>
> >>>>>>>> found condition for my daily operator is very close to being right on the
> >>
> >>>>>>> same
> >>>>>>>
> >>>>>>>
> >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc

> >>>>>
> >>>>>>> on
> >>>>>>>
> >>>>>>>>
> >>>>>>>> and off.
> >>>>>>>>
> >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> >>>>>>
> >>>>>>>
> >>>>>>>> some more and if I come up with something will write.
> >>>>>>>>
> >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> >>>>>>
> >>>>>>>
> >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> >>>
> >>>>>>> your
> >>>>>>>
> >>>>>>>>
> >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> >>>>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>
> >>>>>>>> wouldnt think much higher.
> >>>>>>>>
> >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> >>>>>>
> >>>>>>>
> >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> >>>>>
> >>>>>>
> >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> >>
> >>>>>>> Good
> >>>>>>>
> >>>>>>>
> >>>>>>>> luck Terry
> >>>>>>>>
> >>>>>>>> _____
> >>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>
> >>>>>>>> Hi Terry,
> >>>>>>>>
> >>>>>>>> The only difference from my original post is that I increased the "gain" on
> >>>>
> >>>>>>> the

> >>>>>>>
> >>>>>>>>
> >>>>>>>> input (Mic gain), therefore got an ALC reading.
> >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
>
> >>>>>>> why...
> >>>>>>>>
> >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> >>>>compensate.
> >>>>>>>>
> >>>>>>>>>> Based on what you are reporting I would expect it to
> >>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>>> in
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >>>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> >>
> >>>>>>> right
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> >>>>>>>>>
> >>>>>>>>> Hope this makes sense..
> >>>>>>>>>
> >>>>>>>>> Cheers
> >>>>>>>>> Chris
> >>>>>>>>>
> >>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> >>>>>>>>>
> >>>>>>>>>> Chris--This appears different than what you originally reported of getting
> >>>>
> >>>>>>> no
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> >>>>
> >>>>>>>
> >>>>>>>>>> Where
> >>>>>>>>>>
> >>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> >>
> >>>>>>> hard
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> on

> >>>>>>>>>
> >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> >>>>>
> >>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> peg.
> >>>>>>>>>
> >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> >>>>
> >>>>>>
> >>>>>>>>> off
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> >
> >>>>>>> back
> >>>>>>>
> >>>>>>>
> >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> >>>>>
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> >>>>>
> >>>>>>>
> >>>>>>>>> in
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> >>>>>>>>>
> >>>>>>>>> _____
> >>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>
> >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> >>>>
> >>>>>>
> >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> >>>>>>> without
> >>>>>>>
> >>>>>>>

> >>>>>>>>> PROC NOT engaged, just Mic.
> >>>>>>>>>
> >>>>>>>>> Chris
> >>>>>>>>> Sent from my iPhone
> >>>>>>>>>
> >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> >>>>>>>>>
> >>>>>>>>>> Hi Terry, in a nutshell,
> >>>>>>>>>>
> >>>>>>>>>> It doesn't weigh up here.
> >>>>>>>>>>
> >>>>>>>>>> Following to the letter the service manual and then taking into account
> >>
> >>>>>>>>> your
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> >>>>
> >>>>>>> of
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>
> >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> >>
> >>>>>>>>> meter)
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> deflection without PROC engaged, just Mic.
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> >>>
> >>>>>>
> >>>>>>>>>>
> >>>>>>>>>> Thanks
> >>>>>>>>>> Chris
> >>>>>>>>>>
> >>>>>>>>>> Sent from my iPhone
> >>>>>>>>>>
> >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> >>>>>>>>>>
> >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> >>>>>>> have
> >>>>>>>
> >>>>>>>
> >>>>>>>>> same
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to

> >>>>>>>> adjust
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> mic
> >>>>>>>>>>
> >>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> >>>
> >>>>>>>>
> >>>>>>>>>> Tune
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> >>>>>>>>>>>
> >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> >>>
> >>>>>>>>
> >>>>>>>>> can
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> move
> >>>>>>>>>>>
> >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> >>>
> >>>>>>>>
> >>>>>>>>>> will
> >>>>>>>>>>>
> >>>>>>>>>>> be
> >>>>>>>>>>>
> >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> >>
> >>>>>>>> is
> >>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> to
> >>>>>>>>>>>
> >>>>>>>>>>> set
> >>>>>>>>>>>
> >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> >>>>>>>>> increase
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> >>>>>>>> longer
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> needed
> >>>>>>>>>>>
> >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> >>
> >>>>>>

> >>>>>>>>> would
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> >>>>>>> good
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> matched
> >>>>>>>>>>
> >>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> >>>>>>>>>>
> >>>>>>>>>> _____
> >>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> >>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >>>>>>>>>>
> >>>>>>>>>> Thanks Terry,
> >>>>>>>>>>
> >>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> >>>>>>> then
> >>>>>>>
> >>>>>>> ON
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> to
> >>>>>>>>>>
> >>>>>>>>>> same point? that's what it states from memory... point of exercise is
> >
> >>>>>>> to
> >>>>>>>
> >>>>>>>
> >>>>>>>>> have
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> ALC reading same position with Proc ON and OFF.
> >>>>>>>>>>
> >>>>>>>>>> Cheers
> >>>>>>>>>> Chris
> >>>>>>>>>>
> >>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> >>>>>>>>>>
> >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> >>>>>>> equal
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> >>
> >>>>>>
> >>>>>>>> with

> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> >>>
> >>>>>>> I
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> no
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
>
> >>>>>>> any
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> lower on
> >>>>>>>>>>
> >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>> <cparnell1001@>
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>> Thanks Terry....
> >>>>>>>>>>>>
> >>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> >>>>>>> NZ
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> time.
> >>>>>>>>>>>>
> >>>>>>>>>>>> Cheers
> >>>>>>>>>>>> Chris
> >>>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>
> >>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> >>>>>>>> switch
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> in
> >>>>>>>>>>
> >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> >

> >>>>>>> at
> >>>>>>>
> >>>>>>>
> >>>>>>>>> 20db
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
>
> >>>>>>> box.
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> Less
> >>>>>>>>>>
> >>>>>>>>>>> decay time to mess with. Terry
> >>>>>>>>>>>
> >>>>>>>>>>>>
> >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> >>>>>>>> <wagstw46@>
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> wrote:
> >>>>>>>>>>>
> >>>>>>>>>>>> Chris--OK you are telling me the following:
> >>>>>>>>>>>> Step A:
> >>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> >>>>>>
> >>>>>>>> max
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> clockwise.
> >>>>>>>>>>
> >>>>>>>>>>>> You are in USB mode.
> >>>>>>>>>>>> 2. You have the meter switch to ALC position.
> >>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> >>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> >>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> >>>>>>
> >>>>>>>> end
> >>>>>>>>
> >>>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>> ALC
> >>>>>>>>>>>
> >>>>>>>>>>>> black bordered box.
> >>>>>>>>>>>> 6. You return to Stand-by.
> >>>>>>>>>>>>
> >>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be

> >>>>>>
> >>>>>>>>>> between
> >>>>>>>>>>
> >>>>>>>>>>>> 1000 and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> 1100.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> >>>>>>> you
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> expect
> >>>>>>>>>>
> >>>>>>>>>>>> the ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> >>>>>>> the
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>>> to peg
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> >>>>>>>
> >>>>>>>>>> what
> >>>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> would you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Step B:
> >>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> >>>>>>
> >>>>>>>>> gain
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>> not
> >>>>>>>>>>
> >>>>>>>>>>>> touched
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> >>>>>>>>> when
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> you
> >>>>>>>>>>
> >>>>>>>>>>>> flip to
> >>>>>>>>>>>>

> >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> >>>>>>> any
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> ALC
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> meter
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> >>>>>>>
> >>>>>>>>>> sensitive
> >>>>>>>>>>
> >>>>>>>>>>>> and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >>>>>>> scale.
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>> Quickly
> >>>>>>>>>>
> >>>>>>>>>>>> turn
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> >>>>>>>
> >>>>>>>>> box.
> >>>>>>>>>
> >>>>>>>>>> Mic
> >>>>>>>>>>
> >>>>>>>>>>>> gain
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> >>>>>>
> >>>>>>>> far
> >>>>>>>>
> >>>>>>>>
> >>>>>>>>>> end of
> >>>>>>>>>>
> >>>>>>>>>>>> ALC
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> >>>>>>>
> >>>>>>>>> times
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> until you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.

> >>>>>>> This
> >>>>>>>
> >>>>>>>
> >>>>>>>>>>>> adjustment is
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> >>>>>>> tends
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> peg
> >>>>>>>>>>
> >>>>>>>>>>>> hard
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> >>>>>>
> >>>>>>>>> around
> >>>>>>>>>
> >>>>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> max
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> >>>>>>> meter
> >>>>>>>
> >>>>>>>>> to
> >>>>>>>>>
> >>>>>>>>>>> Comp
> >>>>>>>>>>
> >>>>>>>>>>>> you
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Terry
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> _____
> >>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> >>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> >>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> >>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >>>>>>> alignment
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> Hi Terry, thanks for this.
> >>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be

> >>>>>>>> (Heater
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> on
> >>>>>>>>>>
> >>>>>>>>>>>> etc), but
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> >>>>>>> "align"
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> the
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> speech
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> >>>>>>>
> >>>>>>>>> the
> >>>>>>>>>>
> >>>>>>>>>>>> AG
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> output to
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> 10 mV
> >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> >>>>>>> maximum
> >>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> on-scale ALC
> >>>>>>>>>>>>>
> >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> >>>>>>>>>> on-scaled).
> >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> >>>>>>>
> >>>>>>>>> turn
> >>>>>>>>>>
> >>>>>>>>>>>> the
> >>>>>>>>>>>>
> >>>>>>>>>>>>>> Proc ON
> >>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> and

> >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> >>>>>>> meter
> >>>>>>>
> >>>>>>>> at
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> this
> >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> >>>>>>> reading.
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Cheers
> >>>>>>>>>>>>>>> Chris
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> >>>>>>>> pages
> >>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>> 40&41. As
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> >>>>>>
> >>>>>>>>> switch
> >>>>>>>>>
> >>>>>>>>>>> and
> >>>>>>>>>>
> >>>>>>>>>>> LEAVE
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>> off of the
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >>>>>>> step
> >>>>>>>
> >>>>>>>
> >>>>>>>>> conditions still
> >>>>>>>>>>>
> >>>>>>>>>>>>>>> being in force?
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say

> >>>>>>> "max
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> meter
> >>>>>>>>>>
> >>>>>>>>>>>> reading on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> the Compression Scale".
> >>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> >>>>>>> reading.
> >>>>>>>
> >>>>>>>
> >>>>>>>>> That
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> would be on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> >>>>>>> indication
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> of
> >>>>>>>>>
> >>>>>>>>>>> 20db
> >>>>>>>>>>
> >>>>>>>>>>>> and
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> >>>>>>> with
> >>>>>>>
> >>>>>>>>> a
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> multi-scale
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> >>>>>>> meter
> >>>>>>>
> >>>>>>>
> >>>>>>>>>> scale.
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> >>>>>>>
> >>>>>>>>> mic
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>> gain
> >>>>>>>>>>
> >>>>>>>>>>>

> >>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> >>>>>>> 1200
> >>>>>>>
> >>>>>>>>
> >>>>>>>>> and
> >>>>>>>>>
> >>>>>>>>>>
> >>>>>>>>>>>> peaked L27.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> >>>>>>> would
> >>>>>>>
> >>>>>>>
> >>>>>>>>> say
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>>>> something
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> >>>>>>>>> box".
> >>>>>>>>>
> >>>>>>>>>
> >>>>>>>>>> Just
> >>>>>>>>>>
> >>>>>>>>>>>> make it
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> >>>>>> read.
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> >>>>>>>
> >>>>>>>>>> heater
> >>>>>>>>>>
> >>>>>>>>>>>> switch on
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> >>>>>>> -K9TW
> >>>>>>>
> >>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >>>>>>>>>>>> <cparnell1001@>
> >>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> wrote:
> >>>>>>>>>>>>>>>>>>
> >>>>>>>>>>>>>>>>> Ok Terry, thank you.
> >>>>>>>>>>
(Message over 64 KB, truncated)

32024. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 01:56:15 UTC
From: Terry Wagoner
Topic: 31926 Message: 32024

Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105 watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.

I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF probe.

1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).

2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest PA cage) voltage was 66.0 volts (77.5).

See Page 44 of service manual for test conditions. The Heath VTVM is not true rms but close enough for this testing. Terry

--- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
>
> Hi Terry,
>
> The voltages at the tubes seem a little low from memory, I will measure them again tonight.
> The Driver tube voltages (from memory) looked ok though... but again, I will double check tonight.
>
> Terry, the situation is that if I tune for maximum power out (about 60 - 70 W), then the IP is around 140-160mA.
> If I adjust for 225mA my output power is almost non existent, hence me wanting to get this thing resolved.
>
> Cheers
> Chris
>
>
> On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
>
> > Chris--Are you saying you cannot load to any higher than 150ma IP?
> >
> > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> > on RF board are good place to look with your RF VTVM. Terry
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > Sent: Wed, June 22, 2011 6:51:21 AM
> > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > OK..... well Mike (nor anyone else) answered this question... so...
> >

> > One thing that springs to mind is that I did change the RF board that was faulty
> > in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> > but thinking back, it's the time that my Power out was reduced to around
> > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> >
> > Is the RF board a good place to start looking and if so, around what are?
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > Begin forwarded message:
> >
> > > From: Chris Parnell <cparnell1001@...>
> > > Date: 20 June 2011 10:10:55 AM NZST
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > >
> > > Mike,
> > >
> > > Any idea where would be a good place to start the voltage measurements?
> > >
> > > Cheers
> > > Chris
> > >
> > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > >
> > >> Hi Chris,
> > >>
> > >> Based on the HV and power output levels you provided, 850VDC high voltage and
> > >>70 watts output, that equates to an IP current level of approximately 150ma.
> > >>Therefore, with those levels the INPUT power in the final amplifier would be;
> > >>
> > >> .150 x 850 = 127.5 watts
> > >>
> > >> Since the 830 final amplifier has an efficiency rating of approximately 55%,
> > >>power output would be
> > >>
> > >> 127.5 - 45% = 70.125 watts
> > >>
> > >> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
> > >>supplies are within specifications and operating as they should.
> > >>
> > >> I recommend you troubleshoot the 830's transmit signal path, take level
> > >>measurements and compare your findings with the 830 service manual Level Diagram
> > >>on page 44.
> > >>
> > >> 73s
> > >> Mike
> > >> W5RKL

> > >>
> > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >>wrote:
> > >>>
> > >>> Hi Terry,
> > >>>
> > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
> > >>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
> > >>>then the voltages would be about right for 60-70W output.
> > >>>
> > >>> My 830 was working "OK" originally, although the alignment was miles off.
> > >>> Then I had an issue with a tube that failed in the final unit, and it caused a
> > >>>number of issues.. one of which was NO output etc.
> > >>>
> > >>> I swapped the RF board as the one that came with the unit was broke in a number
> > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > >>> To which I decided to re-align the radio.
> > >>>
> > >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> > >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> > >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> > >>>be).
> > >>> I purchased a new front fascia and it looks great.. needs to work great now
> > >>>:-)
> > >>>
> > >>> Cheers
> > >>> Chris
> > >>>
> > >>>
> > >>>
> > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > >>>
> > >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> > >>>>lack of effort!
> > >>>>
> > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> > >>>>position, that when you flip to send the meter pegs off scale right hand side of
> > >>>>the meter. Is this true?
> > >>>>
> > >>>> 2. The expected response would be for the meter to deflect to the far end of
> > >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> > >>>>not peg.
> > >>>>
> > >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > >>>>
> > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> > >>>>difficulty doing this step as written and you had not completed it yet. I

> > >>>>suggest you go back and repeat this step.
> > >>>>
> > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
> > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> > >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> > >>>>not peg the meter full scale or any ALC indication very far past the black
> > >>>>border. If that is not how you left this step then this is likely your problem.
> > >>>>
> > >>>>
> > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> > >>>>able to move meter indication down to the ALC box max border or S9.
> > >>>>
> > >>>>
> > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
> > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > >>>>
> > >>>>
> > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> > >>>>the AF board.
> > >>>>
> > >>>>
> > >>>> Good Luck-Terry K9TW
> > >>>>
> > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >>>wrote:
> > >>>>>
> > >>>>> Hi Terry,
> > >>>>>
> > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
> > >>>>>an email off list with some voltage measurements.
> > >>>>>
> > >>>>> Cheers
> > >>>>> Chris
> > >>>>>
> > >>>>>
> > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > >>>>>
> > >>>>>> Chris--
> > >>>>>>
> > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
> > >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> > >>>>>>
> > >>>>>> clear enough real time video or not for this to work. Not sure about our time
> > >>>>>>
> > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > >>>>>>

> > >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> > >>>>
> > >>>>>> rigs for a living? As you know I had never performed this step until you asked
> > >>>>>
> > >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> > >>>>>
> > >>>>>> generator. I have just done selected steps.
> > >>>>>>
> > >>>>>> Terry
> > >>>>>>
> > >>>>>> _____
> > >>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>
> > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > >>>>
> > >>>>>> have no attenuation in there)...
> > >>>>>>
> > >>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
> > >>>>>>
> > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> > >>>>>>Gain
> > >>>>>>
> > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > >>>>>>
> > >>>>>> with regards to ALC readings.
> > >>>>>>
> > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > >>>>>>
> > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> > >>>>>>meter.
> > >>>>>>
> > >>>>>> I may record a small video and send it to you... easier to see what I mean and
> > >>>>>
> > >>>>>> what i'm doing.
> > >>>>>>
> > >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> > >>>>>>is,
> > >>>>>>
> > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > >>>>>>
> > >>>>>> Cheers
> > >>>>>> Chris
> > >>>>>>
> > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > >>>>>>
> > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz

> > >>>>
> > >>>>>>> test signals.
> > >>>>>>>
> > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
> > >>>>>>
> > >>>>>>
> > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > >>>>>
> > >>>>>>> where I can get a good match at far right end of ALC black box.
> > >>>>>>>
> > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
> > >>>>>
> > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> > >>>>>>>
> > >>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> > >>>>>
> > >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> > >>>
> > >>>>>>> starting to get confused regards what your problem is.
> > >>>>>>>
> > >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> > >>
> > >>>>>>> troubleshooting with Mike.
> > >>>>>>>
> > >>>>>>> Terry
> > >>>>>>>
> > >>>>>>> _____
> > >>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>
> > >>>>>>> Hi Terry / Mike.....
> > >>>>>>>
> > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > >>>
> > >>>>>>> piece of kit.
> > >>>>>>> Here's what I see when I follow your instructions:
> > >>>>>>>
> > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> > >

> > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > >>>>>>>>
> > >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > >>>>>>>
> > >>>>>>>>> I have the mic gain set exactly at
> > >>>>>>>>> No. 4 position.
> > >>>>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > >>>>>>>>> switches. Let it warm up a little.
> > >>>>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >>
> > >>>>>>> Wave
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> Tek generator to exactly 10 mv
> > >>>>>>>>>
> > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > >>>>>>>
> > >>>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > >>
> > >>>>>>>>> place meter switch in ALC position.
> > >>>>>>>>>
> > >>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> > >>>>>>
> > >>>>>>>
> > >>>>>>>>> end of the black ALC box. Maybe a needles worth.
> > >>>>>>>>>
> > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > >>>>>
> > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > >>>>
> > >>>>>>> s-meter scale, it's S9+40dB +).
> > >>>>>>>
> > >>>>>>>>>

> > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >>>>>>> position
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and I have not touched mic gain pot.
> > >>>>>>>>
> > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > >>>
> > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > >>>>>
> > >>>>>>> I'm saying and seeing.
> > >>>>>>>
> > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > >>
> > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > >>>>>
> > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
> >
> > >>>>>>> minimum.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > >>>>>
> > >>>>>>
> > >>>>>>>> black ALC box.
> > >>>>>>>>
> > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > >>>>>
> > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > >>>>>>>> off, but close enough.
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> > >>>
> > >>>>>>> them
> > >>>>>>>
> > >>>>>>> with the PROC ON.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > >>>>>>>> a little above 20db on the Comp scale.
> > >>>>>>>>

> > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > >>>
> > >>>>>>> adjust L26 for 20dB reading.
> > >>>>>>>
> > >>>>>>> I will need to do some component checking in the circuit around the Processor
> > >>>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>> Mike and yourself have recommended.
> > >>>>>>>
> > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > >mentioned.
> > >>>>>>>
> > >>>>>>> Thanks
> > >>>>>>> Chris, ZL1CDP
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > >>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> found condition for my daily operator is very close to being right on the
> > >>
> > >>>>>>> same
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > >>>>>
> > >>>>>>> on
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and off.
> > >>>>>>>>
> > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> some more and if I come up with something will write.
> > >>>>>>>>
> > >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >>>
> > >>>>>>> your
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > >>>>>
> > >>>>>>> I

> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> wouldnt think much higher.
> > >>>>>>>>
> > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >>>>>
> > >>>>>>
> > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > >>
> > >>>>>>>> Good
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> luck Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Hi Terry,
> > >>>>>>>>
> > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > >>>>>>> why...
> > >>>>>>>>
> > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > >>>>compensate.
> > >>>>>>>>
> > >>>>>>>>> Based on what you are reporting I would expect it to
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > >>>>>>>>>
> > >>>>>>>>
> > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > >>

> > >>>>>>> right
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >>>>>>>>
> > >>>>>>>> Hope this makes sense..
> > >>>>>>>>
> > >>>>>>>> Cheers
> > >>>>>>>> Chris
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >>>>>>>>
> > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > >>>>
> > >>>>>>> no
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > >>>>
> > >>>>>>
> > >>>>>>>>> Where
> > >>>>>>>>>
> > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > >>
> > >>>>>>> hard
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > >>>>>
> > >>>>>>>>
> > >>>>>>>> the
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> peg.
> > >>>>>>>>>
> > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >>>>
> > >>>>>>
> > >>>>>>>>> off
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > >>
> > >>>>>>> back
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > >>>>>

> > >>>>>>>
> > >>>>>>>> to
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > >>>>>>>>>
> > >>>>>>>>> _____
> > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>>
> > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > >>>>
> > >>>>>>
> > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > >>>>>>> without
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> PROC NOT engaged, just Mic.
> > >>>>>>>>>
> > >>>>>>>>> Chris
> > >>>>>>>>> Sent from my iPhone
> > >>>>>>>>>
> > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > >>>>>>>>>
> > >>>>>>>>>> Hi Terry, in a nutshell,
> > >>>>>>>>>>
> > >>>>>>>>>> It doesn't weigh up here.
> > >>>>>>>>>>
> > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > >>>>>>
> > >>>>>>>>> your
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > >>>>>>>
> > >>>>>>>>> of
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> ALC

> > >>>>>>>>>
> > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > >>
> > >>>>>>>> meter)
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >>>
> > >>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> Thanks
> > >>>>>>>>>> Chris
> > >>>>>>>>>>
> > >>>>>>>>>> Sent from my iPhone
> > >>>>>>>>>>
> > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > >>>>>>> have
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> same
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > >>>>>>>> adjust
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> mic
> > >>>>>>>>>>
> > >>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > >>>>>
> > >>>>>>>
> > >>>>>>>> Tune
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > >>>>>>>>>>
> > >>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > >>>>>
> > >>>>>>>
> > >>>>>>>> can
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> move
> > >>>>>>>>>>
> > >>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and

> > >>>
> > >>>>>>>
> > >>>>>>>>>> will
> > >>>>>>>>>
> > >>>>>>>>>> be
> > >>>>>>>>>>
> > >>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > >>
> > >>>>>>> is
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>> set
> > >>>>>>>>>>
> > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > >>>>>>>>> increase
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > >>>>>>> longer
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> needed
> > >>>>>>>>>>
> > >>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > >>
> > >>>>>>
> > >>>>>>>>>> would
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > >>>>>>> good
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> matched
> > >>>>>>>>>>
> > >>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>>> _____
> > >>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>>>>
> > >>>>>>>>>>>> Thanks Terry,
> > >>>>>>>>>>>
> > >>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >>>>>>> then
> > >>>>>>>>

> > >>>>>>>> ON
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > >
> > >>>>>>> to
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> have
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > >>>>>>>>>>>
> > >>>>>>>>>>> Cheers
> > >>>>>>>>>>> Chris
> > >>>>>>>>>>>
> > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>
> > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > >>>>>>> equal
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > >>
> > >>>>>>
> > >>>>>>>>> with
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > >>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> no
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > >
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> lower on
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>>

> > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>> <cparnell1001@>
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> Thanks Terry....
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > >>>>>>> NZ
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> time.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > >>>>>>>> switch
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> in
> > >>>>>>>>>>
> > >>>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > >
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> 20db
> > >>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > >>>>>>> box.
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> Less
> > >>>>>>>>>>
> > >>>>>>>>>>>>> decay time to mess with. Terry
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > >>>>>>>> <wagstw46@>
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> wrote:

> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > >>>>>>>>>>>>>>>> Step A:
> > >>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > >>>>>>
> > >>>>>>>>> max
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>>>> clockwise.
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> You are in USB mode.
> > >>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > >>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > >>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > >>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > >>>>>>
> > >>>>>>>>> end
> > >>>>>>>>>
> > >>>>>>>>>> of
> > >>>>>>>>>>
> > >>>>>>>>>>> the
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> ALC
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> black bordered box.
> > >>>>>>>>>>>>>>>> 6. You return to Stand-by.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > >>>>>>
> > >>>>>>>>>> between
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> 1000 and
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 1100.
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > >>>>>>>> you
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> expect
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> the ALC
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > >>>>>>>> the
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> meter
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> to peg

> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > >>>>>>>
> > >>>>>>>>> what
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>>> would you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Step B:
> > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > >>>>>>>>
> > >>>>>>>>> gain
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> not
> > >>>>>>>>>>>
> > >>>>>>>>>>>> touched
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > >>>>>>>>> when
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> you
> > >>>>>>>>>>>
> > >>>>>>>>>>>> flip to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > >>>>>>>> any
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> meter
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > >>>>>>>>
> > >>>>>>>>>>> sensitive
> > >>>>>>>>>>>
> > >>>>>>>>>>>> and
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > >>>>>>>> scale.
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> Quickly

> > >>>>>>>>>>
> > >>>>>>>>>>> turn
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > >>>>>>>
> > >>>>>>>>> box.
> > >>>>>>>>>
> > >>>>>>>>>> Mic
> > >>>>>>>>>>
> > >>>>>>>>>>> gain
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > >>>>>>
> > >>>>>>>>> far
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> end of
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > >>>>>>>
> > >>>>>>>>> times
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> until you
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > >>>>>>> This
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>> adjustment is
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > >>>>>>> tends
> > >>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> peg
> > >>>>>>>>>>
> > >>>>>>>>>>> hard
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> > >>>>>>
> > >>>>>>>>> around
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> the
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> max

> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>> to
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> Comp
> > >>>>>>>>>>
> > >>>>>>>>>>>> you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Terry
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> _____
> > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >>>>>>> alignment
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > >>>>>>>> (Heater
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>> etc), but
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > >>>>>>> "align"
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> speech
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > >>>>>>>
> > >>>>>>>> the
> > >>>>>>>>

> > >>>>>>>>>
> > >>>>>>>>>> AG
> > >>>>>>>>>>
> > >>>>>>>>>>>> output to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> 10 mV
> > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > >>>>>>> maximum
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>>> on-scale ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> > >>>>>>>>>> on-scaled).
> > >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> > >>>>>>>
> > >>>>>>>>> turn
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>>> Proc ON
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> and
> > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>>> at
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> this
> > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > >>>>>>> reading.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> > >>>>>>>>> pages
> > >>>>>>>>>

> > >>>>>>>>>
> > >>>>>>>>>>>> 40&41. As
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> > >>>>>>
> > >>>>>>>>> switch
> > >>>>>>>>>
> > >>>>>>>>>>> and
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> LEAVE
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >>>>>>>
> > >>>>>>>>>> heater
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> off of the
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> > >>>>>>> step
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>>>> conditions still
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> being in force?
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> > >>>>>>> "max
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> meter
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> reading on
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> the Compression Scale".
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > >>>>>>> reading.
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> That
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> would be on
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > >>>>>>> indication
> > >>>>>>>
> > >>>>>>>

> > >>>>>>>>> of
> > >>>>>>>>
> > >>>>>>>>> 20db
> > >>>>>>>>>
> > >>>>>>>>>> and
> > >>>>>>>>>>
> > >>>>>>>>>>>> that would be on the Compression Scale. So would be better
> > >>>>>>> with
> > >>>>>>>
> > >>>>>>>> a
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> multi-scale
> > >>>>>>>>>>
> > >>>>>>>>>>>> meter for them to tell you the expected value and on what
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> scale.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> > >>>>>>>
> > >>>>>>>> mic
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> gain
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> > >>>>>>> 1200
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> peaked L27.
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > >>>>>>> would
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> say
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> something
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> > >>>>>>>> box".
> > >>>>>>>>
> > >>>>>>>>>

> > >>>>>>>>>> Just
> > >>>>>>>>>>
> > >>>>>>>>>>> make it
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > >>>>>> read.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> > >>>>>>>
> > >>>>>>>>>> heater
> > >>>>>>>>>>
> > >>>>>>>>>>> switch on
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> > >>>>>>> -K9TW
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>>>>> <cparnell1001@>
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Ok Terry, thank you.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> > >>>>>>
> > >>>>>>>>> chance
> > >>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>>> check
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> > >>>>>>> so
> > >>>>>>>
> > >>>>>>>>> I
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> will
> > >>>>>>>>>>

> > >>>>>>>>>>>> give it a
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> try today and report back. Terry
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>
> > >>>>>>>>>>>> <cparnell1001@>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > >>>>>>> in
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>> 830
> > >>>>>>>>>>
> > >>>>>>>>>>>> at the
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> weekend?
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> ----------
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>>>

> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>
> > >>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>
> > >>>>>>>>>>>> ----------
> > >>>>>>>>>>>
> > >>>>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>>
> > >>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>
> > >>>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>
> > >>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>
> > >>>>>>>>> ----------
> > >>>>>>>>
> > >>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>
> > >>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>
> > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > >>>>>>>
> > >>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
> > >>>
> > >>>>>>> about
> > >>>>>>>
> > >>>>>>> out of ideas.
> > >>>>>>>
> > >>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the

> > >>>>>
> > >>>>>>
> > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to the operating
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> position.
> > >>>>>>>>
> > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> >
> > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > >>>>
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > >>
> > >>>>>>>> heater
> > >>>>>>>>
> > >>>>>>>> switches. Let it warm up a little.
> > >>>>>>>>
> > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >>
> > >>>>>>> Wave
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> Tek generator to exactly 10 mv.
> > >>>>>>>>
> > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > >>>>
> > >>>>>>>> place meter switch in ALC position.
> > >>>>>>>>
> > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > >>>>>>>>
> > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >>>>>>> position
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and I have not touched mic gain pot.
> > >>>>>>>>
> > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > >>>>>
> > >>>>>>
> > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> > >>
> > >>>>>>> covers
> > >>>>>>>
> > >>>>>>>>

> > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> > >>>>
> > >>>>>>>> just
> > >>>>>>>>
> > >>>>>>>> a little above 20db on the Comp scale.
> > >>>>>>>>
> > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > >>>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> found condition for my daily operator is very close to being right on the
> > >>
> > >>>>>>> same
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > >>>>>
> > >>>>>>> on
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and off.
> > >>>>>>>>
> > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> > >>>>>
> > >>>>>>>
> > >>>>>>>> some more and if I come up with something will write.
> > >>>>>>>>
> > >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> > >>>>>
> > >>>>>>>
> > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >>>
> > >>>>>>> your
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > >>>>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> wouldnt think much higher.
> > >>>>>>>>
> > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> > >>>>>
> > >>>>>>>
> > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >>>>>
> > >>>>>>
> > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.

> > >>
> > >>>>>>> Good
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> luck Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Hi Terry,
> > >>>>>>>>
> > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > >>>>>>> why...
> > >>>>>>>>
> > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > >>>>compensate.
> > >>>>>>>>
> > >>>>>>>>> Based on what you are reporting I would expect it to
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > >>>>>>>>>
> > >>>>>>>>
> > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > >>
> > >>>>>>> right
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >>>>>>>>
> > >>>>>>>> Hope this makes sense..
> > >>>>>>>>
> > >>>>>>>> Cheers
> > >>>>>>>> Chris
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:

> > >>>>>>>>
> > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > >>>>
> > >>>>>>> no
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > >>>>
> > >>>>>>
> > >>>>>>>>> Where
> > >>>>>>>>>
> > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > >>
> > >>>>>>> hard
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > >>>>>
> > >>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> peg.
> > >>>>>>>>>
> > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >>>>
> > >>>>>>
> > >>>>>>>>> off
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > >
> > >>>>>>> back
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > >>>>>
> > >>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>>> in
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry

> > >>>>>>>>>
> > >>>>>>>>> _____
> > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>>
> > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > >>>>
> > >>>>>>
> > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > >>>>>>> without
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> PROC NOT engaged, just Mic.
> > >>>>>>>>>
> > >>>>>>>>> Chris
> > >>>>>>>>> Sent from my iPhone
> > >>>>>>>>>
> > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > >>>>>>>>>
> > >>>>>>>>>> Hi Terry, in a nutshell,
> > >>>>>>>>>>
> > >>>>>>>>>> It doesn't weigh up here.
> > >>>>>>>>>>
> > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > >>
> > >>>>>>>>> your
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > >>>>
> > >>>>>>> of
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> ALC
> > >>>>>>>>>
> > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > >>
> > >>>>>>>>> meter)
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >>>

> > >>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> Thanks
> > >>>>>>>>>> Chris
> > >>>>>>>>>>
> > >>>>>>>>>> Sent from my iPhone
> > >>>>>>>>>>
> > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > >>>>>>> have
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> same
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > >>>>>>>> adjust
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> mic
> > >>>>>>>>
> > >>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > >>>
> > >>>>>>>
> > >>>>>>>> Tune
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > >>>>>>>>>>>
> > >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > >>>
> > >>>>>>>
> > >>>>>>>> can
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> move
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > >>>
> > >>>>>>>
> > >>>>>>>> will
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> be
> > >>>>>>>>>>
> > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > >>
> > >>>>>>>> is
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>

> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>> set
> > >>>>>>>>>>
> > >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > >>>>>>>> increase
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > >>>>>> longer
> > >>>>>>
> > >>>>>>
> > >>>>>>>>>> needed
> > >>>>>>>>>>
> > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > >>
> > >>>>>
> > >>>>>>>>> would
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > >>>>>> good
> > >>>>>>
> > >>>>>>
> > >>>>>>>>>> matched
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>> _____
> > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>>>>
> > >>>>>>>>>>> Thanks Terry,
> > >>>>>>>>>>>
> > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >>>>>> then
> > >>>>>>
> > >>>>>> ON
> > >>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > >>>
> > >>>>>> to
> > >>>>>>
> > >>>>>>
> > >>>>>>>>> have

> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > >>>>>>>>>>
> > >>>>>>>>>>> Cheers
> > >>>>>>>>>>> Chris
> > >>>>>>>>>>
> > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >>>>>>>>>>
> > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > >>>>>>> equal
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > >>
> > >>>>>>
> > >>>>>>> with
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > >>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> no
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> >
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> lower on
> > >>>>>>>>>
> > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>>> <cparnell1001@>
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>>> Thanks Terry....
> > >>>>>>>>>>
> > >>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > >>>>>>> NZ
> > >>>>>>>

> > >>>>>>>
> > >>>>>>>>>> time.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > >>>>>>>> switch
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> in
> > >>>>>>>>>
> > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > >
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> 20db
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > >>>>>>> box.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> Less
> > >>>>>>>>>
> > >>>>>>>>>>>> decay time to mess with. Terry
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > >>>>>>>> <wagstw46@>
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> wrote:
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > >>>>>>>>>>>>>>> Step A:
> > >>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > >>>>>>>
> > >>>>>>>> max
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> clockwise.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> You are in USB mode.

> > >>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > >>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > >>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > >>>>>>
> > >>>>>>>> end
> > >>>>>>>>
> > >>>>>>>>> of
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> black bordered box.
> > >>>>>>>>>>>>>> 6. You return to Stand-by.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > >>>>>>
> > >>>>>>>>> between
> > >>>>>>>>>>
> > >>>>>>>>>>> 1000 and
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> 1100.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > >>>>>>> you
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> expect
> > >>>>>>>>>>
> > >>>>>>>>>>> the ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> meter
> > >>>>>>>>>>
> > >>>>>>>>>>> to peg
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > >>>>>>>
> > >>>>>>>>> what
> > >>>>>>>>>>
> > >>>>>>>>>>> would you
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Step B:

> > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > >>>>>>
> > >>>>>>>> gain
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> not
> > >>>>>>>>>>
> > >>>>>>>>>>>> touched
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > >>>>>>>> when
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> you
> > >>>>>>>>>>
> > >>>>>>>>>>>> flip to
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> meter
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > >>>>>>>
> > >>>>>>>>>> sensitive
> > >>>>>>>>>>
> > >>>>>>>>>>>> and
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > >>>>>>> scale.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> Quickly
> > >>>>>>>>>>
> > >>>>>>>>>>>> turn
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > >>>>>>>
> > >>>>>>>>> box.
> > >>>>>>>>>
> > >>>>>>>>>> Mic
> > >>>>>>>>>>
> > >>>>>>>>>>>> gain
> > >>>>>>>>>>>

> > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > >>>>>>
> > >>>>>>>> far
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> end of
> > >>>>>>>>>>
> > >>>>>>>>>>>> ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > >>>>>>>
> > >>>>>>>>> times
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> until you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > >>>>>>> This
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>>> adjustment is
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > >>>>>>> tends
> > >>>>>>>
> > >>>>>>>> to
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> peg
> > >>>>>>>>>>
> > >>>>>>>>>>>> hard
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> > >>>>>>
> > >>>>>>>>> around
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>>> max
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>> to
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> Comp
> > >>>>>>>>>>
> > >>>>>>>>>>>> you
> > >>>>>>>>>>>>

> > >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Terry
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> _____
> > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >>>>>>> alignment
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > >>>>>>>> (Heater
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>> etc), but
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > >>>>>>> "align"
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> speech
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > >>>>>>>
> > >>>>>>>> the
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> AG
> > >>>>>>>>>>
> > >>>>>>>>>>>> output to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> 10 mV
> > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > >>>>>>> maximum
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> on-scale ALC

> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> > >>>>>>>>>> on-scaled).
> > >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> > >>>>>>>
> > >>>>>>>>> turn
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>
(Message over 64 KB, truncated)

32025. Need help on 520S Ant. bd, Mixer bd. & Drive bd..

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 02:54:43 UTC
From: Bob
Topic: 32025 Message: 32025

I have a fellow Ham in Australia that wants the following boards:
Ant Coil bd..... X44-1070-00 (I have a X44-1170-00)
Mixer Coil bd..... X44-1080-00 (I have a X44-1180-00)
Drive Coil bd..... X44-1090-00 (I have a X44-1190-00)

My 520S serial is 651215
I wander if he may have an earlier 520S & Kenwood came out with the ones I have...

Are the above boards the same?_____
Thanks in advance.
Bob

32026. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 03:05:39 UTC
From: Chris Parnell
Topic: 31926 Message: 32026

Thanks Terry,

I will check these on mine when I get home.

Cheers
Chris

On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105 watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>
> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF probe.
>
> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>
> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest PA cage) voltage was 66.0 volts (77.5).
>
> See Page 44 of service manual for test conditions. The Heath VTVM is not true rms but close enough for this testing. Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry,
> >
> > The voltages at the tubes seem a little low from memory, I will measure them again tonight.
> > The Driver tube voltages (from memory) looked ok though... but again, I will double check tonight.
> >
> > Terry, the situation is that if I tune for maximum power out (about 60 - 70 W), then the IP is around 140-160mA.
> > If I adjust for 225mA my output power is almost non existent, hence me wanting to get this thing resolved.
> >
> > Cheers
> > Chris
> >
> >
> > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> >
> > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > >
> > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> > > on RF board are good place to look with your RF VTVM. Terry

> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > OK..... well Mike (nor anyone else) answered this question... so...
> > >
> > > One thing that springs to mind is that I did change the RF board that was faulty
> > > in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> > > but thinking back, it's the time that my Power out was reduced to around
> > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > >
> > > Is the RF board a good place to start looking and if so, around what are?
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > Begin forwarded message:
> > >
> > > > From: Chris Parnell <cparnell1001@...>
> > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > > Mike,
> > > >
> > > > Any idea where would be a good place to start the voltage measurements?
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > >
> > > >> Hi Chris,
> > > >>
> > > >> Based on the HV and power output levels you provided, 850VDC high voltage and
> > > >>70 watts output, that equates to an IP current level of approximately 150ma.
> > > >>Therefore, with those levels the INPUT power in the final amplifier would be;
> > > >>
> > > >> .150 x 850 = 127.5 watts
> > > >>
> > > >> Since the 830 final amplifier has an efficiency rating of approximately 55%,
> > > >>power output would be
> > > >>
> > > >> 127.5 - 45% = 70.125 watts
> > > >>
> > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit

> > > >>supplies are within specifications and operating as they should.
> > > >>
> > > >> I recommend you troubleshoot the 830's transmit signal path, take level
> > > >>measurements and compare your findings with the 830 service manual Level Diagram
> > > >>on page 44.
> > > >>
> > > >> 73s
> > > >> Mike
> > > >> W5RKL
> > > >>
> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > > >>wrote:
> > > >>>
> > > >>> Hi Terry,
> > > >>>
> > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
> > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
> > > >>>then the voltages would be about right for 60-70W output.
> > > >>>
> > > >>> My 830 was working "OK" originally, although the alignment was miles off.
> > > >>> Then I had an issue with a tube that failed in the final unit, and it caused a
> > > >>>number of issues.. one of which was NO output etc.
> > > >>>
> > > >>> I swapped the RF board as the one that came with the unit was broke in a number
> > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > >>> To which I decided to re-align the radio.
> > > >>>
> > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> > > >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> > > >>>be).
> > > >>> I purchased a new front fascia and it looks great.. needs to work great now
> > > >>>:-)
> > > >>>
> > > >>> Cheers
> > > >>> Chris
> > > >>>
> > > >>>
> > > >>>
> > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > >>>
> > > >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> > > >>>>lack of effort!
> > > >>>>
> > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> > > >>>>position, that when you flip to send the meter pegs off scale right hand side of
> > > >>>>the meter. Is this true?
> > > >>>>

> > > >>>> 2. The expected response would be for the meter to deflect to the far end of
> > > >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> > > >>>>not peg.
> > > >>>>
> > > >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > >>>>
> > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> > > >>>>difficulty doing this step as written and you had not completed it yet. I
> > > >>>>suggest you go back and repeat this step.
> > > >>>>
> > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
> > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> > > >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> > > >>>>not peg the meter full scale or any ALC indication very far past the black
> > > >>>>border. If that is not how you left this step then this is likely your problem.
> > > >>>>
> > > >>>>
> > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > >>>>
> > > >>>>
> > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
> > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > >>>>
> > > >>>>
> > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> > > >>>>the AF board.
> > > >>>>
> > > >>>>
> > > >>>> Good Luck-Terry K9TW
> > > >>>>
> > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > > >>>wrote:
> > > >>>>>
> > > >>>>> Hi Terry,
> > > >>>>>
> > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
> > > >>>>an email off list with some voltage measurements.
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>>
> > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >>>>>

> > > >>>>>> Chris--
> > > >>>>>>
> > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
> > > >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> > > >>>>>
> > > >>>>>> clear enough real time video or not for this to work. Not sure about our time
> > > >>>>
> > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >>>>>>
> > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> > > >>>>
> > > >>>>>> rigs for a living? As you know I had never performed this step until you asked
> > > >>>>>
> > > >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> > > >>>>>
> > > >>>>>> generator. I have just done selected steps.
> > > >>>>>>
> > > >>>>>> Terry
> > > >>>>>>
> > > >>>>>> _____
> > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>
> > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > >>>>
> > > >>>>>> have no attenuation in there)...
> > > >>>>>>
> > > >>>>>> So I got some test reference dBmA numbers against my calibrated probe and
wrote
> > > >>>>>>
> > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> > > >>>>>> >>>>>>Gain
> > > >>>>>>
> > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC
ON
> > > >>>>>>
> > > >>>>>> with regards to ALC readings.
> > > >>>>>>
> > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I
turn
> > > >>>>>>
> > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> > > >>>>>> >>meter.
> > > >>>>>>
> > > >>>>>> I may record a small video and send it to you... easier to see what I mean and
> > > >>>>>
> > > >>>>>> what i'm doing.

> > > >>>>>>
> > > >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> > > >>>>>>is,
> > > >>>>>>
> > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > > >>>>>>
> > > >>>>>> Cheers
> > > >>>>>> Chris
> > > >>>>>>
> > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >>>>>>
> > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > >>>>
> > > >>>>>>> test signals.
> > > >>>>>>>
> > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in
my
> > > >>>>>>
> > > >>>>>>
> > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > >>>>>
> > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > >>>>>>>
> > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around
the
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and
have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
> > > >>>>>
> > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > >>>>>>>
> > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving required
10mv
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> > > >>>>>
> > > >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> > > >>>>>>
> > > >>>>>>> starting to get confused regards what your problem is.
> > > >>>>>>>
> > > >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> > > >>>>>>
> > > >>>>>>> troubleshooting with Mike.
> > > >>>>>>>
> > > >>>>>>> Terry

> > > >>>>>>>
> > > >>>>>>> _____
> > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>> Hi Terry / Mike.....
> > > >>>>>>>
> > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > >>>
> > > >>>>>>> piece of kit.
> > > >>>>>>> Here's what I see when I follow your instructions:
> > > >>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >>>>>>>
> > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > >>>>>>>
> > > >>>>>>>> I have the mic gain set exactly at
> > > >>>>>>>> No. 4 position.
> > > >>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv
> > > >>>>>>>
> > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > >>>>>>>
> > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > >>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>

> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the
max
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > >>>>>
> > > >>>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC
mode
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > >>>>
> > > >>>>>>>> s-meter scale, it's S9+40dB +).
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >>>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at
either
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > >>>
> > > >>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > >>>>>
> > > >>>>>>>> I'm saying and seeing.
> > > >>>>>>>
> > > >>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > >>
> > > >>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > >>>>>
> > > >>>>>>>> PROC ON, which on the S-Meter is S-9.
> > > >>>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
> > > >
> > > >>>>>>>> minimum.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box.
> > > >>>>>>>>
> > > >>>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with

PROC
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > >>>>>
> > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >>>>>>>
> > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > >>>>>>>> off, but close enough.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > >>>
> > > >>>>>>> them
> > > >>>>>>>
> > > >>>>>>> with the PROC ON.
> > > >>>>>>>
> > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > >>>
> > > >>>>>>> adjust L26 for 20dB reading.
> > > >>>>>>>
> > > >>>>>>> I will need to do some component checking in the circuit around the Processor
> > > >>>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>> Mike and yourself have recommended.
> > > >>>>>>>
> > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > >mentioned.
> > > >>>>>>>
> > > >>>>>>> Thanks
> > > >>>>>>> Chris, ZL1CDP
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right on the
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>

> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about
it
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position or
increase
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection
when
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > > >>>>
> > > >>>>>>> the

> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >>
> > > >>>>>>> right
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > > >>>>
> > > >>>>>>>>
> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on

> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > >
> > > >>>>>>> back
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>

> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > > >>>>
> > > >>>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >>>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to

> > > >>>>>>>> adjust
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> move
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> be
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > > >>
> > > >>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> set
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > > >>>>>>>>> increase
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > > >>>>>>> longer
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > > >>
> > > >>>>>>

> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >>>>>>> good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>
> > > >>>>>>>>>> _____
> > > >>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>
> > > >>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>> ON
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> have
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Cheers
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > > >>
> > > >>>>>>
> > > >>>>>>>> with

> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> no
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > > >
> > > >>>>>>> any
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > > >>>>>>> NZ
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> in
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > > > >

> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> 20db
> > > >>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > > >>>>>>> box.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> Less
> > > >>>>>>>>>
> > > >>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>> <wagstw46@>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > > >>>>>>>
> > > >>>>>>>> max
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> clockwise.
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > > >>>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be

> > > >>>>>>
> > > >>>>>>>>>> between
> > > >>>>>>>>>>
> > > >>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > > >>>>>>>
> > > >>>>>>>>> what
> > > >>>>>>>>>
> > > >>>>>>>>>>> would you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > > >>>>>>
> > > >>>>>>>> gain
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> not
> > > >>>>>>>>>>
> > > >>>>>>>>>>> touched
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > > >>>>>>>> when
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> you
> > > >>>>>>>>>>
> > > >>>>>>>>>>> flip to
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > > >>>>>>> any
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > > >>>>>>>
> > > >>>>>>>>>> sensitive
> > > >>>>>>>>>>
> > > >>>>>>>>>>> and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > > >>>>>>> scale.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Quickly
> > > >>>>>>>>>>
> > > >>>>>>>>>>> turn
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > > >>>>>>
> > > >>>>>>>>> box.
> > > >>>>>>>>>
> > > >>>>>>>>>> Mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>> gain
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > > >>>>>>
> > > >>>>>>>> far
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> end of
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > > >>>>>>>
> > > >>>>>>>>> times
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> until you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.

> > > >>>>>>> This
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> adjustment is
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > > >>>>>>> tends
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> peg
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> hard
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> > > >>>>>>
> > > >>>>>>>>> around
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> max
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>> Comp
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Terry
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> _____
> > > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >>>>>>> alignment
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be

> > > >>>>>>>> (Heater
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> etc), but
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > >>>>>>> "align"
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> speech
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> AG
> > > >>>>>>>>>>
> > > >>>>>>>>>>> output to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> 10 mV
> > > >>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > >>>>>>> maximum
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on-scale ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>> reading. Set the PROC to ON.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >>>>>>>>>> on-scaled).
> > > >>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > >>>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> > > >>>>>>>
> > > >>>>>>>> turn
> > > >>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Proc ON
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> and

> > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> this
> > > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > >>>>>>> reading.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >>>>>>>> pages
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> 40&41. As
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> > > >>>>>>
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>> and
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> LEAVE
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> off of the
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> > > >>>>>>> step
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> conditions still
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> being in force?
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say

> > > >>>>>>> "max
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> reading on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the Compression Scale".
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >>>>>>> reading.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> That
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> would be on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > >>>>>>> indication
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>>> a
> > > >>>>>>>>>
> > > >>>>>>>>>>>> multi-scale
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> scale.
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> > > >>>>>>>
> > > >>>>>>>>> mic
> > > >>>>>>>>>
> > > >>>>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> > > >>>>>>> 1200
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> and
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> peaked L27.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >>>>>>> would
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> say
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> something
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> > > >>>>>>>> box".
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Just
> > > >>>>>>>>>>
> > > >>>>>>>>>>> make it
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > >>>>>> read.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> > > >>>>>>>
> > > >>>>>>>> heater
> > > >>>>>>>>>
> > > >>>>>>>>>>> switch on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> > > >>>>>>> -K9TW
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Ok Terry, thank you.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> > > >>>>>>

> > > >>>>>>>>> chance
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> check
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> > > >>>>>>> so
> > > >>>>>>>
> > > >>>>>>>> I
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>>> give it a
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> try today and report back. Terry
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>
> > > >>>>>>> <cparnell1001@>
> > > >>>>>>>
> > > >>>>>>>> wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > >>>>>>> in
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>> 830
> > > >>>>>>>>>
> > > >>>>>>>>>>> at the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> weekend?
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>> Chris, ZL1CDP
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> ----------
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> ----------
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>

> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>> ------------------------------------
> > > >>>>>>>>
> > > >>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >>>>>>>
> > > >>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
> > > >>>
> > > >>>>>>>> about
> > > >>>>>>>>
> > > >>>>>>>> out of ideas.
> > > >>>>>>>>
> > > >>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
> > > >>>>>
> > > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to the
operating
> > > >>>>>>
> > > >>>>>>>>
> > > >>>>>>>> position.
> > > >>>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > >>>>
> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > >>
> > > >>>>>>>> heater
> > > >>>>>>>>
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv.
> > > >>>>>>>>

> > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > >>>>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the
max
> > > >>>>>>
> > > >>>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >>>>>>>> position
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > > >>>>>>
> > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> > > > >
> > > >>>>>>>> covers
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > >>>>
> > > >>>>>>>> just
> > > >>>>>>>>
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > > >>>>
> > > >>>>>>>> as
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right on the
> > > >>
> > > >>>>>>>> same
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > > >>>>>>
> > > >>>>>>>> on
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about
it
> > > >>>>>>

> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position or
increase
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection
when
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > > >
> > > >>>>>>> why...

> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >>>>
> > > >>>>>>>> right
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > > >>>>
> > > >>>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > > >>>>
> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > > >>>>
> > > >>>>>>>> hard
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>

> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > > > >
> > > >>>>>>> back
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > > >>>>>>> without
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:

> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > > >>>>
> > > >>>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > > >>>>>>>>> adjust
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>> gain or input signal level once balanced. You should be able to flip to

> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> move
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>>> be
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > > >>
> > > >>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > > >>>>>>>>> increase
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > > >>>>>>> longer
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>> needed
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > > >>
> > > >>>>>>
> > > >>>>>>>>>>> would
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >>>>>>> good
> > > >>>>>>>

> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>> ON
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > > >>
> > > >>>>>>
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >>>

> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> no
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > > >
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> in
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > > > >
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> 20db
> > > >>>>>>>>>
> > > >>>>>>>>>>> on

> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > > >>>>>>> box.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Less
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>> <wagstw46@>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > > >>>>>>
> > > >>>>>>>> max
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> clockwise.
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > > >>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > > >>>>>>
> > > >>>>>>>> between
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> 1100.

> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> to peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > > >>>>>>>
> > > >>>>>>>>>> what
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> would you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > > >>>>>>
> > > >>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> not
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> touched
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > > >>>>>>>>> when
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> flip to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > > >>>>>>> any
> > > >>>>>>>
> > > >>>>>>>>>
> > >(Message over 64 KB, truncated)

32027. Re: [TS-520_820_530_830] TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 05:21:26 UTC
From: Joseph Stiles
Topic: 32020 Message: 32027

Fun & Terry,

Good point about the connectors...forgot that one...as I use one finger to hold down the board while I'm trying to remove the connector...I usually use a small "needle-nose" tool to loosen one end then the other while GENTLY pulling up. As Terry said...BE CAREFUL good luck.....

73's Joe
WB7UQU

From: Terry Wagoner <wagstw46@...m>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 22, 2011 2:00 PM
Subject: Re: [TS-520_820_530_830] TS-530SP QUESTION

I know everyone recommends the "connector clean and wipe" and it is probably needed, but be darned carefully pulling connectors off to clean them.

Try not to rock them side to side as you apply upward pressure. If you have to rock them try to do it gently end to end.

It is very easy to crack a foil pad from its trace and not even see it. Can give you fits troubleshooting. Then you are in to making jumpers and trying to extend solder flows to bridge breaks and all those kinds of cobble jobs to save the board. Just my experience. Terry -K9TW

From: Joseph Stiles <stilesjoseph@...>
To: "TS-520_820_530_830@yahoogroups.com" <TS-520_820_530_830@yahoogroups.com>
Sent: Wed, June 22, 2011 4:40:54 PM
Subject: Re: [TS-520_820_530_830] TS-530SP QUESTION

Hey Fun,

Most of the time the HV(high voltage) capacitors may be "sagging" a bit in supplying full voltage for full output...look for about a minimum of 780(key down) or so volts..900 or so at "idle"...you can check with the front panel meter...use the meter selector switch.."HV" and flip the send switch...do this with a dummy load/antenna connected as you should check this also after you "tune-up" to see how much voltage you have. Replacement cap. kits are readily available. If rig suffers from "high plate current" and low power output the cathode resistors can be at fault....a few cents to fix...and some time...usually caused by excessive time "tuning-up." Output should be nominal of 100W(slightly lower on the higher freq bands) with around 200-250mA of plate current. Don't go just replacing the PA tubes 'cause they are old...check for proper output/function first. I have only had to replace 2 sets of PA tubes on

"other rigs." I still have an 820S with
the original S2001A's PA tubes...still going strong. These rigs are pretty
tough...but do get abused. Also, you might notice some "scratchy" pots...easy to
clean with some good tuner cleaner/lube and "canned air." Maybe you can use the
antenna to see if it actually does receive signals...and not just "noise." If
you decide to buy it..get it home...read the manual(s) to get used to tuning
them up. You may also want to have some more fun by removing all the connectors
one by one and clean them up (connector and board side)...they do get oxidized
and can cause signal flow problems...do this by reconnecting/disconnecting
several times with some cleaner wetting the pins. Good
luck.....

73's Joe
WB7UQU

_____
From: Fun <fhlall.pearlriver@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 22, 2011 12:54 PM
Subject: [TS-520_820_530_830] TS-530SP QUESTION

I have an opportunity to purchase(in person) Kenwood TS-530SP. I will be able to
test/operate it prior to purchase.

The following describes the condition of the rig:
1. When was the last time the rig was in operation?

Maybe 18 years? I turned it on last nite and heard sounds from the speaker.

2. What does the rig come with? mike , cord , etc.

See mike and cord in the photo I sent to you.

3. Cosmetic condition - clean or marred(scratches)?

Clean.

4. Operating manuals/instructions, original box included?

Instruction manual - I sent photo - we never got a box from the man who sold to
us.

Since the TS-530 is over 20 years old, outside of possible replacement of the PA
tubes, what other technical concerns/problems might
be anticipated. I am aware that this rig is a hybrid with tubes in the power
output where you would have to have to adjust the Load,
Plate , and Drive. I intend to read the manual before examining the rig.
Thanks, 73 , KC2TBA, Fun

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

32028. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 06:11:57 UTC
From: Chris Parnell
Topic: 31926 Message: 32028

Hi Terry,

I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX and at the "back lug" of VC-3 (which I assume is the one with the small cap attached to it that goes to VC-2?) has "variable" readings in RX - I occasionally see +38V for split second, then it drops to zero (or close to zero), with the reading varying around a bit.

Sounds like a bad connection / earth maybe? I hope I am reading your test procedures correctly

Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230 schematic.

Cheers
Chris

On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105 watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>
> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF probe.
>
> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>
> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest PA cage) voltage was 66.0 volts (77.5).
>
> See Page 44 of service manual for test conditions. The Heath VTVM is not true rms but close enough for this testing. Terry
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> wrote:
> >
> > Hi Terry,
> >
> > The voltages at the tubes seem a little low from memory, I will measure them again tonight.
> > The Driver tube voltages (from memory) looked ok though... but again, I will double check tonight.
> >
> > Terry, the situation is that if I tune for maximum power out (about 60 - 70 W), then the IP is around 140-160mA.
> > If I adjust for 225mA my output power is almost non existent, hence me wanting to get this thing resolved.
> >
> > Cheers
> > Chris

> >
> >
> > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> >
> > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > >
> > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> > > on RF board are good place to look with your RF VTVM. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > OK..... well Mike (nor anyone else) answered this question... so...
> > >
> > > One thing that springs to mind is that I did change the RF board that was faulty
> > > in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> > > but thinking back, it's the time that my Power out was reduced to around
> > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > >
> > > Is the RF board a good place to start looking and if so, around what are?
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > Begin forwarded message:
> > >
> > > > From: Chris Parnell <cparnell1001@...>
> > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > > Mike,
> > > >
> > > > Any idea where would be a good place to start the voltage measurements?
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > >
> > > >> Hi Chris,
> > > >>
> > > >> Based on the HV and power output levels you provided, 850VDC high voltage and
> > > >>70 watts output, that equates to an IP current level of approximately 150ma.
> > > >>Therefore, with those levels the INPUT power in the final amplifier would be;
> > > >>

> > > >> .150 x 850 = 127.5 watts
> > > >>
> > > >> Since the 830 final amplifier has an efficiency rating of approximately 55%,
> > > >>power output would be
> > > >>
> > > >> 127.5 - 45% = 70.125 watts
> > > >>
> > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
> > > >>supplies are within specifications and operating as they should.
> > > >>
> > > >> I recommend you troubleshoot the 830's transmit signal path, take level
> > > >>measurements and compare your findings with the 830 service manual Level Diagram
> > > >>on page 44.
> > > >>
> > > >> 73s
> > > >> Mike
> > > >> W5RKL
> > > >>
> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > > >>wrote:
> > > >>>
> > > >>> Hi Terry,
> > > >>>
> > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
> > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
> > > >>>then the voltages would be about right for 60-70W output.
> > > >>>
> > > >>> My 830 was working "OK" originally, although the alignment was miles off.
> > > >>> Then I had an issue with a tube that failed in the final unit, and it caused a
> > > >>>number of issues.. one of which was NO output etc.
> > > >>>
> > > >>> I swapped the RF board as the one that came with the unit was broke in a number
> > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > >>> To which I decided to re-align the radio.
> > > >>>
> > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> > > >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> > > >>>be).
> > > >>> I purchased a new front fascia and it looks great.. needs to work great now
> > > >>:-)
> > > >>>
> > > >>> Cheers
> > > >>> Chris
> > > >>>
> > > >>>
> > > >>>
> > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > >>>

> > > >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> > > >>>>lack of effort!
> > > >>>>
> > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> > > >>>>position, that when you flip to send the meter pegs off scale right hand side of
> > > >>>>the meter. Is this true?
> > > >>>>
> > > >>>> 2. The expected response would be for the meter to deflect to the far end of
> > > >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> > > >>>>not peg.
> > > >>>>
> > > >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > >>>>
> > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> > > >>>>difficulty doing this step as written and you had not completed it yet. I
> > > >>>>suggest you go back and repeat this step.
> > > >>>>
> > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
> > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> > > >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> > > >>>>not peg the meter full scale or any ALC indication very far past the black
> > > >>>>border. If that is not how you left this step then this is likely your problem.
> > > >>>>
> > > >>>>
> > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > >>>>
> > > >>>>
> > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
> > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > >>>>
> > > >>>>
> > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> > > >>>>the AF board.
> > > >>>>
> > > >>>>
> > > >>>> Good Luck-Terry K9TW
> > > >>>>
> > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > > >>>>wrote:
> > > >>>>>
> > > >>>>> Hi Terry,
> > > >>>>>
> > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike

> > > >>>>>an email off list with some voltage measurements.
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>>
> > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >>>>>
> > > >>>>>> Chris--
> > > >>>>>>
> > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step
> > > >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> > > >>>>>
> > > >>>>>> clear enough real time video or not for this to work. Not sure about our time
> > > >>>>
> > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >>>>>>
> > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> > > >>>>
> > > >>>>>> rigs for a living? As you know I had never performed this step until you asked
> > > >>>>>
> > > >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> > > >>>>>
> > > >>>>>> generator. I have just done selected steps.
> > > >>>>>>
> > > >>>>>> Terry
> > > >>>>>>
> > > >>>>>> _____
> > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>
> > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > > >>>>
> > > >>>>>> have no attenuation in there)...
> > > >>>>>>
> > > >>>>>> So I got some test reference dBmA numbers against my calibrated probe and
wrote
> > > >>>>>
> > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> > > >>>>>> >>>>>Gain
> > > >>>>>>
> > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC
ON
> > > >>>>>>
> > > >>>>>> with regards to ALC readings.
> > > >>>>>>
> > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I

turn
> > > >>>>>>
> > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> > > >>meter.
> > > >>>>>>
> > > >>>>>> I may record a small video and send it to you... easier to see what I mean and
> > > >>>>>
> > > >>>>>> what i'm doing.
> > > >>>>>>
> > > >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> > > >>>>>>is,
> > > >>>>>>
> > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > > >>>>>>
> > > >>>>>> Cheers
> > > >>>>>> Chris
> > > >>>>>>
> > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >>>>>>
> > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > > >>>>
> > > >>>>>>> test signals.
> > > >>>>>>>
> > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in
my
> > > >>>>>>
> > > >>>>>>
> > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > > >>>>>
> > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > >>>>>>>
> > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around
the
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and
have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
> > > >>>>>
> > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> > > >>>>>>>
> > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving required
10mv
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> > > >>>>>
> > > >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> > > >>>

> > > >>>>>>> starting to get confused regards what your problem is.
> > > >>>>>>>
> > > >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> > > >>
> > > >>>>>>> troubleshooting with Mike.
> > > >>>>>>>
> > > >>>>>>> Terry
> > > >>>>>>>
> > > >>>>>>> _____
> > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>> Hi Terry / Mike.....
> > > >>>>>>>
> > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good
> > > >>>
> > > >>>>>>> piece of kit.
> > > >>>>>>> Here's what I see when I follow your instructions:
> > > >>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >>>>>>>>
> > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > > >>>>>>>
> > > >>>>>>>> I have the mic gain set exactly at
> > > >>>>>>>> No. 4 position.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv
> > > >>>>>>>>
> > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > >>>>>>>

> > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > >>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the
max
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > > >>>>>
> > > >>>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC
mode
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > > >>>>
> > > >>>>>>>> s-meter scale, it's S9+40dB +).
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >>>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at
either
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > > >>>
> > > >>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > > >>>>>
> > > >>>>>>>> I'm saying and seeing.
> > > >>>>>>>
> > > >>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > > >>
> > > >>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > > >>>>>
> > > >>>>>>>> PROC ON, which on the S-Meter is S-9.
> > > >>>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
> > >
> > > >>>>>>>> minimum.
> > > >>>>>>>

> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box.
> > > >>>>>>>>
> > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with
PROC
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > > >>>>>>
> > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >>>>>>>
> > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > >>>>>>>> off, but close enough.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> > > >>>
> > > >>>>>>> them
> > > >>>>>>>
> > > >>>>>>> with the PROC ON.
> > > >>>>>>>
> > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > > >>>
> > > >>>>>>> adjust L26 for 20dB reading.
> > > >>>>>>>
> > > >>>>>>> I will need to do some component checking in the circuit around the Processor
> > > >>>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>> Mike and yourself have recommended.
> > > >>>>>>>
> > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > >mentioned.
> > > >>>>>>>
> > > >>>>>>> Thanks
> > > >>>>>>> Chris, ZL1CDP
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right on the

> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about
it
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position or
increase
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection
when
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com

> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >>
> > > >>>>>>> right
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > > >>>>
> > > >>>>>>

> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > > >
> > > >>>>>>> back
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>

> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >>>>>>> have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> same
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > > >>>>>>>> adjust
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> mic
> > > >>>>>>>>
> > > >>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > > >>>
> > > >>>>>>>
> > > >>>>>>>> Tune
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > > >>>>>>>>>
> > > >>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > > >>>
> > > >>>>>>>
> > > >>>>>>>> can
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> move
> > > >>>>>>>>
> > > >>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > > >>>
> > > >>>>>>>
> > > >>>>>>>> will
> > > >>>>>>>>
> > > >>>>>>>>> be
> > > >>>>>>>>
> > > >>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > > >>
> > > >>>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>> set
> > > >>>>>>>>
> > > >>>>>>>>> audio generator output higher as others suggested. I chose to just
> > > >>>>>>>> increase
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> mic gain until I got an indication. After I found that point I no

> > > >>>>>>> longer
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >>>>>>> good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>>> ON
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > > >>
> > > >>>>>>
> > > >>>>>>>> with
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> no
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > > >
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>

> > > >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > > >>>>>>>> switch
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> in
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > > > >
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> 20db
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > > >
> > > >>>>>>> box.
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Less
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>> <wagstw46@>
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > > >>>>>>
> > > >>>>>>>> max
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> clockwise.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > > >>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>>

> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > > >>>>>>
> > > >>>>>>>>>> between
> > > >>>>>>>>>>
> > > >>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > > >>>>>>>
> > > >>>>>>>>>> what
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> would you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > > >>>>>>
> > > >>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> not
> > > >>>>>>>>>>
> > > >>>>>>>>>>> touched
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > > >>>>>>>> when
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> you
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> flip to
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> meter
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > > >>>>>>>>
> > > >>>>>>>>>>> sensitive
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > > >>>>>>> scale.
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> Quickly
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> turn
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > > >>>>>>>>
> > > >>>>>>>>>> box.
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Mic
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> gain
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > > >>>>>>>>
> > > >>>>>>>>>>> far
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> end of
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > > >>>>>>>
> > > >>>>>>>>> times
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> until you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > > >>>>>>> This
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> adjustment is
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > > >>>>>>> tends
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> peg
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> hard
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> > > >>>>>>
> > > >>>>>>>>> around
> > > >>>>>>>>>
> > > >>>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> max
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Comp
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Terry
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> _____
> > > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>

> > > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >>>>>>> alignment
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > > >>>>>>>> (Heater
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> etc), but
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > >>>>>>> "align"
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> speech
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> AG
> > > >>>>>>>>>>
> > > >>>>>>>>>>> output to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> 10 mV
> > > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > >>>>>>> maximum
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> on-scale ALC
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading. Set the PROC to ON.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> > > >>>>>>>>>> on-scaled).
> > > >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point where I

> > > >>>>>>>
> > > >>>>>>>>> turn
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> Proc ON
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> and
> > > >>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > >>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> > > >>>>>>>> meter
> > > >>>>>>>>
> > > >>>>>>>>> at
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> this
> > > >>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > >>>>>>>> reading.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> > > >>>>>>>>> pages
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> 40&41. As
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> > > >>>>>>>>
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> and
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>>> LEAVE
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>>> off of the
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous

> > > >>>>>>> step
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>>> conditions still
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> being in force?
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> > > >>>>>>> "max
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading on
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> the Compression Scale".
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >>>>>>> reading.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> That
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> would be on
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > >>>>>>> indication
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> of
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> 20db
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> and
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>>>>>>> a
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> multi-scale
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>>> scale.
> > > >>>>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> > > >>>>>>>
> > > >>>>>>>> mic
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> > > >>>>>>> 1200
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> and
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> peaked L27.
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >>>>>>> would
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> say
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> something
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> > > >>>>>>>> box".
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Just
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> make it
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > >>>>>> read.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> > > >>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> switch on
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> > > >>>>>>> -K9TW
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > >>>>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> > > >>>>>>
> > > >>>>>>>>> chance
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> check
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> > > >>>>>>> so
> > > >>>>>>>
> > > >>>>>>>>> I
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> will
> > > >>>>>>>>>>
> > > >>>>>>>>>>> give it a
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> try today and report back. Terry
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > >>>>>>> in
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>> 830
> > > >>>>>>>>>>
> > > >>>>>>>>>>> at the
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>>>>>> weekend?
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>
> > > >>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>
> > > >>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>

> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>> ----------
> > > >>>>>>>>
> > > >>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >>>>>>>
> > > >>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just
> > > >>>
> > > >>>>>>> about
> > > >>>>>>>
> > > >>>>>>> out of ideas.
> > > >>>>>>>
> > > >>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
> > > >>>>>
> > > >>>>>>> rig. I just unplugged the mic and brought the test equipment to the
operating
> > > >>>>>
> > > >>>>>>> position.
> > > >>>>>>>
> > > >>>>>>> I use a spare mic connector and clipped the generator output to it with
> > >
> > > >>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > > >>>>
> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > > >>
> > > >>>>>>> heater
> > > >>>>>>>
> > > >>>>>>> switches. Let it warm up a little.

> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv.
> > > >>>>>>>>
> > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > > >>>>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the
max
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> > > > >
> > > >>>>>>> covers
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> > > >>>>
> > > >>>>>>>> just
> > > >>>>>>>>
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right on the
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > > >>>>>

> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about
it
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position or
increase
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection
when
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the "gain" on

> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > > >>
> > > >>>>>>> right
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > > >>>>>>>>>
> > > >>>>>>>>> Hope this makes sense..
> > > >>>>>>>>>
> > > >>>>>>>>> Cheers
> > > >>>>>>>>> Chris
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Chris--This appears different than what you originally reported of getting
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Where
> > > >>>>>>>>>>
> > > >>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>>

> > > >>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > > >>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > > >
> > > >>>>>>>> back
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > > >>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > > >>>>>>>> without

> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into account
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > > >>>>
> > > >>>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > > >>>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>> same
> > > >>>>>>>>>

> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > > >>>>>>>> adjust
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > > >>
> > > >>>>>>>> is
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>> set
> > > >>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > > >>>>>>>>> increase
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > > >>>>>>>> longer
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it

> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > > >>>>>>> good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>>> ON
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > > >>

> > > >>>>>>
> > > >>>>>>>> with
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> no
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > > >
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > > >>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> in
> > > >>>>>>>>>>

> > > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > > >
> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> 20db
> > > >>>>>>>>
> > > >>>>>>>> on
> > > >>>>>>>>
> > > >>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > > >>>>>>> box.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Less
> > > >>>>>>>>
> > > >>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>> <wagstw46@>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > > >>>>>>
> > > >>>>>>>> max
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> clockwise.
> > > >>>>>>>>>
> > > >>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > > >>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>> 6. You return to Stand-by.

> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > > >>>>>>
> > > >>>>>>>>>> between
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> to peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > > >>>>>>>
> > > >>>>>>>>>> what
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> would you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>>>> With Processor on and Comp level se
(Message over 64 KB, truncated)

32029. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 06:24:31 UTC
From: Chris Parnell
Topic: 31926 Message: 32029

Hi Mike

Thanks for this.. I will do some voltage measurements and come back to you.

Cheers
Chris

On 23/06/2011, at 1:03 AM, w5rkl wrote:

> Hi Chris,
>
> I agree with Terry. Knowing that you replaced the RF board and since RF drive is produced on the RF board, it stands to reason the RF board is the place to start.
>
> I do not believe, at this point, the problem exists elsewhere. This does not mean the problem could be elsewhere after you do some troubleshooting. Don't guess because more than likely you will be wrong. Think about what the problem is and if necessary, review the 830 operators and service manual's "Circuit Description" sections to refresh your memory on how the 830 processes both receive and transmit signals. Again, don't guess.
>
> Review the 830 service manual transmit Level Diagram on page 44. Compare the levels in your 830 to the levels in the 830 service manual. This will give you an idea of what's going on in the 830 as far as transmit levels are concerned. Don't forget there are some common circuit that affect both transmit and receive.
>
> If you have not yet done so, measure the voltages on the RF board, especially on the driver tube. Use the 830 high resolution schematic I sent you. The voltages in question are the red voltages. Compare your voltages to the high resolution schematic voltages.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > Chris--Are you saying you cannot load to any higher than 150ma IP?
> >
> > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 and DRV
> > on RF board are good place to look with your RF VTVM. Terry
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > Sent: Wed, June 22, 2011 6:51:21 AM

> > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> >
> > OK..... well Mike (nor anyone else) answered this question... so...
> >
> > One thing that springs to mind is that I did change the RF board that was faulty
> > in my TS-830s for one from Bob Mansker (which he and I of course assume work ok)
> > but thinking back, it's the time that my Power out was reduced to around
> > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> >
> >
> > Is the RF board a good place to start looking and if so, around what are?
> >
> > Thanks
> > Chris, ZL1CDP
> >
> > Begin forwarded message:
> >
> > > From: Chris Parnell <cparnell1001@...>
> > > Date: 20 June 2011 10:10:55 AM NZST
> > > To: TS-520_820_530_830@yahoogroups.com
> > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > >
> > > Mike,
> > >
> > > Any idea where would be a good place to start the voltage measurements?
> > >
> > > Cheers
> > > Chris
> > >
> > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > >
> > >> Hi Chris,
> > >>
> > >> Based on the HV and power output levels you provided, 850VDC high voltage and
> > >>70 watts output, that equates to an IP current level of approximately 150ma.
> > >>Therefore, with those levels the INPUT power in the final amplifier would be;
> > >>
> > >> .150 x 850 = 127.5 watts
> > >>
> > >> Since the 830 final amplifier has an efficiency rating of approximately 55%,
> > >>power output would be
> > >>
> > >> 127.5 - 45% = 70.125 watts
> > >>
> > >> the same as your 830 is producing. That tells me the HV and LV Rectifier Unit
> > >>supplies are within specifications and operating as they should.
> > >>
> > >> I recommend you troubleshoot the 830's transmit signal path, take level

> > >>measurements and compare your findings with the 830 service manual Level Diagram
> > >>on page 44.
> > >>
> > >> 73s
> > >> Mike
> > >> W5RKL
> > >>
> > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >>wrote:
> > >>>
> > >>> Hi Terry,
> > >>>
> > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself re: the
> > >>>voltages... Mike did respond saying that if my IP is around 150mA (which it is),
> > >>>then the voltages would be about right for 60-70W output.
> > >>>
> > >>> My 830 was working "OK" originally, although the alignment was miles off.
> > >>> Then I had an issue with a tube that failed in the final unit, and it caused a
> > >>>number of issues.. one of which was NO output etc.
> > >>>
> > >>> I swapped the RF board as the one that came with the unit was broke in a number
> > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > >>> To which I decided to re-align the radio.
> > >>>
> > >>> On doing so, I noticed that the Speech Processor wouldn't align and the output
> > >>>was 50 -70W maximum. - It still is the same, although RX is excellent now.
> > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine) and CW,
> > >>>but I was hoping to get the radio at 100W and factory aligned (as close as can
> > >>>be).
> > >>> I purchased a new front fascia and it looks great.. needs to work great now
> > >>>:-)
> > >>>
> > >>> Cheers
> > >>> Chris
> > >>>
> > >>>
> > >>>
> > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > >>>
> > >>>> Chris--No one ever accused me of being very smart, but I will never fail due to
> > >>>>lack of effort!
> > >>>>
> > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv injected into
> > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode, meter in ALC
> > >>>>position, that when you flip to send the meter pegs off scale right hand side of
> > >>>>the meter. Is this true?
> > >>>>
> > >>>> 2. The expected response would be for the meter to deflect to the far end of
> > >>>>the ALC black box scale or somewhere close either side of the Max ALC range and
> > >>>>not peg.

> > >>>>
> > >>>> 3. I dont believe this has anything to do with your Processor or Comp Level
> > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > >>>>
> > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I had
> > >>>>difficulty doing this step as written and you had not completed it yet. I
> > >>>>suggest you go back and repeat this step.
> > >>>>
> > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you adjust the
> > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim pot VR-7.
> > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step you should
> > >>>>be able to flip to send with 10 mv signal injected and get max ALC reading and
> > >>>>not peg the meter full scale or any ALC indication very far past the black
> > >>>>border. If that is not how you left this step then this is likely your problem.
> > >>>>
> > >>>>
> > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with Processor
> > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if off the
> > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You should be
> > >>>>able to move meter indication down to the ALC box max border or S9.
> > >>>>
> > >>>>
> > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31 before
> > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > >>>>
> > >>>>
> > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then there is
> > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19 and Q20 on
> > >>>>the AF board.
> > >>>>
> > >>>>
> > >>>> Good Luck-Terry K9TW
> > >>>>
> > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >>>wrote:
> > >>>>>
> > >>>>> Hi Terry,
> > >>>>>
> > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you and Mike
> > >>>>an email off list with some voltage measurements.
> > >>>>>
> > >>>>> Cheers
> > >>>>> Chris
> > >>>>>
> > >>>>>
> > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > >>>>>
> > >>>>>> Chris--
> > >>>>>>
> > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each step

> > >>>>>> together on our rigs and see at what step we differ. Not sure if we could have
> > >>>>>
> > >>>>>> clear enough real time video or not for this to work. Not sure about our time
> > >>>>
> > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > >>>>>>
> > >>>>>> Maybe Mike or Gordon would be better to do this with you as they repair these
> > >>>>
> > >>>>>> rigs for a living? As you know I had never performed this step until you asked
> > >>>>>
> > >>>>>> about it. In fact I have never completed a full alignment as I dont have sweep
> > >>>>>
> > >>>>>> generator. I have just done selected steps.
> > >>>>>>
> > >>>>>> Terry
> > >>>>>>
> > >>>>>> _____
> > >>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>
> > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF Gen (as I
> > >>>>
> > >>>>>> have no attenuation in there)...
> > >>>>>>
> > >>>>>> So I got some test reference dBmA numbers against my calibrated probe and wrote
> > >>>>>>
> > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > >>>>>> So... re-did the whole thing and of course, its more in line with your "Mic
> > >>>>>>Gain
> > >>>>>>
> > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF to PROC ON
> > >>>>>>
> > >>>>>> with regards to ALC readings.
> > >>>>>>
> > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the second I turn
> > >>>>>>
> > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of the
> > >>>>>>meter.
> > >>>>>>
> > >>>>>> I may record a small video and send it to you... easier to see what I mean and
> > >>>>>
> > >>>>>> what i'm doing.
> > >>>>>>
> > >>>>>> Turning the Mic gain up and down of course makes a difference, but the point
> > >>>>>>is,
> > >>>>>>
> > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC readings.
> > >>>>>>

> > >>>>>> Cheers
> > >>>>>> Chris
> > >>>>>>
> > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > >>>>>>
> > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50 mv 1500hz
> > >>>>
> > >>>>>>> test signals.
> > >>>>>>>
> > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than I do in my
> > >>>>>>
> > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4 it is just
> > >>>>>
> > >>>>>>> where I can get a good match at far right end of ALC black box.
> > >>>>>>>
> > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment right around the
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall back and have
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> no meter indication. I do know with both of my rigs I end up at very close to
> > >>>>>
> > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC box.
> > >>>>>>>
> > >>>>>>> I assume you have tried adjusting the mic gain down while leaving required 10mv
> > >>>>>>>
> > >>>>>>>
> > >>>>>>> signal injected? I found it a little touchy. When you first reported no meter
> > >>>>>
> > >>>>>>> indication that is why I suggested turning mic gain up a little. Maybe I am
> > >>>>>>
> > >>>>>>> starting to get confused regards what your problem is.
> > >>>>>>>
> > >>>>>>> If turning mic gain down a little doesnt help then I would say it is on to
> > >>>>>>
> > >>>>>>> troubleshooting with Mike.
> > >>>>>>>
> > >>>>>>> Terry
> > >>>>>>>
> > >>>>>>> _____
> > >>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>
> > >>>>>>> Hi Terry / Mike.....
> > >>>>>>>
> > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test Set. - Good

> > >>>
> > >>>>>>> piece of kit.
> > >>>>>>> Here's what I see when I follow your instructions:
> > >>>>>>>
> > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> >
> > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > >>>>>>>>
> > >>>>>>> Exactly the same as me Terry, except my mini clips are connected directly to
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no differemce.
> > >>>>>>>
> > >>>>>>>> I have the mic gain set exactly at
> > >>>>>>>> No. 4 position.
> > >>>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > >>>>>>>> switches. Let it warm up a little.
> > >>>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >>
> > >>>>>>> Wave
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> Tek generator to exactly 10 mv
> > >>>>>>>>
> > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > >>>>>>>
> > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > >>
> > >>>>>>>> place meter switch in ALC position.
> > >>>>>>>>
> > >>>>>>>
> > >>>>>>> Same here
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > >>>>>>>>
> > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to 1500Hz and 10mV
> > >>>>>
> > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection in ALC mode
> > >>>>>>>

> > >>>>>>>
> > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if you look at
> > >>>>
> > >>>>>>> s-meter scale, it's S9+40dB +).
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >>>>>>>> position
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> and I have not touched mic gain pot.
> > >>>>>>>>>
> > >>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any gains at either
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around S9+20dB
> > >>>>
> > >>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to gauge what
> > >>>>>
> > >>>>>>>> I'm saying and seeing.
> > >>>>>>>
> > >>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get maximum
> > >>
> > >>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale reading without
> > >>>>>
> > >>>>>>>> PROC ON, which on the S-Meter is S-9.
> > >>>>>>>> I check where VR-7 is now within it's VR scale and notice it's almost at
> > >
> > >>>>>>>> minimum.
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > >>>>>
> > >>>>>>
> > >>>>>>>>> black ALC box.
> > >>>>>>>>>
> > >>>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter reading, with PROC
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> OFF, I put PROC ON and the reading drops to around the end of the letter C of
> > >>>>>
> > >>>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> It could be adjusted a little to get a match if I had the covers
> > >>>>>>>>> off, but close enough.
> > >>>>>>>>>
> > >>>>>>>
> > >>>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher and align
> > >>>
> > >>>>>>>> them

> > >>>>>>>
> > >>>>>>> with the PROC ON.
> > >>>>>>>
> > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > >>>>>>>> a little above 20db on the Comp scale.
> > >>>>>>>>
> > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp meter, so I
> > >>>
> > >>>>>>> adjust L26 for 20dB reading.
> > >>>>>>>
> > >>>>>>> I will need to do some component checking in the circuit around the Processor
> > >>>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>> Mike and yourself have recommended.
> > >>>>>>>
> > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > >mentioned.
> > >>>>>>>
> > >>>>>>> Thanks
> > >>>>>>> Chris, ZL1CDP
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > >>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> found condition for my daily operator is very close to being right on the
> > >>
> > >>>>>>> same
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > >>>>>
> > >>>>>>> on
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and off.
> > >>>>>>>>
> > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> > >>>>>>
> > >>>>>>>>
> > >>>>>>>> some more and if I come up with something will write.
> > >>>>>>>>
> > >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> > >>>>>>
> > >>>>>>>>
> > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >>>

> > >>>>>>> your
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > >>>>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> wouldnt think much higher.
> > >>>>>>>>
> > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >>>>>
> > >>>>>>
> > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > >>
> > >>>>>>> Good
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> luck Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Hi Terry,
> > >>>>>>>>
> > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > >>>>>>> why...
> > >>>>>>>>
> > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > >>>>compensate.
> > >>>>>>>>
> > >>>>>>>>> Based on what you are reporting I would expect it to
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>

> > >>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > >>>>>>>>>
> > >>>>>>>>
> > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > >>
> > >>>>>>> right
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >>>>>>>>
> > >>>>>>>> Hope this makes sense..
> > >>>>>>>>
> > >>>>>>>> Cheers
> > >>>>>>>> Chris
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >>>>>>>>
> > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > >>>>
> > >>>>>>> no
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > >>>>
> > >>>>>>
> > >>>>>>>>> Where
> > >>>>>>>>>
> > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > >>
> > >>>>>>> hard
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > >>>>>
> > >>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> peg.
> > >>>>>>>>>
> > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >>>>
> > >>>>>>
> > >>>>>>>>> off
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report

> > >
> > >>>>>>> back
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > >>>>>
> > >>>>>>>
> > >>>>>>>> to
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > >>>>
> > >>>>>>
> > >>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > >>>>>>> without
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> PROC NOT engaged, just Mic.
> > >>>>>>>>
> > >>>>>>>> Chris
> > >>>>>>>> Sent from my iPhone
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > >>>>>>>>
> > >>>>>>>> Hi Terry, in a nutshell,
> > >>>>>>>>
> > >>>>>>>> It doesn't weigh up here.
> > >>>>>>>>
> > >>>>>>>> Following to the letter the service manual and then taking into account
> > >>>>>>
> > >>>>>>>> your
> > >>>>>>>>
> > >>>>>>>>

> > >>>>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > >>>>
> > >>>>>>> of
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC
> > >>>>>>>>>
> > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > >>
> > >>>>>>>> meter)
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >>>
> > >>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> Thanks
> > >>>>>>>>>> Chris
> > >>>>>>>>>>
> > >>>>>>>>>> Sent from my iPhone
> > >>>>>>>>>>
> > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > >>>>>>> have
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> same
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > >>>>>>>> adjust
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> mic
> > >>>>>>>>>>
> > >>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > >>>
> > >>>>>>>>
> > >>>>>>>>> Tune
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > >>>>>>>>>>
> > >>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > >>>
> > >>>>>>>>

> > >>>>>>>> can
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> move
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > >>>
> > >>>>>>>>
> > >>>>>>>>> will
> > >>>>>>>>>
> > >>>>>>>>>> be
> > >>>>>>>>>>
> > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > >>
> > >>>>>>>> is
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>>> set
> > >>>>>>>>>>>
> > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > >>>>>>>>> increase
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > >>>>>>>> longer
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> needed
> > >>>>>>>>>>
> > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > >>
> > >>>>>>>>> would
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > >>>>>>>> good
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> matched
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>>> _____
> > >>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > >>>>>>>>>>>
> > >>>>>>>>>>> Thanks Terry,
> > >>>>>>>>>>>
> > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >>>>>>> then
> > >>>>>>>
> > >>>>>>>> ON
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>
> > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > >
> > >>>>>>> to
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> have
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > >>>>>>>>>>>
> > >>>>>>>>>>> Cheers
> > >>>>>>>>>>> Chris
> > >>>>>>>>>>>
> > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>
> > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > >>>>>>> equal
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > >>
> > >>>>>>
> > >>>>>>>> with
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > >>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> no
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > >
> > >>>>>>> any
> > >>>>>>>

> > >>>>>>>
> > >>>>>>>>>> lower on
> > >>>>>>>>>>
> > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>>>> <cparnell1001@>
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> Thanks Terry....
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > >>>>>>>> NZ
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> time.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > >>>>>>>>> switch
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> in
> > >>>>>>>>>>
> > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > >
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> 20db
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> > >
> > >>>>>>> box.
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> Less
> > >>>>>>>>>
> > >>>>>>>>>> decay time to mess with. Terry
> > >>>>>>>>>>

> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > >>>>>>>> <wagstw46@>
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > >>>>>>>>>>>>>>>> Step A:
> > >>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > >>>>>>
> > >>>>>>>> max
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>>> clockwise.
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>>> You are in USB mode.
> > >>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > >>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > >>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > >>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > >>>>>>
> > >>>>>>>> end
> > >>>>>>>>
> > >>>>>>>>>> of
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>> ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>>> black bordered box.
> > >>>>>>>>>>>>>>>> 6. You return to Stand-by.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > >>>>>>
> > >>>>>>>> between
> > >>>>>>>>>>
> > >>>>>>>>>>> 1000 and
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 1100.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > >>>>>>> you
> > >>>>>>>>
> > >>>>>>>>>> expect
> > >>>>>>>>>>
> > >>>>>>>>>>> the ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect

> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> meter
> > >>>>>>>>>>
> > >>>>>>>>>>>> to peg
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > >>>>>>>>
> > >>>>>>>>>> what
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> would you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Step B:
> > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > >>>>>>
> > >>>>>>>> gain
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> not
> > >>>>>>>>>>
> > >>>>>>>>>>>> touched
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > >>>>>>>>> when
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> you
> > >>>>>>>>>>
> > >>>>>>>>>>>> flip to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> ALC
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> meter
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > >>>>>>>
> > >>>>>>>>>> sensitive
> > >>>>>>>>>>
> > >>>>>>>>>>>> and

> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > >>>>>>> scale.
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> Quickly
> > >>>>>>>>>>
> > >>>>>>>>>>>> turn
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > >>>>>>>
> > >>>>>>>>> box.
> > >>>>>>>>>
> > >>>>>>>>>> Mic
> > >>>>>>>>>>
> > >>>>>>>>>>>> gain
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > >>>>>>
> > >>>>>>>>> far
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> end of
> > >>>>>>>>>>
> > >>>>>>>>>>>> ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > >>>>>>>
> > >>>>>>>>> times
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> until you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > >>>>>>> This
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> adjustment is
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > >>>>>>> tends
> > >>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> peg
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> hard
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float

> > >>>>>>
> > >>>>>>>>> around
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>>> max
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> Comp
> > >>>>>>>>>>
> > >>>>>>>>>>>> you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> Terry
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> _____
> > >>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > >>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >>>>>>> alignment
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> Hi Terry, thanks for this.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > >>>>>>>> (Heater
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>> etc), but
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > >>>>>>> "align"
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> speech
> > >>>>>>>>>>>>

> > >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > >>>>>>>
> > >>>>>>>> the
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> AG
> > >>>>>>>>>>
> > >>>>>>>>>>> output to
> > >>>>>>>>>>>
> > >>>>>>>>>>>> 10 mV
> > >>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > >>>>>>> maximum
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> on-scale ALC
> > >>>>>>>>>>>
> > >>>>>>>>>>>> reading. Set the PROC to ON.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX ALC
> > >>>>>>>>>> on-scaled).
> > >>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > >>>>>>>>>>>> Every step up until here works fine. I get to the point where I
> > >>>>>>>
> > >>>>>>>>> turn
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>> Proc ON
> > >>>>>>>>>>>
> > >>>>>>>>>>>> and
> > >>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > >>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>> at
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> this
> > >>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > >>>>>>> reading.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>> Cheers
> > >>>>>>>>>>>> Chris
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>

> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment on
> > >>>>>>>> pages
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> 40&41. As
> > >>>>>>>>>>
> > >>>>>>>>>>> usual the service manual leaves out a few thing!
> > >>>>>>>>>>>
> > >>>>>>>>>>>> They should tell you to load up normally. Then switch off SG
> > >>>>>>
> > >>>>>>>>> switch
> > >>>>>>>>>
> > >>>>>>>>>> and
> > >>>>>>>>>>
> > >>>>>>>>>>> LEAVE
> > >>>>>>>>>>>
> > >>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with the
> > >>>>>>>
> > >>>>>>>>>> heater
> > >>>>>>>>>>
> > >>>>>>>>>>> off of the
> > >>>>>>>>>>>
> > >>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> > >>>>>>>> step
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> conditions still
> > >>>>>>>>>>
> > >>>>>>>>>>> being in force?
> > >>>>>>>>>>>
> > >>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> > >>>>>>>> "max
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> meter
> > >>>>>>>>>>
> > >>>>>>>>>>> reading on
> > >>>>>>>>>>>
> > >>>>>>>>>>>> the Compression Scale".
> > >>>>>>>>>>>
> > >>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > >>>>>>>> reading.
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> That
> > >>>>>>>>>>
> > >>>>>>>>>>

> > >>>>>>>>>>>> would be on
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > >>>>>>> indication
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> of
> > >>>>>>>>>
> > >>>>>>>>>> 20db
> > >>>>>>>>>>
> > >>>>>>>>>>>> and
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> > >>>>>>> with
> > >>>>>>>
> > >>>>>>>> a
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>>>> multi-scale
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> scale.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to set
> > >>>>>>>
> > >>>>>>>> mic
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> gain
> > >>>>>>>>>>
> > >>>>>>>>>>>
> > >>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine at
> > >>>>>>> 1200
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> and
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> peaked L27.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > >>>>>>> would
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> say
> > >>>>>>>>>
> > >>>>>>>>>>

> > >>>>>>>>>>>> something
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter scale
> > >>>>>>>> box".
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> Just
> > >>>>>>>>>>
> > >>>>>>>>>>>> make it
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > >>>>>> read.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and leave
> > >>>>>>>>
> > >>>>>>>>>> heater
> > >>>>>>>>>>
> > >>>>>>>>>>>> switch on
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> > >>>>>>>> -K9TW
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>>>>>> <cparnell1001@>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Ok Terry, thank you.
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had much
> > >>>>>>>>
> > >>>>>>>>>> chance
> > >>>>>>>>>>
> > >>>>>>>>>>>> to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> check
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> > >>>>>>>> so

> > >>>>>>>
> > >>>>>>>> I
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> will
> > >>>>>>>>>>
> > >>>>>>>>>>>> give it a
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> try today and report back. Terry
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>
> > >>>>>>>>>> <cparnell1001@>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > >>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>> 830
> > >>>>>>>>>>
> > >>>>>>>>>>>> at the
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> weekend?
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>>>> ------------------------------------
> > >>>>>>>>>>>>>>>>>>

> > >>>>>>>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
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> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> ----------
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> ----------
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Yahoo! Groups Links
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I am just

> > >>>
> > >>>>>>>> about
> > >>>>>>>>
> > >>>>>>>> out of ideas.
> > >>>>>>>>
> > >>>>>>>> I just repeated the test on my daily operating TS-830 with the covers on the
> > >>>>>
> > >>>>>>
> > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to the operating
> > >>>>>>
> > >>>>>>>>
> > >>>>>>>> position.
> > >>>>>>>>
> > >>>>>>>> I use a spare mic connector and clipped the generator output to it with
> >
> > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain set exactly
> > >>>>
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on rig and
> > >>
> > >>>>>>>> heater
> > >>>>>>>>
> > >>>>>>>> switches. Let it warm up a little.
> > >>>>>>>>
> > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine wave from
> > >>
> > >>>>>>> Wave
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> Tek generator to exactly 10 mv.
> > >>>>>>>>
> > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch to USB. I
> > >>>>
> > >>>>>>>> place meter switch in ALC position.
> > >>>>>>>>
> > >>>>>>>> I then flip to Send and get ALC meter indication that is just outside the max
> > >>>>>>
> > >>>>>>>>
> > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > >>>>>>>>
> > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in ALC
> > >>>>>>> position
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and I have not touched mic gain pot.
> > >>>>>>>>
> > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more outside the
> > >>>>>

> > >>>>>>
> > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I had the
> > >
> > >>>>>>> covers
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it indicates
> > >>>>
> > >>>>>>>> just
> > >>>>>>>>
> > >>>>>>>> a little above 20db on the Comp scale.
> > >>>>>>>>
> > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In short my
> > >>>>
> > >>>>>>> as
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> found condition for my daily operator is very close to being right on the
> > >>
> > >>>>>>> same
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> indicated level on the ALC meter scale (near max on black border) with Proc
> > >>>>>
> > >>>>>>> on
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> and off.
> > >>>>>>>>
> > >>>>>>>> At this point Chris not sure I can be of any more help? I will think about it
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> some more and if I come up with something will write.
> > >>>>>>>>
> > >>>>>>>> Whatever you do you should not have to increase mic gain position or increase
> > >>>>>>
> > >>>>>>>
> > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp gain in
> > >>>
> > >>>>>>> your
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> rig you may have to be a little higher than position 4 on the mic gain , but
> > >>>>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> wouldnt think much higher.
> > >>>>>>>>
> > >>>>>>>> Also, you might want to measure the sig gen level at your mic connection when

> > >>>>>>
> > >>>>>>>
> > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not vary from
> > >>>>>
> > >>>>>>
> > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my experience.
> > >>
> > >>>>>>> Good
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> luck Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Hi Terry,
> > >>>>>>>>
> > >>>>>>>> The only difference from my original post is that I increased the "gain" on
> > >>>>
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not sure
> > >
> > >>>>>>> why...
> > >>>>>>>>
> > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > >>>>compensate.
> > >>>>>>>>
> > >>>>>>>>> Based on what you are reporting I would expect it to
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere
> > >>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > >>>>>>>>>
> > >>>>>>>>
> > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to the far
> > >>
> > >>>>>>> right
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the same.
> > >>>>>>>>

> > >>>>>>>> Hope this makes sense..
> > >>>>>>>>
> > >>>>>>>> Cheers
> > >>>>>>>> Chris
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > >>>>>>>>
> > >>>>>>>>> Chris--This appears different than what you originally reported of getting
> > >>>>
> > >>>>>>> no
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do different?
> > >>>>
> > >>>>>>
> > >>>>>>>>> Where
> > >>>>>>>>>
> > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long as it is
> > >>
> > >>>>>>> hard
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> on
> > >>>>>>>>>
> > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get meter off
> > >>>>>
> > >>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>> peg.
> > >>>>>>>>>
> > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or at least
> > >>>>
> > >>>>>>>> off
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and report
> > >
> > >>>>>>> back
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would expect it
> > >>>>>
> > >>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>> be something less than far right of ALC black box? Assuming it is somewhere

> > >>>>>
> > >>>>>>>
> > >>>>>>>> in
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up? Terry
> > >>>>>>>>
> > >>>>>>>> _____
> > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>
> > >>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of black ALC
> > >>>>
> > >>>>>>
> > >>>>>>>> setting), with processor on and full scale (pegged meter) deflection
> > >>>>>>> without
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> PROC NOT engaged, just Mic.
> > >>>>>>>>
> > >>>>>>>> Chris
> > >>>>>>>> Sent from my iPhone
> > >>>>>>>>
> > >>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > >>>>>>>>
> > >>>>>>>> Hi Terry, in a nutshell,
> > >>>>>>>>
> > >>>>>>>> It doesn't weigh up here.
> > >>>>>>>>
> > >>>>>>>> Following to the letter the service manual and then taking into account
> > >>
> > >>>>>>>> your
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>> notes, the final situation is that I end up with full on-scale deflection
> > >>>>
> > >>>>>>> of
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>> ALC
> > >>>>>>>>
> > >>>>>>>> (ie end of black ALC setting), with processor on and full scale (pegged
> > >>
> > >>>>>>>> meter)
> > >>>>>>>>

> > >>>>>>>>>
> > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and PROC OFF.
> > >>>
> > >>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> Thanks
> > >>>>>>>>>> Chris
> > >>>>>>>>>>
> > >>>>>>>>>> Sent from my iPhone
> > >>>>>>>>>>
> > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > >>>>>>>>>>
> > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv applied to
> > >>>>>>> have
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> same
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not have to
> > >>>>>>>> adjust
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> mic
> > >>>>>>>>>>
> > >>>>>>>>>>> gain or input signal level once balanced. You should be able to flip to
> > >>>
> > >>>>>>>
> > >>>>>>>>> Tune
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> with Proc on and off and see approx the same max ALC indication.
> > >>>>>>>>>>
> > >>>>>>>>>>> If you initially get no indication (I think that is your problem?) you
> > >>>
> > >>>>>>>
> > >>>>>>>> can
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> move
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take much and
> > >>>
> > >>>>>>>
> > >>>>>>>>> will
> > >>>>>>>>>
> > >>>>>>>>>> be

> > >>>>>>>>>>
> > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice you have
> > >>
> > >>>>>>> is
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>> set
> > >>>>>>>>>>
> > >>>>>>>>>>> audio generator output higher as others suggested. I chose to just
> > >>>>>>>>> increase
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> mic gain until I got an indication. After I found that point I no
> > >>>>>>> longer
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> needed
> > >>>>>>>>>>
> > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time then it
> > >>
> > >>>>>>
> > >>>>>>>>> would
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting pretty
> > >>>>>>> good
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> matched
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > >>>>>>>>>>>
> > >>>>>>>>>>> _____
> > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > >>>>>>>>>>>
> > >>>>>>>>>>> Thanks Terry,
> > >>>>>>>>>>>
> > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc OFF
> > >>>>>>> then
> > >>>>>>>
> > >>>>>>>>> ON
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>> to
> > >>>>>>>>>>

> > >>>>>>>>>>> same point? that's what it states from memory... point of exercise is
> > >
> > >>>>>>> to
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> have
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > >>>>>>>>>>>
> > >>>>>>>>>>>> Cheers
> > >>>>>>>>>>>> Chris
> > >>>>>>>>>>>
> > >>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty good
> > >>>>>>> equal
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>>>> indications at far right of ALC black box or S-9 on the S-meter scale
> > >>
> > >>>>>>
> > >>>>>>>>> with
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> the
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27 adjusted
> > >>>
> > >>>>>>> I
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> no
> > >>>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I cant go
> > >
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>>> lower on
> > >>>>>>>>>>>
> > >>>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > >>>>>>>>> <cparnell1001@>
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>>> wrote:

> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> Thanks Terry....
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later tonight
> > >>>>>>> NZ
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>>> time.
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> Cheers
> > >>>>>>>>>>>>> Chris
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially (meter
> > >>>>>>>> switch
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> in
> > >>>>>>>>>>
> > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated level
> > >
> > >>>>>>> at
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> 20db
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of the ALC
> >
> > >>>>>>> box.
> > >>>>>>>
> > >>>>>>>
> > >>>>>>>>> Less
> > >>>>>>>>>>
> > >>>>>>>>>>>> decay time to mess with. Terry
> > >>>>>>>>>>>>>
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > >>>>>>>> <wagstw46@>
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>> wrote:
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>> Chris--OK you are telling me the following:
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>> Step A:
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>> 1. You have the Processor button off and Compression level pot
> > >>>>>>

> > >>>>>>>> max
> > >>>>>>>>
> > >>>>>>>>
> > >>>>>>>>>>>> clockwise.
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> You are in USB mode.
> > >>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > >>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > >>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far right
> > >>>>>>
> > >>>>>>>> end
> > >>>>>>>>
> > >>>>>>>>> of
> > >>>>>>>>>
> > >>>>>>>>>> the
> > >>>>>>>>>>
> > >>>>>>>>>>>> ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> black bordered box.
> > >>>>>>>>>>>>>>> 6. You return to Stand-by.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should be
> > >>>>>>
> > >>>>>>>>>> between
> > >>>>>>>>>>
> > >>>>>>>>>>>> 1000 and
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> 1100.
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What would
> > >>>>>>> you
> > >>>>>>>
> > >>>>>>>>>> expect
> > >>>>>>>>>>
> > >>>>>>>>>>>> the ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you expect
> > >>>>>>> the
> > >>>>>>>
> > >>>>>>>>>> meter
> > >>>>>>>>>>
> > >>>>>>>>>>>> to peg
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and whistled
> > >>>>>>>
> > >>>>>>>>> what
> > >>>>>>>>>

> > >>>>>>>>>
> > >>>>>>>>>>>> would you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Step B:
> > >>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the mic
> > >>>>>>
> > >>>>>>>>> gain
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>> not
> > >>>>>>>>>>>
> > >>>>>>>>>>>> touched
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> from above you are telling me that you have no ALC indication
> > >>>>>>>>> when
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> you
> > >>>>>>>>>>>
> > >>>>>>>>>>>> flip to
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to obtain
> > >>>>>>> any
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>> ALC
> > >>>>>>>>>
> > >>>>>>>>>>>
> > >>>>>>>>>>>> meter
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be very
> > >>>>>>>
> > >>>>>>>>>>> sensitive
> > >>>>>>>>>>>
> > >>>>>>>>>>>> and
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > >>>>>>> scale.
> > >>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>>> Quickly
> > >>>>>>>>>>>
> > >>>>>>>>>>>> turn
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC black
> > >>>>>>>

> > >>>>>>>>> box.
> > >>>>>>>>>
> > >>>>>>>>>> Mic
> > >>>>>>>>>>
> > >>>>>>>>>>>> gain
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying at
> > >>>>>>
> > >>>>>>>> far
> > >>>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> end of
> > >>>>>>>>>>
> > >>>>>>>>>>>> ALC
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth several
> > >>>>>>>
> > >>>>>>>> times
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> until you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > >>>>>>> This
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>>>>> adjustment is
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > >>>>>>> tends
> > >>>>>>>
> > >>>>>>>>> to
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> peg
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> hard
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> right and then slowly come back down. So it will tend to float
> > >>>>>>
> > >>>>>>>> around
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> the
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> max
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> > >>>>>>> meter
> > >>>>>>>
> > >>>>>>>>> to

> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> Comp
> > >>>>>>>>>>
> > >>>>>>>>>>>> you
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Terry
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> _____
> > >>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > >>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > >>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > >>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >>>>>>> alignment
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > >>>>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > >>>>>>>> (Heater
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> on
> > >>>>>>>>>>
> > >>>>>>>>>>>> etc), but
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > >>>>>>> "align"
> > >>>>>>>
> > >>>>>>>>
> > >>>>>>>>> the
> > >>>>>>>>>
> > >>>>>>>>>>
> > >>>>>>>>>>>> speech
> > >>>>>>>>>>>>
> > >>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > >>>>>>>>>>>>>>
> > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum. Set
> > >>>>>>>
> > >>>>>>>> the
> > >>>>>>>>
> > >>>>>>>>>
> > >>>>>>>>>> AG
> > >>>>>>>>>>
> > >>>>>>>>>>>> o
(Message over 64 KB, truncated)

32030. Re: TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 04:15:23 UTC
From: Fun
Topic: 32020 Message: 32030

Thanks for replies , I do plan to bring my buddipole antenna to test the TS-530SP, current owner has been out of the hobby for 18+ years, no antenna at sellers QTH. Will have my FT857 in my car to see if it the kenwood rig transmits and receives.

Owners stated it makes sounds when plugged in(hope to hear stations when connected to BP antenna). I am kind of hesitant to transmit not knowing what the settings for driver, plate and load parameters are after long period of inactivity. I guess the rig will have to be tuned (with owners help) or go by the manual. I would have to go slow as I am not up to speed with operating hybrid rigs.

Meanwhile , I will reading the manual and feeding my brain with info from the web.

Thx again,73, Fun Leung ,KC2TBA

32031. Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 08:15:17 UTC
From: g3uhu
Topic: 32017 Message: 32031

Hi Joe,
I often see funny characters in posts (not just yours and not just in this group. For instance, in your post I see
quote
current"Â and
unquote

I often wonder what causes this, I usually blame Windows and/or Intenet Explorer!

73
Dave G3UHU

--- In TS-520_820_530_830@yahoogroups.com, Joseph Stiles <stilesjoseph@...> wrote:
>
> Greetings group,
>
> A member of this group contacted me stating that he could not read my post(s) due to "non-text stuff" being included in the msg. Has anybody else had this problem??
>
>   73's joe wb7uqu
>
>
> [Non-text portions of this message have been removed]
>

32032. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 11:02:46 UTC
From: Terry Wagoner
Topic: 31926 Message: 32032

Chris--The page you need is the Level Diagram page. You can view it on Gordons N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in RX mode.

You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went there for conveniencetto keep RF probe ground lead short and be able to move probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube socket board as well.

If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz bandwidth or greater) and 10/1 probe.

You will be taking the RF drive level readings with SG off, in CW mode, with ALC level set with Carrier Level, and Standby switched to Send.

You have to have some level of drive to get 70 watts out at 160ma.

If your drive level readings and 6146 tube voltages are good then I would try swapping out tubes again and I would very carefully try to read anode voltage on each tube under the plastic plate caps. I once had a very high resistance connection from top of plate choke at the back tube and best I could get out was slightly more than half power. I found it by using insulated tuning tool and gently pushing on plate cap and parasitic choke and could see output power move around. Turns out the anode wire coming out of glass envelop was not soldered well to top of silver anode cap on the tube.

Typically with low output power and high plate current it means one of two things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage swings at the final tube plates. (low drive). Good luck - Terry K9TW

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 2:11:57 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry,

I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX and at the "back lug" of VC-3 (which I assume is the one with the small cap attached to it that goes to VC-2?) has "variable" readings in RX - I occasionally see +38V for split second, then it drops to zero (or close to zero), with the reading varying around a bit.

Sounds like a bad connection / earth maybe? I hope I am reading your test procedures correctly

Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230 schematic.

Cheers
Chris

On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105 >watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>
>
> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF >probe.
>
>
> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>
> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest >PA cage) voltage was 66.0 volts (77.5).
>
>
> See Page 44 of service manual for test conditions. The Heath VTVM is not true >rms but close enough for this testing. Terry
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...> >wrote:
> >
> > Hi Terry,
> >
> > The voltages at the tubes seem a little low from memory, I will measure them >again tonight.
> > The Driver tube voltages (from memory) looked ok though... but again, I will >double check tonight.
> >
> > Terry, the situation is that if I tune for maximum power out (about 60 - 70 >W), then the IP is around 140-160mA.
> > If I adjust for 225mA my output power is almost non existent, hence me >wanting to get this thing resolved.
> >
> > Cheers
> > Chris
> >
> >
> > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> >
> > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > >
> > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4 >and DRV
>

> > > on RF board are good place to look with your RF VTVM. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > OK..... well Mike (nor anyone else) answered this question... so...
> > >
> > > One thing that springs to mind is that I did change the RF board that was
>faulty
>
> > > in my TS-830s for one from Bob Mansker (which he and I of course assume
>work ok)
>
> > > but thinking back, it's the time that my Power out was reduced to around
> > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > >
> > > Is the RF board a good place to start looking and if so, around what are?
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > Begin forwarded message:
> > >
> > > > From: Chris Parnell <cparnell1001@...>
> > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > > Mike,
> > > >
> > > > Any idea where would be a good place to start the voltage measurements?
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > >
> > > >> Hi Chris,
> > > >>
> > > >> Based on the HV and power output levels you provided, 850VDC high
>voltage and
>
> > > >>70 watts output, that equates to an IP current level of approximately
>150ma.
>
> > > >>Therefore, with those levels the INPUT power in the final amplifier would

>be;
> > > >>
> > > >> .150 x 850 = 127.5 watts
> > > >>
> > > >> Since the 830 final amplifier has an efficiency rating of approximately
>55%,
>
> > > >>power output would be
> > > >>
> > > >> 127.5 - 45% = 70.125 watts
> > > >>
> > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
>Unit
>
> > > >>supplies are within specifications and operating as they should.
> > > >>
> > > >> I recommend you troubleshoot the 830's transmit signal path, take level

> > > >>measurements and compare your findings with the 830 service manual Level
>Diagram
>
> > > >>on page 44.
> > > >>
> > > >> 73s
> > > >> Mike
> > > >> W5RKL
> > > >>
> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>
> > > >>wrote:
> > > >>>
> > > >>> Hi Terry,
> > > >>>
> > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
>re: the
>
> > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which
>it is),
>
> > > >>>then the voltages would be about right for 60-70W output.
> > > >>>
> > > >>> My 830 was working "OK" originally, although the alignment was miles
>off.
> > > >>> Then I had an issue with a tube that failed in the final unit, and it
>caused a
>
> > > >>>number of issues.. one of which was NO output etc.
> > > >>>
> > > >>> I swapped the RF board as the one that came with the unit was broke in
>a number

>
> > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > >>> To which I decided to re-align the radio.
> > > >>>
> > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the
>output
>
> > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
>now.
> > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
>and CW,
>
> > > >>>but I was hoping to get the radio at 100W and factory aligned (as close
>as can
>
> > > >>>be).
> > > >>> I purchased a new front fascia and it looks great.. needs to work great
>now
>
> > > >>:-)
> > > >>>
> > > >>> Cheers
> > > >>> Chris
> > > >>>
> > > >>>
> > > >>>
> > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > >>>
> > > >>> Chris--No one ever accused me of being very smart, but I will never
>fail due to
>
> > > >>>lack of effort!
> > > >>>
> > > >>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
>injected into
>
> > > >>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
>meter in ALC
>
> > > >>>position, that when you flip to send the meter pegs off scale right
>hand side of
>
> > > >>>the meter. Is this true?
> > > >>>
> > > >>> 2. The expected response would be for the meter to deflect to the far
>end of
>
> > > >>>the ALC black box scale or somewhere close either side of the Max ALC
>range and
>

> > > >>>>not peg.
> > > >>>>
> > > >>>> 3. I dont believe this has anything to do with your Processor or Comp
>Level
>
> > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > >>>>
> > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
>had
>
> > > >>>>difficulty doing this step as written and you had not completed it yet.
>I
>
> > > >>>>suggest you go back and repeat this step.
> > > >>>>
> > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
>adjust the
>
> > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
>pot VR-7.
>
> > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
>you should
>
> > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
>reading and
>
> > > >>>>not peg the meter full scale or any ALC indication very far past the
>black
>
> > > >>>>border. If that is not how you left this step then this is likely your
>problem.
>
> > > >>>>
> > > >>>>
> > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
>Processor
>
> > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
>off the
>
> > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You
>should be
>
> > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > >>>>
> > > >>>>
> > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
>before
>

> > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > >>>>
> > > >>>>
> > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
>there is
>
> > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
>and Q20 on
>
> > > >>>>the AF board.
> > > >>>>
> > > >>>>
> > > >>>> Good Luck-Terry K9TW
> > > >>>>
> > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
> > > >>>wrote:
> > > >>>>>
> > > >>>>> Hi Terry,
> > > >>>>>
> > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
>and Mike
>
> > > >>>>>an email off list with some voltage measurements.
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>>
> > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >>>>>
> > > >>>>>> Chris--
> > > >>>>>>
> > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each
>step
>
> > > >>>>>> together on our rigs and see at what step we differ. Not sure if we
>could have
>
> > > >>>>>
> > > >>>>>> clear enough real time video or not for this to work. Not sure about
>our time
>
> > > >>>>
> > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >>>>>>
> > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
>repair these
>

> > > >>>>
> > > >>>>>> rigs for a living? As you know I had never performed this step until
>you asked
>
> > > >>>>>
> > > >>>>>> about it. In fact I have never completed a full alignment as I dont
>have sweep
>
> > > >>>>>
> > > >>>>>> generator. I have just done selected steps.
> > > >>>>>>
> > > >>>>>> Terry
> > > >>>>>>
> > > >>>>>> _____
> > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>
> > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF
>Gen (as I
>
> > > >>>>
> > > >>>>>> have no attenuation in there)...
> > > >>>>>>
> > > >>>>>> So I got some test reference dBmA numbers against my calibrated
>probe and wrote
>
> > > >>>>>>
> > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > >>>>>> So... re-did the whole thing and of course, its more in line with
>your "Mic
>
> > > >>>>>>Gain
> > > >>>>>>
> > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
>to PROC ON
>
> > > >>>>>>
> > > >>>>>> with regards to ALC readings.
> > > >>>>>>
> > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
>second I turn
>
> > > >>>>>>
> > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
>the
>
> > > >>meter.
> > > >>>>>>

> > > >>>>>> I may record a small video and send it to you... easier to see what
>I mean and
>
> > > >>>>>
> > > >>>>>> what i'm doing.
> > > >>>>>>
> > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
>the point
>
> > > >>>>>>is,
> > > >>>>>>
> > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
>readings.
> > > >>>>>>
> > > >>>>>> Cheers
> > > >>>>>> Chris
> > > >>>>>>
> > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >>>>>>
> > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50
>mv 1500hz
>
> > > >>>>
> > > >>>>>>> test signals.
> > > >>>>>>>
> > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
>I do in my
>
> > > >>>>>>
> > > >>>>>>
> > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4
>it is just
>
> > > >>>>>
> > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > >>>>>>>
> > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
>right around the
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
>back and have
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
>very close to
>
> > > >>>>>

> > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
>box.
>
> > > >>>>>>>
> > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
>required 10mv
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> signal injected? I found it a little touchy. When you first
>reported no meter
>
> > > >>>>>
> > > >>>>>>> indication that is why I suggested turning mic gain up a little.
>Maybe I am
>
> > > >>>
> > > >>>>>>> starting to get confused regards what your problem is.
> > > >>>>>>>
> > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
>is on to
>
> > > >>
> > > >>>>>>> troubleshooting with Mike.
> > > >>>>>>>
> > > >>>>>>> Terry
> > > >>>>>>>
> > > >>>>>>> _____
> > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>> Hi Terry / Mike.....
> > > >>>>>>>
> > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
>Set. - Good
>
> > > >>>
> > > >>>>>>> piece of kit.
> > > >>>>>>> Here's what I see when I follow your instructions:
> > > >>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
>with
>
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >>>>>>>>
> > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
>directly to

>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
differemce.
> > > >>>>>>>
> > > >>>>>>>> I have the mic gain set exactly at
> > > >>>>>>>> No. 4 position.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv
> > > >>>>>>>>
> > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > >>>>>>>
> > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
>USB. I
>
> > > >>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
>1500Hz and 10mV
>
> > > >>>>>
> > > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection

>in ALC mode
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
>you look at
>
> > > >>>>
> > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>ALC
>
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
>gains at either
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
>S9+20dB
>
> > > >>>
> > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to
>gauge what
>
> > > >>>>>
> > > >>>>>>> I'm saying and seeing.
> > > >>>>>>>
> > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get
>maximum
>
> > > >>
> > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
>reading without
>
> > > >>>>>
> > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
>almost at
>
> > > >
> > > >>>>>>> minimum.
> > > >>>>>>>
> > > >>>>>>>>

> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box.
> > > >>>>>>>>
> > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
>reading, with PROC
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
>letter C of
>
> > > >>>>>>
> > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >>>>>>>
> > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > >>>>>>>> off, but close enough.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
>and align
>
> > > >>>
> > > >>>>>>> them
> > > >>>>>>>
> > > >>>>>>> with the PROC ON.
> > > >>>>>>>
> > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
>meter, so I
>
> > > >>>
> > > >>>>>>> adjust L26 for 20dB reading.
> > > >>>>>>>
> > > >>>>>>> I will need to do some component checking in the circuit around the
>Processor
>
> > > >>>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>> Mike and yourself have recommended.
> > > >>>>>>>
> > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > >mentioned.
> > > >>>>>>>

> > > >>>>>>> Thanks
> > > >>>>>>> Chris, ZL1CDP
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right
>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position
>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>gain in
>
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
>gain , but
>
> > > >>>>>

> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>>> Good
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the
>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>sure
>
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>>> Based on what you are reporting I would expect it to

> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>>
> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on

> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>meter off
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"

> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into
>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> ALC
> > > >>>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.

> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to
>
> > > >>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>have to
>
> > > >>>>>>>>> adjust
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to
>flip to
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can

> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
>much and
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have
>
> > > >>
> > > >>>>>>> is
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to
>just
>
> > > >>>>>>>>> increase
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain until I got an indication. After I found that point I
>no
>
> > > >>>>>>> longer
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good

> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>> ON
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of
>exercise is
>
> > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> indications at far right of ALC black box or S-9 on the
>S-meter scale

>
> > > >>
> > > >>>>>>
> > > >>>>>>>> with
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> no
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I
>cant go
>
> > > >
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later
>tonight
>
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>>

> > > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> in
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
>level
>
> > > >
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>> on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of
>the ALC
>
> > >
> > > >>>>>>> box.
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Less
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>>> <wagstw46@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level
>pot
>
> > > >>>>>>
> > > >>>>>>>>> max
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> clockwise.
> > > >>>>>>>>>>>>

> > > >>>>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
>right
>
> > > >>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>
> > > >>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
>be
>
> > > >>>>>>
> > > >>>>>>>> between
> > > >>>>>>>>>
> > > >>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
>would
>
> > > >>>>>>> you
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> reading to do for the same mic gain setting? Would you
>expect
>
> > > >>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> hard upscale far right? If you had a mic connected and

>whistled
>
> > > >>>>>>>
> > > >>>>>>>>> what
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> would you
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the
>mic
>
> > > >>>>>>
> > > >>>>>>>>> gain
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> not
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> touched
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> from above you are telling me that you have no ALC
>indication
>
> > > >>>>>>>> when
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> you
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> flip to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > > >>>>>>> any
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
>very
>
> > > >>>>>>>
> > > >>>>>>>>>> sensitive

> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up

> > > >>>>>>> scale.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Quickly
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> turn
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
>black
>
> > > >>>>>>>
> > > >>>>>>>>>> box.
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Mic
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> gain
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
>at
>
> > > >>>>>>
> > > >>>>>>>>> far
> > > >>>>>>>>>>
> > > >>>>>>>>>>> end of
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
>several
>
> > > >>>>>>>
> > > >>>>>>>>>> times
> > > >>>>>>>>>>
> > > >>>>>>>>>>> until you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>
> > > >>>>>>> This
> > > >>>>>>>
> > > >>>>>>>>>> adjustment is
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter

> > > >>>>>>> tends
> > > >>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> peg
> > > >>>>>>>>>>
> > > >>>>>>>>>>> hard
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> right and then slowly come back down. So it will tend to
>float
>
> > > >>>>>>
> > > >>>>>>>> around
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> max
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> end of the ALC box until things settle down. If you switch

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Comp
> > > >>>>>>>>>>
> > > >>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> should see about 20db on Comp Scale.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Terry
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> _____
> > > >>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > >>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >>>>>>> alignment
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Hi Terry, thanks for this.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>
> > > >>>>>>>> (Heater
> > > >>>>>>>>
> > > >>>>>>>>>

> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> etc), but
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > >>>>>>> "align"
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> speech
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
>Set
>
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> AG
> > > >>>>>>>>>>
> > > >>>>>>>>>>> output to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> 10 mV
> > > >>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > >>>>>>> maximum
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on-scale ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>>>> reading. Set the PROC to ON.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > >>>>>>>>>> on-scaled).
> > > >>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > >>>>>>>>>>>>> Every step up until here works fine. I get to the point
>where I
>
> > > >>>>>>>
> > > >>>>>>>> turn
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>

> > > >>>>>>>>>>>> Proc ON
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> and
> > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> this
> > > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > >>>>>>> reading.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
>on
>
> > > >>>>>>>> pages
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> 40&41. As
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off
>SG
>
> > > >>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>>> and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> LEAVE
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
>the
>
> > > >>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> off of the

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>
> > > >>>>>>> step
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>>> conditions still
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> being in force?
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say

> > > >>>>>>> "max
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> reading on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> the Compression Scale".
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >>>>>>> reading.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> That
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> would be on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > >>>>>>> indication
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>>
> > > >>>>>>>>>>> 20db
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> a
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> multi-scale
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> scale.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to
>set
>
> > > >>>>>>>
> > > >>>>>>>> mic
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > > >>>>>>> 1200
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> and
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> peaked L27.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >>>>>>> would
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> say
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> something
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
>scale
>
> > > >>>>>>>> box".
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Just
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> make it
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > >>>>>>> read.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
>leave
>

> > > >>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> switch on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>
> > > >>>>>>> -K9TW
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
>much
>
> > > >>>>>>
> > > >>>>>>>>> chance
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> check
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day

> > > >>>>>>> so
> > > >>>>>>>
> > > >>>>>>>>> I
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> will
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> give it a
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> try today and report back. Terry
> > > >>>>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
> > > >>>>>>
> > > >>>>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > >>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>> 830
> > > >>>>>>>>>>
> > > >>>>>>>>>>> at the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> weekend?
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I
>am just
>
> > > >>>
> > > >>>>>>>>>>> about
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> out of ideas.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> I just repeated the test on my daily operating TS-830 with the
>covers on the

>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to
>the operating
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> position.
> > > >>>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
>with
>
> > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain
>set exactly
>
> > > >>>>
> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on
>rig and
>
> > > >>
> > > >>>>>>>> heater
> > > >>>>>>>>
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv.
> > > >>>>>>>>
> > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch
>to USB. I
>
> > > >>>>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.

> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>ALC
>
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
>had the
>
> > > > >
> > > >>>>>>> covers
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it
>indicates
>
> > > >>>>
> > > >>>>>>>> just
> > > >>>>>>>>
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right
>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>

> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position
>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>gain in
>
> > > >>>
> > > >>>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
>gain , but
>
> > > >>>>>
> > > >>>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____

> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the
>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>sure
>
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris

> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>meter off
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>>

> > > >>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>expect it
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>
> > > >>>>>>>>> It doesn't weigh up here.

> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into
>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
>(pegged
>
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to
>
> > > >>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not

>have to
>
> > > >>>>>>>> adjust
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to
>flip to
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
>much and
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have
>
> > > >>
> > > >>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to

>just
>
> > > >>>>>>>> increase
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I
>no
>
> > > >>>>>>> longer
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>>
> > > >>>>>>>>>> ON
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to
> > > >>>>>>>>>>>

> > > >>>>>>>>>>> same point? that's what it states from memory... point of
>exercise is
>
> > > >
> > > >>>>>>> to
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Cheers
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indications at far right of ALC black box or S-9 on the
>S-meter scale
>
> > > >>
> > > >>>>>>
> > > >>>>>>>> with
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
>adjusted
>
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> longer needed to tweak the mic gain to get an indication. I
>cant go
>
> > > >
> > > >>>>>>> any
> > > >>>>>>>
> > > >>>>>>>

> > > >>>>>>>>>> lower on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Will hopefully get around to confirming all of this later
>tonight
>
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> time.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> in
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
>level
>
> > > >
> > > >>>>>>> at
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>> on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> the Compression scale as opposed to down at the high end of
>the ALC
>
> > > >

> > > >>>>>>> box.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Less
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>>> <wagstw46@>
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level
>pot
>
> > > >>>>>>
> > > >>>>>>>>> max
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> clockwise.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
>right
>
> > > >>>>>>
> > > >>>>>>>>> end
> > > >>>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
>be
>
> > > >>>>>>
> > > >>>>>>>>> between
> > > >>>>>>>>>>>

> > > >>>>>>>>>>>> 1000 and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
>would
>
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> >
(Message over 64 KB, truncated)

32033. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 11:18:31 UTC
From: Terry Wagoner
Topic: 31926 Message: 32033

Chris--TYPO--VC-2 should be VC-3 sorry. Also, you should not have read any dc voltage at VC-3 DRV blue wire. Not sure why you saw erratic 38 volts? C1 at 6146 grids should block tube -100 vdc bias and C29 from plate of 12BY7 should block plate voltage. If you do have 38 volts on DRV blue wire in RX mode it appears bad cap which would be rare? Terry

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From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 7:02:46 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Chris--The page you need is the Level Diagram page. You can view it on Gordons N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in

RX mode.

You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went

there for conveniencetto keep RF probe ground lead short and be able to move probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube socket board as well.

If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz bandwidth or greater) and 10/1 probe.

You will be taking the RF drive level readings with SG off, in CW mode, with ALC

level set with Carrier Level, and Standby switched to Send.

You have to have some level of drive to get 70 watts out at 160ma.

If your drive level readings and 6146 tube voltages are good then I would try swapping out tubes again and I would very carefully try to read anode voltage on

each tube under the plastic plate caps. I once had a very high resistance connection from top of plate choke at the back tube and best I could get out was

slightly more than half power. I found it by using insulated tuning tool and gently pushing on plate cap and parasitic choke and could see output power move around. Turns out the anode wire coming out of glass envelop was not soldered well to top of silver anode cap on the tube.

Typically with low output power and high plate current it means one of two things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage swings at the final tube plates. (low drive). Good luck - Terry K9TW

From: Chris Parnell <cparnell1001@me.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 2:11:57 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry,

I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX and at the "back lug" of VC-3 (which I assume is the one with the small cap attached to it that goes to VC-2?) has "variable" readings in RX - I occasionally see +38V for split second, then it drops to zero (or close to zero), with the reading varying around a bit.

Sounds like a bad connection / earth maybe? I hope I am reading your test procedures correctly

Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230 schematic.

Cheers
Chris

On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
>watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>
>
> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF

>probe.
>
>
> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>
> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
>
>PA cage) voltage was 66.0 volts (77.5).
>
>
> See Page 44 of service manual for test conditions. The Heath VTVM is not true
>rms but close enough for this testing. Terry
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>wrote:
> >
> > Hi Terry,
> >
> > The voltages at the tubes seem a little low from memory, I will measure them

>again tonight.
> > The Driver tube voltages (from memory) looked ok though... but again, I will

>double check tonight.
> >
> > Terry, the situation is that if I tune for maximum power out (about 60 - 70
>W), then the IP is around 140-160mA.
> > If I adjust for 225mA my output power is almost non existent, hence me
>wanting to get this thing resolved.
> >
> > Cheers
> > Chris
> >
> >
> > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> >
> > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > >
> > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4
>and DRV
>
> > > on RF board are good place to look with your RF VTVM. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > OK..... well Mike (nor anyone else) answered this question... so...
> > >
> > > One thing that springs to mind is that I did change the RF board that was
>faulty
>
> > > in my TS-830s for one from Bob Mansker (which he and I of course assume
>work ok)
>
> > > but thinking back, it's the time that my Power out was reduced to around
> > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > >
> > > Is the RF board a good place to start looking and if so, around what are?
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > Begin forwarded message:
> > >
> > > > From: Chris Parnell <cparnell1001@...>
> > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > > Mike,
> > > >
> > > > Any idea where would be a good place to start the voltage measurements?
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > >
> > > >> Hi Chris,
> > > >>
> > > >> Based on the HV and power output levels you provided, 850VDC high
>voltage and
>
> > > >>70 watts output, that equates to an IP current level of approximately
>150ma.
>
> > > >>Therefore, with those levels the INPUT power in the final amplifier would
>
>be;
> > > >>
> > > >> .150 x 850 = 127.5 watts
> > > >>
> > > >> Since the 830 final amplifier has an efficiency rating of approximately

>55%,
>
> > > >>power output would be
> > > >>
> > > >> 127.5 - 45% = 70.125 watts
> > > >>
> > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
>
>Unit
>
> > > >>supplies are within specifications and operating as they should.
> > > >>
> > > >> I recommend you troubleshoot the 830's transmit signal path, take level

> > > >>measurements and compare your findings with the 830 service manual Level

>Diagram
>
> > > >>on page 44.
> > > >>
> > > >> 73s
> > > >> Mike
> > > >> W5RKL
> > > >>

> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>
>
> > > >>wrote:
> > > >>>
> > > >>> Hi Terry,
> > > >>>
> > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
>
>re: the
>
> > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which
>
>it is),
>
> > > >>>then the voltages would be about right for 60-70W output.
> > > >>>
> > > >>> My 830 was working "OK" originally, although the alignment was miles
>off.
> > > >>> Then I had an issue with a tube that failed in the final unit, and it
>caused a
>
> > > >>>number of issues.. one of which was NO output etc.
> > > >>>
> > > >>> I swapped the RF board as the one that came with the unit was broke in

>a number
>
> > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > >>> To which I decided to re-align the radio.
> > > >>>
> > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the
>
>output
>
> > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
>now.
> > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
>and CW,
>
> > > >>>but I was hoping to get the radio at 100W and factory aligned (as close

>as can
>
> > > >>>be).
> > > >>> I purchased a new front fascia and it looks great.. needs to work great
>
>now
>
> > > >>:-)
> > > >>>

> > > >>> Cheers
> > > >>> Chris
> > > >>>
> > > >>>
> > > >>>
> > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > >>>
> > > >>>> Chris--No one ever accused me of being very smart, but I will never
>fail due to
>
> > > >>>>lack of effort!
> > > >>>>
> > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
>injected into
>
> > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
>meter in ALC
>
> > > >>>>position, that when you flip to send the meter pegs off scale right
>hand side of
>
> > > >>>>the meter. Is this true?
> > > >>>>
> > > >>>> 2. The expected response would be for the meter to deflect to the far

>end of
>
> > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
>range and
>
> > > >>>>not peg.
> > > >>>>
> > > >>>> 3. I dont believe this has anything to do with your Processor or Comp

>Level
>
> > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > >>>>
> > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
>
>had
>
> > > >>>>difficulty doing this step as written and you had not completed it yet.
>
>I
>
> > > >>>>suggest you go back and repeat this step.
> > > >>>>
> > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
>adjust the
>

> > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
>pot VR-7.
>
> > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
>you should
>
> > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
>reading and
>
> > > >>>>not peg the meter full scale or any ALC indication very far past the
>black
>
> > > >>>>border. If that is not how you left this step then this is likely your

>problem.
>
> > > >>>>
> > > >>>>
> > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
>Processor
>
> > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
>
>off the
>
> > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You

>should be
>
> > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > >>>>
> > > >>>>
> > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
>before
>
> > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > >>>>
> > > >>>>
> > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
>there is
>
> > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
>and Q20 on
>
> > > >>>>the AF board.
> > > >>>>
> > > >>>>
> > > >>>> Good Luck-Terry K9TW
> > > >>>>
> > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>

>
> > > >>>wrote:
> > > >>>>>
> > > >>>>> Hi Terry,
> > > >>>>>
> > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
>
>and Mike
>
> > > >>>>>an email off list with some voltage measurements.
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>>
> > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >>>>>
> > > >>>>>> Chris--
> > > >>>>>>
> > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each

>step
>
> > > >>>>>> together on our rigs and see at what step we differ. Not sure if we

>could have
>
> > > >>>>>
> > > >>>>>> clear enough real time video or not for this to work. Not sure about
>
>our time
>
> > > >>>>
> > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >>>>>>
> > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
>repair these
>
> > > >>>>
> > > >>>>>> rigs for a living? As you know I had never performed this step until
>
>you asked
>
> > > >>>>>
> > > >>>>>> about it. In fact I have never completed a full alignment as I dont

>have sweep
>
> > > >>>>>
> > > >>>>>> generator. I have just done selected steps.
> > > >>>>>>

> > > >>>>>> Terry
> > > >>>>>>
> > > >>>>>> _____
> > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>
> > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF

>Gen (as I
>
> > > >>>>
> > > >>>>>> have no attenuation in there)...
> > > >>>>>>
> > > >>>>>> So I got some test reference dBmA numbers against my calibrated
>probe and wrote
>
> > > >>>>>>
> > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > >>>>>> So... re-did the whole thing and of course, its more in line with
>your "Mic
>
> > > >>>>>>Gain
> > > >>>>>>
> > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
>
>to PROC ON
>
> > > >>>>>>
> > > >>>>>> with regards to ALC readings.
> > > >>>>>>
> > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
>second I turn
>
> > > >>>>>>
> > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
>the
>
> > > >>meter.
> > > >>>>>>
> > > >>>>>> I may record a small video and send it to you... easier to see what

>I mean and
>
> > > >>>>>
> > > >>>>>> what i'm doing.
> > > >>>>>>
> > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
>the point
>

> > > >>>>>>is,
> > > >>>>>>
> > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
>readings.
> > > >>>>>>
> > > >>>>>> Cheers
> > > >>>>>> Chris
> > > >>>>>>
> > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >>>>>>
> > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50

>mv 1500hz
>
> > > >>>>
> > > >>>>>>> test signals.
> > > >>>>>>>
> > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
>
>I do in my
>
> > > >>>>>>
> > > >>>>>>
> > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4

>it is just
>
> > > >>>>>
> > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > >>>>>>>
> > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
>right around the
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
>back and have
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
>very close to
>
> > > >>>>>
> > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
>box.
>
> > > >>>>>>>
> > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
>required 10mv
>

> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> signal injected? I found it a little touchy. When you first
>reported no meter
>
> > > >>>>>
> > > >>>>>>> indication that is why I suggested turning mic gain up a little.
>Maybe I am
>
> > > >>>
> > > >>>>>>> starting to get confused regards what your problem is.
> > > >>>>>>>
> > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
>is on to
>
> > > >>
> > > >>>>>>> troubleshooting with Mike.
> > > >>>>>>>
> > > >>>>>>> Terry
> > > >>>>>>>
> > > >>>>>>> _____
> > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>> Hi Terry / Mike.....
> > > >>>>>>>
> > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
>Set. - Good
>
> > > >>>
> > > >>>>>>> piece of kit.
> > > >>>>>>> Here's what I see when I follow your instructions:
> > > >>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
>
>with
>
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >>>>>>>>
> > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
>directly to
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
differemce.

> > > >>>>>>>
> > > >>>>>>>> I have the mic gain set exactly at
> > > >>>>>>>> No. 4 position.
> > > >>>>>>>>
> > > >>>>>>>> Same here
> > > >>>>>>>>
> > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>>> Same here
> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>>> Wave
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv
> > > >>>>>>>>
> > > >>>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > >>>>>>>>
> > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
>
>USB. I
>
> > > >>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Same here
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>>
> > > >>>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
>1500Hz and 10mV
>
> > > >>>>>
> > > >>>>>>>> and USB mode, I flick to send and I get full scale meter deflection
>
>in ALC mode
>
> > > >>>>>>>>
> > > >>>>>>>>

> > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
>you look at
>
> > > >>>>
> > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>
>ALC
>
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
>gains at either
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
>
>S9+20dB
>
> > > >>>
> > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to

>gauge what
>
> > > >>>>>
> > > >>>>>>> I'm saying and seeing.
> > > >>>>>>>
> > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get

>maximum
>
> > > >>
> > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
>reading without
>
> > > >>>>>
> > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
>almost at
>
> > >
> > > >>>>>>> minimum.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more

>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box.
> > > >>>>>>>>
> > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
>reading, with PROC
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
>letter C of
>
> > > >>>>>
> > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >>>>>>>
> > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > >>>>>>>> off, but close enough.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
>and align
>
> > > >>>
> > > >>>>>>> them
> > > >>>>>>>
> > > >>>>>>> with the PROC ON.
> > > >>>>>>>
> > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
>meter, so I
>
> > > >>>
> > > >>>>>>> adjust L26 for 20dB reading.
> > > >>>>>>>
> > > >>>>>>> I will need to do some component checking in the circuit around the
>
>Processor
>
> > > >>>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>> Mike and yourself have recommended.
> > > >>>>>>>
> > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > >mentioned.
> > > >>>>>>>

> > > >>>>>>> Thanks
> > > >>>>>>> Chris, ZL1CDP
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right
>
>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position

>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>
>gain in
>
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>

> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic

>gain , but
>
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>
>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the

>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>
>sure

>
> > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to

>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>

> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>
>meter off
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and

>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>
>expect it
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>

>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of

>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>
> > > >>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>
> > > >>>>>>>>> Following to the letter the service manual and then taking into

>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> notes, the final situation is that I end up with full on-scale

>deflection
>
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale

>(pegged
>
> > > >>
> > > >>>>>>>> meter)
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to
>
> > > >>>>>>> have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>have to
>
> > > >>>>>>>> adjust
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> mic
> > > >>>>>>>>>
> > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to

>
>flip to
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
>much and
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have
>
> > > >>
> > > >>>>>>>> is
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
>just
>
> > > >>>>>>>>> increase
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I

>no
>
> > > >>>>>>> longer
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time

>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>>
> > > >>>>>>>>> ON
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of
>exercise is
>
> > > >
> > > >>>>>>> to

> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >>>>>>> equal
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> indications at far right of ALC black box or S-9 on the
>S-meter scale
>
> > > >>
> > > >>>>>>
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27

>adjusted
>
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> longer needed to tweak the mic gain to get an indication. I
>cant go
>
> > > >
> > > >>>>>>> any
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> lower on
> > > >>>>>>>
> > > >>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Will hopefully get around to confirming all of this later
>tonight
>
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> in
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
>
>level
>
> > > >
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> 20db
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the Compression scale as opposed to down at the high end of
>the ALC
>
> > > >
> > > >>>>>>> box.
> > > >>>>>>>>
> > > >>>>>>>>

> > > >>>>>>>>>> Less
> > > >>>>>>>>>>
> > > >>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>> <wagstw46@>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>> 1. You have the Processor button off and Compression level

>pot
>
> > > >>>>>>
> > > >>>>>>>> max
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> clockwise.
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
>right
>
> > > >>>>>>
> > > >>>>>>>> end
> > > >>>>>>>>
> > > >>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
>
>be
>
> > > >>>>>>
> > > >>>>>>>> between
> > > >>>>>>>>>>
> > > >>>>>>>>>>> 1000 and

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
>would
>
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
>expect
>
> > > >>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> to peg
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
>whistled
>
> > > >>>>>>>
> > > >>>>>>>>> what
> > > >>>>>>>>>
> > > >>>>>>>>>>> would you
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the

>mic
>
> > > >>>>>>
> > > >>>>>>>> gain
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> not
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> touched
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC
>indication
>

> > > >>>>>>>> when
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> you
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> flip to
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> meter
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
>very
>
> > > >>>>>>>>
> > > >>>>>>>>>> sensitive
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > > >>>>>>> scale.
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Quickly
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> turn
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
>black
>
> > > >>>>>>>>
> > > >>>>>>>>> box.
> > > >>>>>>>>>
> > > >>>>>>>>>> Mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> gain
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
>
>at

>
> > > >>>>>>
> > > >>>>>>>> far
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> end of
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
>several
>
> > > >>>>>>>
> > > >>>>>>>>> times
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> until you
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>
>
> > > >>>>>>> This
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> adjustment is
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter

> > > >>>>>>> tends
> > > >>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> peg
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> hard
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to
>float
>
> > > >>>>>>
> > > >>>>>>>>> around
> > > >>>>>>>>>
> > > >>>>>>>>>>>> the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>> max
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch

> > > >>>>>>> meter
> > > >>>>>>>>

> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Comp
> > > >>>>>>>>>>
> > > >>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> should see about 20db on Comp Scale.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Terry
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> _____
> > > >>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > >>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >>>>>>> alignment
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>
>
> > > >>>>>>>> (Heater
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> etc), but
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > >>>>>>> "align"
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> speech
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
>
>Set
>
> > > >>>>>>>
> > > >>>>>>>> the

> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> AG
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> output to
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> 10 mV
> > > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > >>>>>>> maximum
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> on-scale ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading. Set the PROC to ON.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > >>>>>>>>>> on-scaled).
> > > >>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > >>>>>>>>>>>>>> Every step up until here works fine. I get to the point
>where I
>
> > > >>>>>>>
> > > >>>>>>>>> turn
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> Proc ON
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> and
> > > >>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > >>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>>> at
> > > >>>>>>>>>
> > > >>>>>>>>>> this
> > > >>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > >>>>>>> reading.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>

> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
>on
>
> > > >>>>>>>> pages
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> 40&41. As
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off

>SG
>
> > > >>>>>>
> > > >>>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>>> and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> LEAVE
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
>
>the
>
> > > >>>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> off of the
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>
>
> > > >>>>>>>> step
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> conditions still
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> being in force?
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say

> > > >>>>>>>> "max
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> meter
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> reading on

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> the Compression Scale".
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >>>>>>> reading.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> That
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> would be on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > >>>>>>> indication
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>
>
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>> a
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> multi-scale
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> meter for them to tell you the expected value and on what

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> scale.
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to

>set
>
> > > >>>>>>>
> > > >>>>>>>> mic
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine

>at
>
> > > >>>>>>> 1200
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> and
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> peaked L27.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >>>>>>> would
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> say
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> something
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
>scale
>
> > > >>>>>>>> box".
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Just
> > > >>>>>>>>>>
> > > >>>>>>>>>>> make it
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > >>>>>> read.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
>leave
>
> > > >>>>>>>
> > > >>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>> switch on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>
>
> > > >>>>>>> -K9TW
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>>>>> <cparnell1001@>

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
>much
>
> > > >>>>>>
> > > >>>>>>>>> chance
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>>>> check
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day

> > > >>>>>>> so
> > > >>>>>>>>
> > > >>>>>>>>> I
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> will
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> give it a
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> try today and report back. Terry
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
>
> > > >>>>>>
> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > >>>>>>>>>>>>> in
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> the
> > > >>>>>>>>>>>>>

> > > >>>>>>>>>> 830
> > > >>>>>>>>>>
> > > >>>>>>>>>>> at the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> weekend?
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>> Chris, ZL1CDP
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> ---------------------------------
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> ---------------------------------
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>

> > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>> ----------
> > > >>>>>>>>
> > > >>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >>>>>>>
> > > >>>>>>> Chris--I will give some more thought. Not sure what is going on. I
>
>am just
>
> > > >>>
> > > >>>>>>> about
> > > >>>>>>>
> > > >>>>>>> out of ideas.
> > > >>>>>>>
> > > >>>>>>> I just repeated the test on my daily operating TS-830 with the
>covers on the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>> rig. I just unplugged the mic and brought the test equipment to
>the operating
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>> position.
> > > >>>>>>>
> > > >>>>>>> I use a spare mic connector and clipped the generator output to it
>

>with
>
> > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain
>set exactly
>
> > > >>>>
> > > >>>>>>> at
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on

>rig and
>
> > > >>
> > > >>>>>>>> heater
> > > >>>>>>>>
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv.
> > > >>>>>>>>
> > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch

>to USB. I
>
> > > >>>>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>
>ALC
>
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>

> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
>had the
>
> > > >
> > > >>>>>>> covers
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it

>indicates
>
> > > >>>>
> > > >>>>>>>> just
> > > >>>>>>>>
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right
>
>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>

> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position

>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>
>gain in
>
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic

>gain , but
>
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>
>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com

> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the

>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>
>sure
>
> > > >
> > > >>>>>>> why...
> > > >>>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to

>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers

> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>
>meter off
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and

>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>
>expect it
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of

>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris

> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into

>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >>>>
> > > >>>>>>>> of
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> ALC
> > > >>>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale

>(pegged
>
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to

>
> > > >>>>>>> have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>have to
>
> > > >>>>>>>> adjust
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to
>
>flip to
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take

>much and
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have

>
> > > >>
> > > >>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>> set
> > > >>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
>just
>
> > > >>>>>>>> increase
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I

>no
>
> > > >>>>>>> longer
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> needed
> > > >>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time

>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> matched
> > > >>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,

> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>> ON
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>>
> > > >>>>>>>>> same point? that's what it states from memory... point of
>exercise is
>
> > > >
> > > >>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>
> > > >>>>>>>>> Cheers
> > > >>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >>>>>>> equal
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> indications at far right of ALC black box or S-9 on the
>S-meter scale
>
> > > >>
> > > >>>>>>
> > > >>>>>>>> with
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>>
> > > >>>>>>>>>> mic gain at just a hai
(Message over 64 KB, truncated)

32034. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 11:50:16 UTC
From: Terry Wagoner
Topic: 31926 Message: 32034

Chris--You mentioned "bad earth". When you measure the RF drive levels try to keep meter or scope ground lead short. Ground post TP-G is provided on the RF board for this. Do not connect meter or scope ground lead to the frames of the three VC variable caps as they are floating above ground. OK to use chassis "earth" (ground) if you cant get on TP-G.

I suppose we will be talking about "aerials" next!

The small cap on VC-3 is C77 which is part of the neutralizing circuit. Terry

---

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 7:18:31 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Chris--TYPO--VC-2 should be VC-3 sorry. Also, you should not have read any dc voltage at VC-3 DRV blue wire. Not sure why you saw erratic 38 volts? C1 at 6146

grids should block tube -100 vdc bias and C29 from plate of 12BY7 should block plate voltage. If you do have 38 volts on DRV blue wire in RX mode it appears bad cap which would be rare? Terry

---

From: Terry Wagoner <wagstw46@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 7:02:46 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Chris--The page you need is the Level Diagram page. You can view it on Gordons N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in

RX mode.

You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went

there for conveniencetto keep RF probe ground lead short and be able to move probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube socket board as well.

If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz bandwidth or greater) and 10/1 probe.

You will be taking the RF drive level readings with SG off, in CW mode, with ALC

level set with Carrier Level, and Standby switched to Send.

You have to have some level of drive to get 70 watts out at 160ma.

If your drive level readings and 6146 tube voltages are good then I would try swapping out tubes again and I would very carefully try to read anode voltage on

each tube under the plastic plate caps. I once had a very high resistance connection from top of plate choke at the back tube and best I could get out was

slightly more than half power. I found it by using insulated tuning tool and gently pushing on plate cap and parasitic choke and could see output power move around. Turns out the anode wire coming out of glass envelop was not soldered well to top of silver anode cap on the tube.

Typically with low output power and high plate current it means one of two things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage swings at the final tube plates. (low drive). Good luck - Terry K9TW

From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 2:11:57 AM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

Hi Terry,

I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX and at the "back lug" of VC-3 (which I assume is the one with the small cap attached to it that goes to VC-2?) has "variable" readings in RX - I occasionally see +38V for split second, then it drops to zero (or close to zero), with the reading varying around a bit.

Sounds like a bad connection / earth maybe? I hope I am reading your test procedures correctly

Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230 schematic.

Cheers
Chris

On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
>watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>
>
> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF

>probe.
>
>
> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>
> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
>
>

>PA cage) voltage was 66.0 volts (77.5).
>
>
> See Page 44 of service manual for test conditions. The Heath VTVM is not true
>rms but close enough for this testing. Terry
>
>
> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
>wrote:
> >
> > Hi Terry,
> >
> > The voltages at the tubes seem a little low from memory, I will measure them

>again tonight.
> > The Driver tube voltages (from memory) looked ok though... but again, I will

>double check tonight.
> >
> > Terry, the situation is that if I tune for maximum power out (about 60 - 70
>W), then the IP is around 140-160mA.
> > If I adjust for 225mA my output power is almost non existent, hence me
>wanting to get this thing resolved.
> >
> > Cheers
> > Chris
> >
> >
> > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> >
> > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > >
> > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4
>and DRV
>
> > > on RF board are good place to look with your RF VTVM. Terry
> > >
> > > _____
> > > From: Chris Parnell <cparnell1001@...>
> > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > >
> > > OK..... well Mike (nor anyone else) answered this question... so...
> > >
> > > One thing that springs to mind is that I did change the RF board that was
>faulty
>
> > > in my TS-830s for one from Bob Mansker (which he and I of course assume
>work ok)
>

> > > but thinking back, it's the time that my Power out was reduced to around
> > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > >
> > > Is the RF board a good place to start looking and if so, around what are?
> > >
> > > Thanks
> > > Chris, ZL1CDP
> > >
> > > Begin forwarded message:
> > >
> > > > From: Chris Parnell <cparnell1001@...>
> > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > To: TS-520_820_530_830@yahoogroups.com
> > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > >
> > > > Mike,
> > > >
> > > > Any idea where would be a good place to start the voltage measurements?
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > >
> > > >> Hi Chris,
> > > >>
> > > >> Based on the HV and power output levels you provided, 850VDC high
>voltage and
>
> > > >>70 watts output, that equates to an IP current level of approximately
>150ma.
>
> > > >>Therefore, with those levels the INPUT power in the final amplifier would
>
>
>be;
> > > >>
> > > >> .150 x 850 = 127.5 watts
> > > >>
> > > >> Since the 830 final amplifier has an efficiency rating of approximately

>55%,
>
> > > >>power output would be
> > > >>
> > > >> 127.5 - 45% = 70.125 watts
> > > >>
> > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
>

>
>Unit
>
> > > >>supplies are within specifications and operating as they should.
> > > >>
> > > >> I recommend you troubleshoot the 830's transmit signal path, take level

> > > >>measurements and compare your findings with the 830 service manual Level

>Diagram
>
> > > >>on page 44.
> > > >>
> > > >> 73s
> > > >> Mike
> > > >> W5RKL
> > > >>
> > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>
>
>
> > > >>wrote:
> > > >>>
> > > >>> Hi Terry,
> > > >>>
> > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
>
>
>re: the
>
> > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which
>
>
>it is),
>
> > > >>>then the voltages would be about right for 60-70W output.
> > > >>>
> > > >>> My 830 was working "OK" originally, although the alignment was miles
>off.
> > > >>> Then I had an issue with a tube that failed in the final unit, and it
>caused a
>
> > > >>>number of issues.. one of which was NO output etc.
> > > >>>
> > > >>> I swapped the RF board as the one that came with the unit was broke in

>a number
>
> > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > >>> To which I decided to re-align the radio.
> > > >>>

> > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the
>
>
>output
>
> > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
>now.
> > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
>and CW,
>
> > > >>>but I was hoping to get the radio at 100W and factory aligned (as close

>as can
>
> > > >>>be).
> > > >>> I purchased a new front fascia and it looks great.. needs to work great
>
>
>now
>
> > > >>:-)
> > > >>>
> > > >>> Cheers
> > > >>> Chris
> > > >>>
> > > >>>
> > > >>>
> > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > >>>
> > > >>>> Chris--No one ever accused me of being very smart, but I will never
>fail due to
>
> > > >>>>lack of effort!
> > > >>>>
> > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
>injected into
>
> > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
>meter in ALC
>
> > > >>>>position, that when you flip to send the meter pegs off scale right
>hand side of
>
> > > >>>>the meter. Is this true?
> > > >>>>
> > > >>>> 2. The expected response would be for the meter to deflect to the far

>end of
>
> > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
>range and

>
> > > >>>>not peg.
> > > >>>>
> > > >>>> 3. I dont believe this has anything to do with your Processor or Comp

>Level
>
> > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > >>>>
> > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
>
>
>had
>
> > > >>>>difficulty doing this step as written and you had not completed it yet.
>
>
>I
>
> > > >>>>suggest you go back and repeat this step.
> > > >>>>
> > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
>adjust the
>
> > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
>pot VR-7.
>
> > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
>you should
>
> > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
>reading and
>
> > > >>>>not peg the meter full scale or any ALC indication very far past the
>black
>
> > > >>>>border. If that is not how you left this step then this is likely your

>problem.
>
> > > >>>>
> > > >>>>
> > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
>Processor
>
> > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
>
>
>off the
>
> > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You

>should be
>
> > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > >>>>
> > > >>>>
> > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
>before
>
> > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > >>>>
> > > >>>>
> > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
>there is
>
> > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
>and Q20 on
>
> > > >>>>the AF board.
> > > >>>>
> > > >>>>
> > > >>>> Good Luck-Terry K9TW
> > > >>>>
> > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
> > > >>>wrote:
> > > >>>>>
> > > >>>>> Hi Terry,
> > > >>>>>
> > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
>
>
>and Mike
>
> > > >>>>>an email off list with some voltage measurements.
> > > >>>>>
> > > >>>>> Cheers
> > > >>>>> Chris
> > > >>>>>
> > > >>>>>
> > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > >>>>>
> > > >>>>>> Chris--
> > > >>>>>>
> > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each

>step
>
> > > >>>>>> together on our rigs and see at what step we differ. Not sure if we

>could have
>

> > > >>>>>
> > > >>>>>> clear enough real time video or not for this to work. Not sure about
>
>
>our time
>
> > > >>>>
> > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > >>>>>>
> > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
>repair these
>
> > > >>>>
> > > >>>>>> rigs for a living? As you know I had never performed this step until
>
>
>you asked
>
> > > >>>>>
> > > >>>>>> about it. In fact I have never completed a full alignment as I dont

>have sweep
>
> > > >>>>>
> > > >>>>>> generator. I have just done selected steps.
> > > >>>>>>
> > > >>>>>> Terry
> > > >>>>>>
> > > >>>>>> _____
> > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>
> > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF

>Gen (as I
>
> > > >>>>
> > > >>>>>> have no attenuation in there)...
> > > >>>>>>
> > > >>>>>> So I got some test reference dBmA numbers against my calibrated
>probe and wrote
>
> > > >>>>>>
> > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > >>>>>> So... re-did the whole thing and of course, its more in line with
>your "Mic
>
> > > >>>>>>Gain
> > > >>>>>>

> > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
>
>
>to PROC ON
>
> > > >>>>>>
> > > >>>>>> with regards to ALC readings.
> > > >>>>>>
> > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
>second I turn
>
> > > >>>>>>
> > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
>the
>
> > > >>meter.
> > > >>>>>>
> > > >>>>>> I may record a small video and send it to you... easier to see what

>I mean and
>
> > > >>>>>
> > > >>>>>> what i'm doing.
> > > >>>>>>
> > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
>the point
>
> > > >>>>>>is,
> > > >>>>>>
> > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
>readings.
> > > >>>>>>
> > > >>>>>> Cheers
> > > >>>>>> Chris
> > > >>>>>>
> > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > >>>>>>
> > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50

>mv 1500hz
>
> > > >>>>
> > > >>>>>>> test signals.
> > > >>>>>>>
> > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
>
>
>I do in my
>
> > > >>>>>>
> > > >>>>>>

> > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4

>it is just
>
> > > >>>>>
> > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > >>>>>>>
> > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
>right around the
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
>back and have
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
>very close to
>
> > > >>>>>
> > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
>box.
>
> > > >>>>>>>
> > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
>required 10mv
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> signal injected? I found it a little touchy. When you first
>reported no meter
>
> > > >>>>>
> > > >>>>>>> indication that is why I suggested turning mic gain up a little.
>Maybe I am
>
> > > >>>
> > > >>>>>>> starting to get confused regards what your problem is.
> > > >>>>>>>
> > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
>is on to
>
> > > >>
> > > >>>>>>> troubleshooting with Mike.
> > > >>>>>>>
> > > >>>>>>> Terry
> > > >>>>>>>
> > > >>>>>>> _____
> > > >>>>>>> From: Chris Parnell <cparnell1001@>

> > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>> Hi Terry / Mike.....
> > > >>>>>>>
> > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
>Set. - Good
>
> > > >>>
> > > >>>>>>> piece of kit.
> > > >>>>>>> Here's what I see when I follow your instructions:
> > > >>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
>
>
>with
>
> > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > >>>>>>>>
> > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
>directly to
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
differemce.
> > > >>>>>>>
> > > >>>>>>>> I have the mic gain set exactly at
> > > >>>>>>>> No. 4 position.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>> Same here
> > > >>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv
> > > >>>>>>>>
> > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.

> > > >>>>>>>
> > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
>
>
>USB. I
>
> > > >>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Same here
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>>
> > > >>>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > >>>>>>>>
> > > >>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
>1500Hz and 10mV
>
> > > >>>>>
> > > >>>>>>>> and USB mode, I flick to send and I get full scale meter deflection
>
>
>in ALC mode
>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
>you look at
>
> > > >>>>
> > > >>>>>>>> s-meter scale, it's S9+40dB +).
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>
>
>ALC
>
> > > >>>>>>>> position
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
>gains at either

>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
>
>
>S9+20dB
>
> > > >>>
> > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to

>gauge what
>
> > > >>>>>
> > > >>>>>>> I'm saying and seeing.
> > > >>>>>>>
> > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get

>maximum
>
> > > >>
> > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
>reading without
>
> > > >>>>>
> > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
>almost at
>
> > >
> > > >>>>>>> minimum.
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>>> black ALC box.
> > > >>>>>>>>>
> > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
>reading, with PROC
>
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
>letter C of
>
> > > >>>>>
> > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > >>>>>>>

> > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > >>>>>>>> off, but close enough.
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
>and align
>
> > > >>>
> > > >>>>>>> them
> > > >>>>>>>
> > > >>>>>>> with the PROC ON.
> > > >>>>>>>
> > > >>>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > >>>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>>
> > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
>meter, so I
>
> > > >>>
> > > >>>>>>> adjust L26 for 20dB reading.
> > > >>>>>>>
> > > >>>>>>> I will need to do some component checking in the circuit around the
>
>
>Processor
>
> > > >>>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>> Mike and yourself have recommended.
> > > >>>>>>>
> > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > >mentioned.
> > > >>>>>>>
> > > >>>>>>> Thanks
> > > >>>>>>> Chris, ZL1CDP
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>
>
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> found condition for my daily operator is very close to being right
>
>

>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>
>
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position

>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>
>
>gain in
>
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic

>gain , but
>
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when

>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>
>
>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the

>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>
>
>sure
>
> > >
> > > >>>>>>> why...
> > > >>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>

>
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to

>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>> Cheers
> > > >>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>> Where
> > > >>>>>>>>
> > > >>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>
> > > >>>>>>>>

> > > >>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>
>
>meter off
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>
>
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> off
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and

>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>
>
>expect it
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>>> in

> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____
> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of

>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>
> > > >>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>
> > > >>>>>>>>> Following to the letter the service manual and then taking into

>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>

> > > >>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale

>(pegged
>
> > > >>
> > > >>>>>>>>> meter)
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to
>
> > > >>>>>>> have
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> ALC reading (max) with Processor on and off. You should not
>have to
>
> > > >>>>>>> adjust
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> mic
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>> gain or input signal level once balanced. You should be able to
>
>
>flip to
>
> > > >>>

> > > >>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> move
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take

>much and
>
> > > >>>
> > > >>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>
> > > >>>>>>>>>>> be
> > > >>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have
>
> > > >>
> > > >>>>>>> is
> > > >>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
>just
>
> > > >>>>>>>>> increase
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I

>no
>
> > > >>>>>>> longer
> > > >>>>>>>

> > > >>>>>>>
> > > >>>>>>>>>> needed
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time

>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> _____
> > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>
>
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>>
> > > >>>>>>>>> ON
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> same point? that's what it states from memory... point of
>exercise is
>
> > > >
> > > >>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>

> > > >>>>>>>>> have
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Cheers
> > > >>>>>>>>>>> Chris
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>good
>
> > > >>>>>>> equal
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>> indications at far right of ALC black box or S-9 on the
>S-meter scale
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> with
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27

>adjusted
>
> > > >>>
> > > >>>>>>> I
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> no
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I
>cant go
>
> > > >
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>> lower on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > > >>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Thanks Terry....
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Will hopefully get around to confirming all of this later
>tonight
>
> > > >>>>>>> NZ
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> time.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
>(meter
>
> > > >>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> in
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
>
>
>level
>
> > > >
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> the Compression scale as opposed to down at the high end of
>the ALC
>
> > > >
> > > >>>>>>> box.
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> Less

> > > >>>>>>>>>>
> > > >>>>>>>>>>>> decay time to mess with. Terry
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > >>>>>>>>> <wagstw46@>
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > >>>>>>>>>>>>>>>> Step A:
> > > >>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level

>pot
>
> > > >>>>>>
> > > >>>>>>>>> max
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> clockwise.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> You are in USB mode.
> > > >>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > >>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > >>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > >>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
>right
>
> > > >>>>>>
> > > >>>>>>>>> end
> > > >>>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> black bordered box.
> > > >>>>>>>>>>>>>>>> 6. You return to Stand-by.
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
>
>
>be
>
> > > >>>>>>
> > > >>>>>>>>> between
> > > >>>>>>>>>
> > > >>>>>>>>>>>> 1000 and

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> 1100.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
>would
>
> > > >>>>>>> you
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> expect
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> the ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
>expect
>
> > > >>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> meter
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> to peg
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
>whistled
>
> > > >>>>>>>
> > > >>>>>>>>> what
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> would you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Step B:
> > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the

>mic
>
> > > >>>>>>
> > > >>>>>>>> gain
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> not
> > > >>>>>>>>>>
> > > >>>>>>>>>>> touched
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC
>indication
>

> > > >>>>>>>> when
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> you
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> flip to
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
>obtain
>
> > > >>>>>>> any
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> meter
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
>very
>
> > > >>>>>>>>
> > > >>>>>>>>>> sensitive
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> > > >>>>>>> scale.
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Quickly
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> turn
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
>black
>
> > > >>>>>>>>
> > > >>>>>>>>> box.
> > > >>>>>>>>>
> > > >>>>>>>>>> Mic
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> gain
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
>
>

>at
>
> > > >>>>>>
> > > >>>>>>>> far
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> end of
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> ALC
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
>several
>
> > > >>>>>>>>
> > > >>>>>>>>>> times
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> until you
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>
>
>
> > > >>>>>>>> This
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> adjustment is
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter

> > > >>>>>>>> tends
> > > >>>>>>>>>
> > > >>>>>>>>>> to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> peg
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> hard
> > > >>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to
>float
>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> around
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> max
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Comp
> > > >>>>>>>>>>
> > > >>>>>>>>>>> you
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> should see about 20db on Comp Scale.
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Terry
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> _____
> > > >>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > >>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > >>>>>>> alignment
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > >>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
>
>
>
> > > >>>>>>>> (Heater
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>>
> > > >>>>>>>>>>> etc), but
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > >>>>>>> "align"
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> speech
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
>
>
>Set

>
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> AG
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> output to
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> 10 mV
> > > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > >>>>>>> maximum
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> on-scale ALC
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>> reading. Set the PROC to ON.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
>ALC
>
> > > >>>>>>>>>> on-scaled).
> > > >>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > >>>>>>>>>>>>>> Every step up until here works fine. I get to the point
>where I
>
> > > >>>>>>>
> > > >>>>>>>>> turn
> > > >>>>>>>>>
> > > >>>>>>>>>> the
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> Proc ON
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>> and
> > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>>> at
> > > >>>>>>>>>
> > > >>>>>>>>>> this
> > > >>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > >>>>>>> reading.
> > > >>>>>>>>>>>>>
> > > >>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>> Chris

> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
>on
>
> > > >>>>>>>> pages
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> 40&41. As
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>> They should tell you to load up normally. Then switch off

>SG
>
> > > >>>>>>
> > > >>>>>>>> switch
> > > >>>>>>>>>
> > > >>>>>>>>>> and
> > > >>>>>>>>>>
> > > >>>>>>>>>>> LEAVE
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
>
>
>the
>
> > > >>>>>>>>
> > > >>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>> off of the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>
>
>
> > > >>>>>>>> step
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> conditions still
> > > >>>>>>>>>>
> > > >>>>>>>>>>> being in force?
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say

> > > >>>>>>> "max
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> meter
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> reading on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the Compression Scale".
> > > >>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > >>>>>>> reading.
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> That
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> would be on
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > >>>>>>> indication
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> of
> > > >>>>>>>>>
> > > >>>>>>>>>>> 20db
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> and
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>
>
>
> > > >>>>>>> with
> > > >>>>>>>
> > > >>>>>>>>> a
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>>> multi-scale
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>> meter for them to tell you the expected value and on what

> > > >>>>>>> meter
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> scale.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to

>set
>
> > > >>>>>>>
> > > >>>>>>>>> mic

> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> gain
> > > >>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
>at
>
> > > >>>>>>> 1200
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> and
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> peaked L27.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > >>>>>>> would
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> say
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> something
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
>scale
>
> > > >>>>>>>> box".
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> Just
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> make it
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > >>>>>> read.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
>leave
>
> > > >>>>>>>
> > > >>>>>>>>>> heater
> > > >>>>>>>>>>
> > > >>>>>>>>>>>> switch on
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>
>
>

> > > >>>>>>> -K9TW
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > >>>>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
>much
>
> > > >>>>>>
> > > >>>>>>>>> chance
> > > >>>>>>>>>
> > > >>>>>>>>>>> to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> check
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>> Chris
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day

> > > >>>>>>> so
> > > >>>>>>>
> > > >>>>>>>>> I
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>>> will
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> give it a
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>>>>> try today and report back. Terry
> > > >>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
>
>
> > > >>>>>>
> > > >>>>>>>>>> <cparnell1001@>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>>

> > > >>>>>>>>>>>>>>>> wrote:
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > >>>>>>> in
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>>
> > > >>>>>>>>>> 830
> > > >>>>>>>>>>
> > > >>>>>>>>>>> at the
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> weekend?
> > > >>>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>>> Cheers
> > > >>>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > >>>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> ---------------------------------
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>
> > > >>>>>>>>>>>>>>>>>>>

> > > >>>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> ------------------------------------
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> [Non-text portions of this message have been removed]
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> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>> ----------------------------------
> > > >>>>>>>>
> > > >>>>>>>>> Yahoo! Groups Links
> > > >>>>>>>>
> > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>
> > > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > >>>>>>>
> > > >>>>>>> Chris--I will give some more thought. Not sure what is going on. I
>
>
>am just
>
> > > >>>
> > > >>>> about
> > > >>>>
> > > >>>> out of ideas.
> > > >>>>
> > > >>>> I just repeated the test on my daily operating TS-830 with the
>covers on the
>
> > > >>>>>
> > > >>>>>>

> > > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to
>the operating
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> position.
> > > >>>>>>>>
> > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
>
>
>with
>
> > > >
> > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain
>set exactly
>
> > > >>>>
> > > >>>>>>> at
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on

>rig and
>
> > > >>
> > > >>>>>>>> heater
> > > >>>>>>>>
> > > >>>>>>>> switches. Let it warm up a little.
> > > >>>>>>>>
> > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>wave from
>
> > > >>
> > > >>>>>>> Wave
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> Tek generator to exactly 10 mv.
> > > >>>>>>>>
> > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch

>to USB. I
>
> > > >>>>
> > > >>>>>>>> place meter switch in ALC position.
> > > >>>>>>>>
> > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
>outside the max
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> end of the black ALC box. Maybe a needles worth.

> > > >>>>>>>>
> > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>
>
>ALC
>
> > > >>>>>>> position
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and I have not touched mic gain pot.
> > > >>>>>>>>
> > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>outside the
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
>had the
>
> > > >
> > > >>>>>>> covers
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it

>indicates
>
> > > >>>>
> > > >>>>>>>> just
> > > >>>>>>>>
> > > >>>>>>>> a little above 20db on the Comp scale.
> > > >>>>>>>>
> > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>
>
>short my
>
> > > >>>>
> > > >>>>>>> as
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> found condition for my daily operator is very close to being right
>
>
>on the
>
> > > >>
> > > >>>>>>> same
> > > >>>>>>>
> > > >>>>>>>

> > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
>
>
>with Proc
>
> > > >>>>>
> > > >>>>>>> on
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> and off.
> > > >>>>>>>>
> > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
>think about it
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> some more and if I come up with something will write.
> > > >>>>>>>>
> > > >>>>>>>> Whatever you do you should not have to increase mic gain position

>or increase
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>
>
>gain in
>
> > > >>>
> > > >>>>>>> your
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic

>gain , but
>
> > > >>>>>
> > > >>>>>>> I
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> wouldnt think much higher.
> > > >>>>>>>>
> > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
>connection when
>
> > > >>>>>>
> > > >>>>>>>
> > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>
>

>vary from
>
> > > >>>>>
> > > >>>>>>
> > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>experience.
>
> > > >>
> > > >>>>>>> Good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> luck Terry
> > > >>>>>>>
> > > >>>>>>>> _____
> > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>
> > > >>>>>>>> Hi Terry,
> > > >>>>>>>
> > > >>>>>>>> The only difference from my original post is that I increased the

>"gain" on
>
> > > >>>>
> > > >>>>>>> the
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>
>
>sure
>
> > >
> > > >>>>>>> why...
> > > >>>>>>>
> > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > >>>>compensate.
> > > >>>>>>>
> > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> in

> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > >>>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to

>the far
>
> > > >>
> > > >>>>>>> right
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>same.
> > > >>>>>>>>
> > > >>>>>>>>> Hope this makes sense..
> > > >>>>>>>>
> > > >>>>>>>>> Cheers
> > > >>>>>>>>> Chris
> > > >>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > >>>>>>>>
> > > >>>>>>>>>> Chris--This appears different than what you originally reported
>of getting
>
> > > >>>>
> > > >>>>>>> no
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>different?
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>>> Where
> > > >>>>>>>>>
> > > >>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>as it is
>
> > > >>
> > > >>>>>>> hard
> > > >>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>>> on
> > > >>>>>>>>>
> > > >>>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>
>
>meter off

>
> > > >>>>>
> > > >>>>>>>
> > > >>>>>>>> the
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> peg.
> > > >>>>>>>>>
> > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>
>
>at least
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>> off
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and

>report
>
> > > >
> > > >>>>>>> back
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>
>
>expect it
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> to
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
>
>
>somewhere
>
> > > >>>>>
> > > >>>>>>>>
> > > >>>>>>>> in
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>Terry
> > > >>>>>>>>>
> > > >>>>>>>>> _____

> > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >>>>>>>>>
> > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of

>black ALC
>
> > > >>>>
> > > >>>>>>
> > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
>deflection
>
> > > >>>>>>> without
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > >>>>>>>>>
> > > >>>>>>>>> Chris
> > > >>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>
> > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > >>>>>>>>>
> > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > >>>>>>>>>>
> > > >>>>>>>>>> It doesn't weigh up here.
> > > >>>>>>>>>>
> > > >>>>>>>>>> Following to the letter the service manual and then taking into

>account
>
> > > >>
> > > >>>>>>>>> your
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>deflection
>
> > > >>>>
> > > >>>>>>> of
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>> ALC
> > > >>>>>>>>>
> > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale

>(pegged
>
> > > >>
> > > >>>>>>>> meter)
> > > >>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > >>>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>PROC OFF.
>
> > > >>>
> > > >>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks
> > > >>>>>>>>>> Chris
> > > >>>>>>>>>>
> > > >>>>>>>>>> Sent from my iPhone
> > > >>>>>>>>>>
> > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > >>>>>>>>>>
> > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>applied to
>
> > > >>>>>>> have
> > > >>>>>>>>
> > > >>>>>>>>
> > > >>>>>>>>> same
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>have to
>
> > > >>>>>>>> adjust
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> mic
> > > >>>>>>>>>>
> > > >>>>>>>>>> gain or input signal level once balanced. You should be able to
>
>
>flip to
>
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>>> Tune
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> with Proc on and off and see approx the same max ALC
>indication.

>
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> If you initially get no indication (I think that is your
>problem?) you
>
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>>> can
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> move
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take

>much and
>
> > > >>>
> > > >>>>>>>>
> > > >>>>>>>>> will
> > > >>>>>>>>>>
> > > >>>>>>>>>>> be
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>you have
>
> > > >>
> > > >>>>>>>> is
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> to
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> set
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
>just
>
> > > >>>>>>>>> increase
> > > >>>>>>>>>>
> > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I

>no
>
> > > >>>>>>>> longer
> > > >>>>>>>>>
> > > >>>>>>>>>>
> > > >>>>>>>>>>> needed
> > > >>>>>>>>>>>
> > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time

>then it
>
> > > >>
> > > >>>>>>
> > > >>>>>>>>> would
> > > >>>>>>>>>
> > > >>>>>>>>>
> > > >>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>pretty
>
> > > >>>>>>> good
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>> matched
> > > >>>>>>>>>>
> > > >>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > >>>>>>>>>>
> > > >>>>>>>>>> _____
> > > >>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > >>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > >>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > >>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > >>>>>>>>>>
> > > >>>>>>>>>> Thanks Terry,
> > > >>>>>>>>>>
> > > >>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>
>
>OFF
>
> > > >>>>>>> then
> > > >>>>>>>
> > > >>>>>>>
> > > >>>>>>>>>>
(Message over 64 KB, truncated)

32035. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 12:47:20 UTC
From: w5rkl
Topic: 31926 Message: 32035

The transmit mixer's RF signal level at TP4 should be approximately 2.4 volt rms.

The RF signal level at the output of the driver tube should be approximately 77.5 volts rms.

The driver's RF signal level at the grids of the final tubes should be approximately 53.3 volts rms.

The "TIF" signal from the IF Unit, RF unit plug 7 pin 2, should have an approximately RF signal level of 12.4mv rms.

These RF signal level voltages came from the 830 service manual's Level Diagram on page 44. Chris you said page 44 in your 830 service manual is the remote VFO. Page 45 in the 830 service manual is the remote VFO-230. You may be confusing that page with page 44.

The setup is what Terry said, frequency 14.2Mhz, SG switch OFF, and the CAR control is adjusted for maximum ALC scale indication. Connection grounds should be as close to the RF probe or scope connection as possible.

I hope this helps.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
>
> Chris--The page you need is the Level Diagram page. You can view it on Gordons
> N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in
> RX mode.
>
> You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went
> there for conveniencetto keep RF probe ground lead short and be able to move
> probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube
> socket board as well.
>
> If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz
> bandwidth or greater) and 10/1 probe.
>
> You will be taking the RF drive level readings with SG off, in CW mode, with ALC
> level set with Carrier Level, and Standby switched to Send.
>
> You have to have some level of drive to get 70 watts out at 160ma.
>
> If your drive level readings and 6146 tube voltages are good then I would try
> swapping out tubes again and I would very carefully try to read anode voltage on
> each tube under the plastic plate caps. I once had a very high resistance

> connection from top of plate choke at the back tube and best I could get out was
> slightly more than half power. I found it by using insulated tuning tool and
> gently pushing on plate cap and parasitic choke and could see output power move
> around. Turns out the anode wire coming out of glass envelop was not soldered
> well to top of silver anode cap on the tube.
>
> Typically with low output power and high plate current it means one of two
> things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage
> swings at the final tube plates. (low drive). Good luck - Terry K9TW
>
>
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 2:11:57 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX
> and at the "back lug" of VC-3 (which I assume is the one with the small cap
> attached to it that goes to VC-2?) has "variable" readings in RX - I
> occasionally see +38V for split second, then it drops to zero (or close to
> zero), with the reading varying around a bit.
>
> Sounds like a bad connection / earth maybe? I hope I am reading your test
> procedures correctly
>
> Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230
> schematic.
>
> Cheers
> Chris
>
> On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:
>
> > Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
> >watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
> >
> >
> > I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF
> >probe.
> >
> >
> > 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
> >
> > 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
> >PA cage) voltage was 66.0 volts (77.5).
> >

> >
> > See Page 44 of service manual for test conditions. The Heath VTVM is not true
> >rms but close enough for this testing. Terry
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >wrote:
> > >
> > > Hi Terry,
> > >
> > > The voltages at the tubes seem a little low from memory, I will measure them
> > >again tonight.
> > > The Driver tube voltages (from memory) looked ok though... but again, I will
> > >double check tonight.
> > >
> > > Terry, the situation is that if I tune for maximum power out (about 60 - 70
> > >W), then the IP is around 140-160mA.
> > > If I adjust for 225mA my output power is almost non existent, hence me
> > >wanting to get this thing resolved.
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> > >
> > > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > > >
> > > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4
> > >and DRV
> > >
> > > > on RF board are good place to look with your RF VTVM. Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@>
> > > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > OK..... well Mike (nor anyone else) answered this question... so...
> > > >
> > > > One thing that springs to mind is that I did change the RF board that was
> > >faulty
> > >
> > > > in my TS-830s for one from Bob Mansker (which he and I of course assume
> > >work ok)
> > >
> > > > but thinking back, it's the time that my Power out was reduced to around
> > > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > > >

> > > > Is the RF board a good place to start looking and if so, around what are?
> > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > >
> > > > Begin forwarded message:
> > > >
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > > >
> > > > > Mike,
> > > > >
> > > > > Any idea where would be a good place to start the voltage measurements?
> > > > >
> > > > > Cheers
> > > > > Chris
> > > > >
> > > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > > >
> > > > >> Hi Chris,
> > > > >>
> > > > >> Based on the HV and power output levels you provided, 850VDC high
> >voltage and
> >
> > > > >>70 watts output, that equates to an IP current level of approximately
> >150ma.
> >
> > > > >>Therefore, with those levels the INPUT power in the final amplifier would
> >be;
> > > > >>
> > > > >> .150 x 850 = 127.5 watts
> > > > >>
> > > > >> Since the 830 final amplifier has an efficiency rating of approximately
> >55%,
> >
> > > > >>power output would be
> > > > >>
> > > > >> 127.5 - 45% = 70.125 watts
> > > > >>
> > > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
> >Unit
> >
> > > > >>supplies are within specifications and operating as they should.
> > > > >>
> > > > >> I recommend you troubleshoot the 830's transmit signal path, take level
> >
> > > > >>measurements and compare your findings with the 830 service manual Level

> >Diagram
> >
> > > > >>on page 44.
> > > > >>
> > > > >> 73s
> > > > >> Mike
> > > > >> W5RKL
> > > > >>
> > > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> >
> > > > >>wrote:
> > > > >>>
> > > > >>> Hi Terry,
> > > > >>>
> > > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
> >re: the
> >
> > > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which
> >it is),
> >
> > > > >>>then the voltages would be about right for 60-70W output.
> > > > >>>
> > > > >>> My 830 was working "OK" originally, although the alignment was miles
> >off.
> > > > >>> Then I had an issue with a tube that failed in the final unit, and it
> >caused a
> >
> > > > >>>number of issues.. one of which was NO output etc.
> > > > >>>
> > > > >>> I swapped the RF board as the one that came with the unit was broke in
> >a number
> >
> > > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > > >>> To which I decided to re-align the radio.
> > > > >>>
> > > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the
> >output
> >
> > > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
> >now.
> > > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
> >and CW,
> >
> > > > >>>but I was hoping to get the radio at 100W and factory aligned (as close
> >as can
> >
> > > > >>>be).
> > > > >>> I purchased a new front fascia and it looks great.. needs to work great
> >now
> >

> > > > >>:-)
> > > > >>>
> > > > >>> Cheers
> > > > >>> Chris
> > > > >>>
> > > > >>>
> > > > >>>
> > > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > > >>>
> > > > >>>> Chris--No one ever accused me of being very smart, but I will never
> >fail due to
> >
> > > > > >>>>lack of effort!
> > > > > >>>>
> > > > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
> >injected into
> >
> > > > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
> >meter in ALC
> >
> > > > > >>>>position, that when you flip to send the meter pegs off scale right
> >hand side of
> >
> > > > > >>>>the meter. Is this true?
> > > > > >>>>
> > > > > >>>> 2. The expected response would be for the meter to deflect to the far
> >end of
> >
> > > > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
> >range and
> >
> > > > > >>>>not peg.
> > > > > >>>>
> > > > > >>>> 3. I dont believe this has anything to do with your Processor or Comp
> >Level
> >
> > > > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > > > >>>>
> > > > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
> >had
> >
> > > > > >>>>difficulty doing this step as written and you had not completed it yet.
> >I
> >
> > > > > >>>>suggest you go back and repeat this step.
> > > > > >>>>
> > > > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
> >adjust the
> >
> > > > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim

> >pot VR-7.
> >
> > > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
> >you should
> >
> > > > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
> >reading and
> >
> > > > > >>>>not peg the meter full scale or any ALC indication very far past the
> >black
> >
> > > > > >>>>border. If that is not how you left this step then this is likely your
> >problem.
> >
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
> >Processor
> >
> > > > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
> >off the
> >
> > > > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You
> >should be
> >
> > > > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
> >before
> >
> > > > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
> >there is
> >
> > > > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
> >and Q20 on
> >
> > > > > >>>>the AF board.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> Good Luck-Terry K9TW
> > > > > >>>>
> > > > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > > > > >>>wrote:
> > > > > >>>>>

> > > > >>>>> Hi Terry,
> > > > >>>>>
> > > > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
> >and Mike
> >
> > > > > >>>>>an email off list with some voltage measurements.
> > > > > >>>>>
> > > > > >>>>> Cheers
> > > > > >>>>> Chris
> > > > > >>>>>
> > > > > >>>>>
> > > > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > > > >>>>>
> > > > > >>>>>> Chris--
> > > > > >>>>>>
> > > > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each
> >step
> >
> > > > > >>>>>> together on our rigs and see at what step we differ. Not sure if we
> >could have
> >
> > > > > >>>>>>
> > > > > >>>>>> clear enough real time video or not for this to work. Not sure about
> >our time
> >
> > > > > >>>>
> > > > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > > > >>>>>>
> > > > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
> >repair these
> >
> > > > > >>>>
> > > > > >>>>>> rigs for a living? As you know I had never performed this step until
> >you asked
> >
> > > > > >>>>>>
> > > > > >>>>>> about it. In fact I have never completed a full alignment as I dont
> >have sweep
> >
> > > > > >>>>>>
> > > > > >>>>>> generator. I have just done selected steps.
> > > > > >>>>>>
> > > > > >>>>>> Terry
> > > > > >>>>>>
> > > > > >>>>>> _____
> > > > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >>>>>>

> > > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF
> >Gen (as I
> >
> > > > > >>>>
> > > > > >>>>>> have no attenuation in there)...
> > > > > >>>>>>
> > > > > >>>>>> So I got some test reference dBmA numbers against my calibrated
> >probe and wrote
> >
> > > > > >>>>>>
> > > > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > > >>>>>> So... re-did the whole thing and of course, its more in line with
> >your "Mic
> >
> > > > > >>>>>>Gain
> > > > > >>>>>>
> > > > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
> >to PROC ON
> >
> > > > > >>>>>>
> > > > > >>>>>> with regards to ALC readings.
> > > > > >>>>>>
> > > > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
> >second I turn
> >
> > > > > >>>>>>
> > > > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
> >the
> >
> > > > > >>meter.
> > > > > >>>>>>
> > > > > >>>>>> I may record a small video and send it to you... easier to see what
> >I mean and
> >
> > > > > >>>>>
> > > > > >>>>>> what i'm doing.
> > > > > >>>>>>
> > > > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
> >the point
> >
> > > > > >>>>>>is,
> > > > > >>>>>>
> > > > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
> >readings.
> > > > > >>>>>>
> > > > > >>>>>> Cheers
> > > > > >>>>>> Chris
> > > > > >>>>>>
> > > > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > > >>>>>>

> > > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50
> >mv 1500hz
> >
> > > > >>>>
> > > > >>>>>>> test signals.
> > > > >>>>>>>
> > > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
> >I do in my
> >
> > > > >>>>>>
> > > > >>>>>>
> > > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4
> >it is just
> >
> > > > >>>>>
> > > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > > >>>>>>>
> > > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
> >right around the
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
> >back and have
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
> >very close to
> >
> > > > >>>>>
> > > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
> >box.
> >
> > > > >>>>>>>
> > > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
> >required 10mv
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> signal injected? I found it a little touchy. When you first
> >reported no meter
> >
> > > > >>>>>
> > > > >>>>>>> indication that is why I suggested turning mic gain up a little.
> >Maybe I am
> >
> > > > >>>>
> > > > >>>>>>> starting to get confused regards what your problem is.
> > > > >>>>>>>

> > > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
> >is on to
> >
> > > > >>
> > > > >>>>>>> troubleshooting with Mike.
> > > > >>>>>>>
> > > > >>>>>>> Terry
> > > > >>>>>>>
> > > > >>>>>>> _____
> > > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>
> > > > >>>>>>> Hi Terry / Mike.....
> > > > >>>>>>>
> > > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
> >Set. - Good
> >
> > > > >>>
> > > > >>>>>>> piece of kit.
> > > > >>>>>>> Here's what I see when I follow your instructions:
> > > > >>>>>>>
> > > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
> >with
> >
> > > > >
> > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > >>>>>>>>
> > > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
> >directly to
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
> differemce.
> > > > >>>>>>>
> > > > >>>>>>>> I have the mic gain set exactly at
> > > > >>>>>>>> No. 4 position.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> >wave from

> >
> > > > >>
> > > > >>>>>>> Wave
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> Tek generator to exactly 10 mv
> > > > >>>>>>>>
> > > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > >>>>>>>
> > > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
> >USB. I
> >
> > > > >>
> > > > >>>>>>>> place meter switch in ALC position.
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > >>>>>>>>
> > > > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
> >1500Hz and 10mV
> >
> > > > >>>>>
> > > > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection
> >in ALC mode
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
> >you look at
> >
> > > > >>>>
> > > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> >ALC
> >
> > > > >>>>>>> position
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and I have not touched mic gain pot.
> > > > >>>>>>>>

> > > > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
> >gains at either
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
> >S9+20dB
> >
> > > > >>>
> > > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to
> >gauge what
> >
> > > > >>>>>
> > > > >>>>>>> I'm saying and seeing.
> > > > >>>>>>>
> > > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get
> >maximum
> >
> > > > >>
> > > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
> >reading without
> >
> > > > >>>>>
> > > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
> >almost at
> >
> > > > >
> > > > >>>>>>> minimum.
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> I flip to Send and the ALC meter indication is a little bit more
> >outside the
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>> black ALC box.
> > > > >>>>>>>
> > > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
> >reading, with PROC
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
> >letter C of
> >
> > > > >>>>>
> > > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > >>>>>>>
> > > > >>>>>>> It could be adjusted a little to get a match if I had the covers

> > > > >>>>>>>> off, but close enough.
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
> >and align
> >
> > > > >>>
> > > > >>>>>>> them
> > > > >>>>>>>
> > > > >>>>>>> with the PROC ON.
> > > > >>>>>>>
> > > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > >>>>>>>>
> > > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
> >meter, so I
> >
> > > > >>>
> > > > >>>>>>> adjust L26 for 20dB reading.
> > > > >>>>>>>
> > > > >>>>>>> I will need to do some component checking in the circuit around the
> >Processor
> >
> > > > >>>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>> Mike and yourself have recommended.
> > > > >>>>>>>
> > > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > > >>>> >mentioned.
> > > > >>>>>>>
> > > > >>>>>>> Thanks
> > > > >>>>>>> Chris, ZL1CDP
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
> >short my
> >
> > > > >>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> found condition for my daily operator is very close to being right
> >on the
> >
> > > > >>>>
> > > > >>>>>>> same
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)

> >with Proc
> >
> > > > >>>>>
> > > > >>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and off.
> > > > >>>>>>>>
> > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
> >gain in
> >
> > > > >>>
> > > > >>>>>>> your
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>> I
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> wouldnt think much higher.
> > > > >>>>>>>>
> > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.
> >
> > > > >>

> > > > >>>>>>> Good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> luck Terry
> > > > >>>>>>>>
> > > > >>>>>>>> _____
> > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased the
> >"gain" on
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> >sure
> >
> > > > >
> > > > >>>>>>> why...
> > > > >>>>>>>>
> > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > >>>>compensate.
> > > > >>>>>>>>
> > > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > > >>>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
> >the far
> >
> > > > >>
> > > > >>>>>>> right
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the

> >same.
> > > > >>>>>>>>
> > > > >>>>>>>> Hope this makes sense..
> > > > >>>>>>>>
> > > > >>>>>>>> Cheers
> > > > >>>>>>>> Chris
> > > > >>>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>
> > > > >>>>>>>> Chris--This appears different than what you originally reported
> >of getting
> >
> > > > >>>>
> > > > >>>>>>> no
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> ALC indication? Why now getting ALC indication? What did you do
> >different?
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>> Where
> > > > >>>>>>>>
> > > > >>>>>>>> is your mic gain set at? I would not leave meter pegged to long
> >as it is
> >
> > > > >>
> > > > >>>>>>> hard
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> on
> > > > >>>>>>>>
> > > > >>>>>>>> the movement. I would slowly turn down mic gain until I could get
> >meter off
> >
> > > > >>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> peg.
> > > > >>>>>>>>
> > > > >>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
> >at least
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>> off
> > > > >>>>>>>>
> > > > >>>>>>>>

> > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
> >report
> >
> > > > >
> > > > >>>>>>> back
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> what your ALC reading is. Based on what you are reporting I would
> >expect it
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> be something less than far right of ALC black box? Assuming it is
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>>
> > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
> >black ALC
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
> >deflection
> >
> > > > >>>>>>> without
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> PROC NOT engaged, just Mic.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris
> > > > >>>>>>>>> Sent from my iPhone

> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> It doesn't weigh up here.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Following to the letter the service manual and then taking into
> >account
> >
> > > > > >>
> > > > >>>>>>>>> your
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
> >deflection
> >
> > > > > >>>>
> > > > >>>>>>>> of
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> ALC
> > > > >>>>>>>>>
> > > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
> >(pegged
> >
> > > > > >>
> > > > >>>>>>>>> meter)
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
> >PROC OFF.
> >
> > > > > >>>
> > > > >>>>>>>
> > > > >>>>>>>>>> Thanks
> > > > >>>>>>>>>> Chris
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
> >applied to
> >
> > > > > >>>>>>> have

> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> same
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
> >have to
> >
> > > > >>>>>>>>> adjust
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> mic
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> gain or input signal level once balanced. You should be able to
> >flip to
> >
> > > > >>>
> > > > >>>>>>>>
> > > > >>>>>>>>> Tune
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
> >indication.
> >
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> If you initially get no indication (I think that is your
> >problem?) you
> >
> > > > >>>
> > > > >>>>>>>>
> > > > >>>>>>>>> can
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> move
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
> >much and
> >
> > > > >>>
> > > > >>>>>>>>
> > > > >>>>>>>>> will
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> be
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
> >you have
> >
> > > > >>
> > > > >>>>>>>>> is
> > > > >>>>>>>>

> > > > >>>>>>>>
> > > > >>>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>> set
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
> >just
> >
> > > > >>>>>>>> increase
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I
> >no
> >
> > > > >>>>>>> longer
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> needed
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
> >then it
> >
> > > > >>
> > > > >>>>>>
> > > > >>>>>>>>> would
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
> >pretty
> >
> > > > >>>>>>> good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> matched
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> _____
> > > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >alignment
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Thanks Terry,
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
> >OFF
> >
> > > > >>>>>>> then

> > > > >>>>>>>
> > > > >>>>>>>> ON
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> same point? that's what it states from memory... point of
> >exercise is
> >
> > > > > >
> > > > >>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> have
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Cheers
> > > > >>>>>>>>>>> Chris
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
> >good
> >
> > > > >>>>>>> equal
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> indications at far right of ALC black box or S-9 on the
> >S-meter scale
> >
> > > > > >>
> > > > >>>>>>>
> > > > >>>>>>>>> with
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
> >adjusted
> >
> > > > > >>>
> > > > >>>>>>> I
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> no
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I

> >cant go
> >
> > > >
> > > > >>>>>>> any
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> lower on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > >>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Thanks Terry....
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Will hopefully get around to confirming all of this later
> >tonight
> >
> > > > >>>>>>> NZ
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> time.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Cheers
> > > > >>>>>>>>>>> Chris
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
> >(meter
> >
> > > > >>>>>>>> switch
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> in
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
> >level
> >
> > > > > >
> > > > >>>>>>> at
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> 20db
> > > > >>>>>>>>>>

> > > > >>>>>>>>>> on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the Compression scale as opposed to down at the high end of
> >the ALC
> >
> > > > >
> > > > >>>>>>> box.
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> Less
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> decay time to mess with. Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > >>>>>>>>> <wagstw46@>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > > >>>>>>>>>>>>> Step A:
> > > > >>>>>>>>>>>>> 1. You have the Processor button off and Compression level
> >pot
> >
> > > > >>>>>>
> > > > >>>>>>> max
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>> clockwise.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> You are in USB mode.
> > > > >>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > > >>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > > >>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > > >>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
> >right
> >
> > > > >>>>>>
> > > > >>>>>>> end
> > > > >>>>>>>>
> > > > >>>>>>>>>> of
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> black bordered box.
> > > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > > >>>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
> >be
> >
> > > > >>>>>>
> > > > >>>>>>>>>> between
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> 1000 and
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> 1100.
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
> >would
> >
> > > > >>>>>>> you
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> expect
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> the ALC
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
> >expect
> >
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> meter
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> to peg
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
> >whistled
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> what
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> would you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Step B:
> > > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the
> >mic
> >
> > > > >>>>>>
> > > > >>>>>>>>> gain
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> not

> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> touched
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC
> >indication
> >
> > > > >>>>>>>>> when
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> you
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> flip to
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
> >obtain
> >
> > > > >>>>>>> any
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> ALC
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>> meter
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
> >very
> >
> > > > >>>>>>>>
> > > > >>>>>>>>>> sensitive
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> and
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >
> > > > >>>>>>>>> scale.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> Quickly
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> turn
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
> >black
> >
> > > > >>>>>>>>
> > > > >>>>>>>>>>> box.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>> Mic

> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> gain
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
> >at
> >
> > > > >>>>>>
> > > > >>>>>>>> far
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> end of
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> ALC
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
> >several
> >
> > > > >>>>>>>>
> > > > >>>>>>>>>> times
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> until you
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> >
> > > > >>>>>>>> This
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>>> adjustment is
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> >
> > > > >>>>>>>> tends
> > > > >>>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> peg
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> hard
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to
> >float
> >
> > > > >>>>>>
> > > > >>>>>>>> around
> > > > >>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> max

> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Comp
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> should see about 20db on Comp Scale.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Terry
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> _____
> > > > >>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > > >>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >>>>>>> alignment
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> >
> > > > >>>>>>>> (Heater
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> etc), but
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > > >>>>>>> "align"
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> speech
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
> >Set

> >
> > > > >>>>>>>
> > > > >>>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> AG
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> output to
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> 10 mV
> > > > >>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > > >>>>>>> maximum
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> on-scale ALC
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> reading. Set the PROC to ON.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
> >ALC
> >
> > > > >>>>>>>>>> on-scaled).
> > > > >>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > > >>>>>>>>>>>>> Every step up until here works fine. I get to the point
> >where I
> >
> > > > >>>>>>>
> > > > >>>>>>>>> turn
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> Proc ON
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> and
> > > > >>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > > >>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>>> at
> > > > >>>>>>>>>
> > > > >>>>>>>>>> this
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > > >>>>>>> reading.
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> Cheers
> > > > >>>>>>>>>>> Chris

> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
> >on
> >
> > > > >>>>>>>>> pages
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> 40&41. As
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off
> >SG
> >
> > > > >>>>>>
> > > > >>>>>>>>> switch
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> and
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> LEAVE
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
> >the
> >
> > > > >>>>>>>>
> > > > >>>>>>>>>> heater
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> off of the
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >
> > > > >>>>>>>>> step
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> conditions still
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> being in force?
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> >
> > > > >>>>>>>>> "max
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> meter
> > > > >>>>>>>>>>>>>

> > > > >>>>>>>>>>>> reading on
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> the Compression Scale".
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > > >>>>>>> reading.
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> That
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> would be on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > > >>>>>>> indication
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> of
> > > > >>>>>>>>>
> > > > >>>>>>>>>> 20db
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> and
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> that would be on the Compression Scale. So would be better
> >
> > > > >>>>>>> with
> > > > >>>>>>>
> > > > >>>>>>>>> a
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> multi-scale
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> meter for them to tell you the expected value and on what
> >
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> scale.
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to
> >set
> >
> > > > >>>>>>>
> > > > >>>>>>>>> mic
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> gain
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine

> >at
> >
> > > > >>>>>>> 1200
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> and
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> peaked L27.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > >>>>>>> would
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> say
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> something
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
> >scale
> >
> > > > >>>>>>>> box".
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Just
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> make it
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > > >>>>>> read.
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
> >leave
> >
> > > > >>>>>>>
> > > > >>>>>>>>> heater
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> switch on
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> >
> > > > >>>>>>> -K9TW
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > >>>>>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
> >much
> >
> > > > >>>>>>
> > > > >>>>>>>>> chance
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> check
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>
> > > > >>>>>>> so
> > > > >>>>>>>>
> > > > >>>>>>>>> I
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> will
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> give it a
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> try today and report back. Terry
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@...m, Chris Parnell
> >
> > > > >>>>>>
> > > > >>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > > >>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> 830
> > > > >>>>>>>>>>>

> > > > >>>>>>>>>>>> at the
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> weekend?
> > > > >>>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > > >>>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> ------------------------------------
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> ------------------------------------
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>

> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>
> > > > >>>>>>>>> ----------
> > > > >>>>>>>>
> > > > >>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>
> > > > >>>>>>>> Chris--I will give some more thought. Not sure what is going on. I
> >am just
> >
> > > > >>>
> > > > >>>>>>> about
> > > > >>>>>>>
> > > > >>>>>>> out of ideas.
> > > > >>>>>>>
> > > > >>>>>>> I just repeated the test on my daily operating TS-830 with the
> >covers on the
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>> rig. I just unplugged the mic and brought the test equipment to
> >the operating
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>> position.
> > > > >>>>>>>
> > > > >>>>>>> I use a spare mic connector and clipped the generator output to it
> >with
> >
> > > > >
> > > > >>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain

> >set exactly
> >
> > > > >>>>
> > > > >>>>>>> at
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on
> >rig and
> >
> > > > >>
> > > > >>>>>>>> heater
> > > > >>>>>>>>
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> >wave from
> >
> > > > >>
> > > > >>>>>>> Wave
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> Tek generator to exactly 10 mv.
> > > > >>>>>>>>
> > > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch
> >to USB. I
> >
> > > > >>>>
> > > > >>>>>>>> place meter switch in ALC position.
> > > > >>>>>>>>
> > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > >>>>>>>>
> > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> >ALC
> >
> > > > >>>>>>> position
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and I have not touched mic gain pot.
> > > > >>>>>>>>
> > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
> >outside the
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I

> >had the
> >
> > > > >
> > > > >>>>>>> covers
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it
> >indicates
> >
> > > > >>>>
> > > > >>>>>>>> just
> > > > >>>>>>>>
> > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > >>>>>>>>
> > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
> >short my
> >
> > > > >>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> found condition for my daily operator is very close to being right
> >on the
> >
> > > > >>
> > > > >>>>>>> same
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
> >with Proc
> >
> > > > >>>>>
> > > > >>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and off.
> > > > >>>>>>>>
> > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp

> >gain in
> >
> > > > >>>
> > > > >>>>>>> your
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> wouldnt think much higher.
> > > > >>>>>>>
> > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.
> >
> > > > >>
> > > > >>>>>>> Good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> luck Terry
> > > > >>>>>>>
> > > > >>>>>>>> _____
> > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased the
> >"gain" on
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.

> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> >sure
> >
> > > > >
> > > > > >>>>>>> why...
> > > > > >>>>>>>>
> > > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > > >>>>compensate.
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> >somewhere
> >
> > > > > >>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> in
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > > > >>>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
> >the far
> >
> > > > > >>
> > > > > >>>>>>> right
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
> >same.
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Hope this makes sense..
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Cheers
> > > > > >>>>>>>>> Chris
> > > > > >>>>>>>>
> > > > > >>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Chris--This appears different than what you originally reported
> >of getting
> >
> > > > > >>>>
> > > > > >>>>>>> no
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
> >different?
> >
> > > > > >>>>
> > > > > >>>>>>

> > > > >>>>>>>>> Where
> > > > >>>>>>>>>
> > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
> >as it is
> >
> > > > >>
> > > > >>>>>>> hard
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> on
> > > > >>>>>>>>>
> > > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
> >meter off
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> peg.
> > > > >>>>>>>>>
> > > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
> >at least
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>> off
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
> >report
> >
> > > > > >
> > > > >>>>>>> back
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
> >expect it
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> in

> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>>
> > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
> >black ALC
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
> >deflection
> >
> > > > >>>>>>> without
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris
> > > > >>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > >>>>>>>>>
> > > > >>>>>>>>> Hi Terry, in a nutshell,
> > > > >>>>>>>>>
> > > > >>>>>>>>> It doesn't weigh up here.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Following to the letter the service manual and then taking into
> >account
> >
> > > > >>
> > > > >>>>>>>>> your
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> notes, the final situation is that I end up with full on-scale
> >deflection
> >
> > > > >>>>
> > > > >>>>>>>>> of
> > > > >>>>>>>>>
> > > > >>>>>>>>>

> > > > >>>>>>>>> ALC
> > > > >>>>>>>>>
> > > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
> >(pegged
> >
> > > > >>
> > > > >>>>>>>>> meter)
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
> >PROC OFF.
> >
> > > > >>>
> > > > >>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Thanks
> > > > >>>>>>>>>> Chris
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
> >
(Message over 64 KB, truncated)

32036. Re: TS-520 vs TS-520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 12:59:30 UTC
From: Bill
Topic: 32005 Message: 32036

Hi Daniel,

I can't speak to the 520 directly as I have something different - 599 Twins. Mine are plain. The D models have some differences. In mine the effort to "update" is not worth the trouble.

I have a Heathkit DX-100. There is a B model with additional features. Heath also sold the TX-1 Apache and there are even more improvements in that model. You can see the evolutionary line. My plain DX-100 has some of the later features added to it. They were simple to do and there were no structural modifications made. Those mods were worthwhile.

If you study the differences between your plain 520 and the s model so that you understand what would have to be done vs the expected benefit you might decide to do some of them and not others. Something else to consider is how such changes might affect the resale value of your radio. In almost all cases the value will decrease. If you do make changes please document them and attach a copy of the document inside the radio so the next owner has a chance to keep the radio in service.

73,

Bill KU8H

32037. Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 15:55:25 UTC
From: rkersey tds.net
Topic: 32017 Message: 32037

Maybe what is being referred to here is all the arrows and reposted replies in Chris's thread about the speech processor. I understand it is nice to be able to reference the earlier posts in reading what is written today, but the thread has gotten so long that it takes a matter of minutes just to find the end of each post. They ARE hard to read with all the arrows in them, too. It might be time to truncate some of the old, early replies off your answers.

Thanks,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

32038. Re: [TS-520_820_530_830] Re: TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 07:26:24 UTC
From: Matthew Artley
Topic: 32020 Message: 32038

On Wed, Jun 22, 2011 at 11:15 PM, Fun <fhlall.pearlriver@...> wrote:

> **
>
>
>
>
> Thanks for replies , I do plan to bring my buddipole antenna
> to test the TS-530SP, current owner has been out of the hobby
> for 18+ years, no antenna at sellers QTH. Will have my FT857 in my
> car to see if it the kenwood rig transmits and receives.
>
> Owners stated it makes sounds when plugged in(hope to hear
> stations when connected to BP antenna). I am kind of hesitant to
> transmit not knowing what the settings for driver, plate and load
> parameters are after long period of inactivity. I guess the rig
> will have to be tuned (with owners help) or go by the manual.
> I would have to go slow as I am not up to speed with operating
> hybrid rigs.
>
> Meanwhile , I will reading the manual and feeding my brain with
> info from the web.
>
> Thx again,73, Fun Leung ,KC2TBA
>
> K4EAA has a tuneup procedure on his website, very good info there. Also, he
sells parts if needed. Good luck!

>
>

[Non-text portions of this message have been removed]

32039. Re: [TS-520_820_530_830] Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 15:57:05 UTC
From: n6wk@n6wk.com
Topic: 32017 Message: 32039

Dave,
are you viewing the messages as Original HTML ?

Gordon
N6WK

On 6/23/2011 1:15 AM, g3uhu wrote:
>
> Hi Joe,
> I often see funny characters in posts (not just yours and not just in
> this group. For instance, in your post I see
> quote
> current"? and
> unquote
>
> I often wonder what causes this, I usually blame Windows and/or
> Intenet Explorer!
>
> 73
> Dave G3UHU
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> <stilesjoseph@...> wrote:
> >
> > Greetings group,
> >
> > A member of this group contacted me stating that he could not read
> my post(s) due to "non-text stuff" being included in the msg. Has
> anybody else had this problem??
> >
> > 73's joe wb7uqu
> >
> >
> > [Non-text portions of this message have been removed]
> >
>
>

32040. Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 16:00:19 UTC
From: rkersey tds.net
Topic: 32040 Message: 32040

Hello All,

I am still a ways from getting on the air with my TS-830S. I have a nice old Shure mike for it, but I was recently thinking that, with my hearing problems, I might do better with a headset that would seal out extraneous noise and allow me to use the direct connection afforded by the voice coil switch on my hearing aids. I see that at eham there are several cheap headsets that are touted as being pretty good. Does anyone have some recommendations for a headset that would work well with the TS-830S?

TIA &73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

32041. Inspecting filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 16:03:59 UTC
From: rkersey tds.net
Topic: 32041 Message: 32041

Hello again,

'Nother question. When I hauled out the TS-830S the other day to get another look at it, I noticed that it is a "Gold" model with the bronze colored nameplate. I found a picture of the cover removed, showing two filters, but how would I find out whether this unit still has all four filters installed? Do I have to remove the board and look on the other side? Or is there a simple on the air test that would tell me?

TIA & 73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

32042. DRIVE COIL ADJUSTMENT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 16:26:08 UTC
From: AL
Topic: 32042 Message: 32042

Hi there
In the ts-830 service manual, Adjustments, Nº18, Generator, Drive coil adjustment, one of the "conditions" call for CAR VR (I think it is the front panel Car Control)"CENTERED".
If I do so, following the manual procedure; I got ALC readings out of the meter scale in almost all bands. It is suppose to go for the "Max. ALC meter reading", to be able to see the maximum reading I have to lower the CAR control, and in this case I am not in the "conditions" the manual ask for.
I haven´t adjust any drive coil yet because I don´t know if the levels I am getting now are ok and If it is correct to lower the CAR level to see the maximum. Could anyone give some advice on this?

Al
CX8AT

32043. Re: Inspecting filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 16:28:13 UTC
From: w5rkl
Topic: 32041 Message: 32043

Hi Roy,

Do you have the TS-830 operators manual? If not then I recommend downloading it from Gordon's website

www.n6wk.com/kenwood/

Go to page 24 Section 5.2, Installing Accessories, for instructions on installing/connecting the filters. The filters are located on the IF board, with top cover off, the IF board is the PC board on the left front.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hello again,
>
> 'Nother question. When I hauled out the TS-830S the other day to get
> another look at it, I noticed that it is a "Gold" model with the bronze
> colored nameplate. I found a picture of the cover removed, showing two
> filters, but how would I find out whether this unit still has all four
> filters installed? Do I have to remove the board and look on the other
> side? Or is there a simple on the air test that would tell me?
>
> TIA & 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

32044. Re: [TS-520_820_530_830] DRIVE COIL ADJUSTMENT

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 17:15:04 UTC
From: n6wk@n6wk.com
Topic: 32042 Message: 32044

Al,
It is the DRIVE control that is supposed to be centered when you adjust the drive coils.
Also make sure you do the drive coil adjustments at the correct frequency in the service manual. If the ALC is too high, you turn down the carrier control.

73,
Gordon
N6WK

On 6/23/2011 9:26 AM, AL wrote:
>
> Hi there
> In the ts-830 service manual, Adjustments, N?18, Generator, Drive coil
> adjustment, one of the "conditions" call for CAR VR (I think it is the
> front panel Car Control)"CENTERED".
> If I do so, following the manual procedure; I got ALC readings out of
> the meter scale in almost all bands. It is suppose to go for the "Max.
> ALC meter reading", to be able to see the maximum reading I have to
> lower the CAR control, and in this case I am not in the "conditions"
> the manual ask for.
> I haven?t adjust any drive coil yet because I don?t know if the levels
> I am getting now are ok and If it is correct to lower the CAR level to
> see the maximum. Could anyone give some advice on this?
>
> Al
> CX8AT
>
>

32045. Re: [TS-520_820_530_830] Re: TS-530SP QUESTION

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 18:48:10 UTC
From: John Davidson
Topic: 32020 Message: 32045

Dont be slow in dipping the plate current as you can damage things with long periods of untuned transmission ! Do not let the plate current stay anywhere over 250 MA for more than a few seconds

---

From: Fun <fhlall.pearlriver@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 12:15:23 AM
Subject: [TS-520_820_530_830] Re: TS-530SP QUESTION

Thanks for replies , I do plan to bring my buddipole antenna to test the TS-530SP, current owner has been out of the hobby for 18+ years, no antenna at sellers QTH. Will have my FT857 in my car to see if it the kenwood rig transmits and receives.

Owners stated it makes sounds when plugged in(hope to hear stations when connected to BP antenna). I am kind of hesitant to transmit not knowing what the settings for driver, plate and load parameters are after long period of inactivity. I guess the rig will have to be tuned (with owners help) or go by the manual. I would have to go slow as I am not up to speed with operating hybrid rigs.

Meanwhile , I will reading the manual and feeding my brain with info from the web.

Thx again,73, Fun Leung ,KC2TBA

[Non-text portions of this message have been removed]

32046. No Frequency Display on TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 18:21:11 UTC
From: Paul Delange
Topic: 32046 Message: 32046

Need help with the frequency display panel. i have no display at all. Any idea where to start looking?

Thanks
Paul, KF7HQ

32047. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 19:54:40 UTC
From: Chris Parnell
Topic: 31926 Message: 32047

> I suppose we will be talking about "aerials" next!
>

Hmmm Thanks Terry. Appreciate your thoughts on this, but no, we won't.
In fact, I won't be asking any more from you following this. I will sort it myself.

73
Chris

On 23/06/2011, at 11:50 PM, Terry Wagoner wrote:

> Chris--You mentioned "bad earth". When you measure the RF drive levels try to
> keep meter or scope ground lead short. Ground post TP-G is provided on the RF
> board for this. Do not connect meter or scope ground lead to the frames of the
> three VC variable caps as they are floating above ground. OK to use chassis
> "earth" (ground) if you cant get on TP-G.
>
> I suppose we will be talking about "aerials" next!
>
> The small cap on VC-3 is C77 which is part of the neutralizing circuit. Terry
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 7:18:31 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Chris--TYPO--VC-2 should be VC-3 sorry. Also, you should not have read any dc
> voltage at VC-3 DRV blue wire. Not sure why you saw erratic 38 volts? C1 at 6146
>
> grids should block tube -100 vdc bias and C29 from plate of 12BY7 should block
> plate voltage. If you do have 38 volts on DRV blue wire in RX mode it appears
> bad cap which would be rare? Terry
>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 7:02:46 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Chris--The page you need is the Level Diagram page. You can view it on Gordons
> N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in
>
> RX mode.
>
> You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went

>
> there for conveniencetto keep RF probe ground lead short and be able to move
> probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube
> socket board as well.
>
> If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz
> bandwidth or greater) and 10/1 probe.
>
> You will be taking the RF drive level readings with SG off, in CW mode, with ALC
>
> level set with Carrier Level, and Standby switched to Send.
>
> You have to have some level of drive to get 70 watts out at 160ma.
>
> If your drive level readings and 6146 tube voltages are good then I would try
> swapping out tubes again and I would very carefully try to read anode voltage on
>
> each tube under the plastic plate caps. I once had a very high resistance
> connection from top of plate choke at the back tube and best I could get out was
>
> slightly more than half power. I found it by using insulated tuning tool and
> gently pushing on plate cap and parasitic choke and could see output power move
> around. Turns out the anode wire coming out of glass envelop was not soldered
> well to top of silver anode cap on the tube.
>
> Typically with low output power and high plate current it means one of two
> things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage
> swings at the final tube plates. (low drive). Good luck - Terry K9TW
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 2:11:57 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX
> and at the "back lug" of VC-3 (which I assume is the one with the small cap
> attached to it that goes to VC-2?) has "variable" readings in RX - I
> occasionally see +38V for split second, then it drops to zero (or close to
> zero), with the reading varying around a bit.
>
> Sounds like a bad connection / earth maybe? I hope I am reading your test
> procedures correctly
>
> Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230
> schematic.
>
> Cheers

> Chris
>
> On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:
>
> > Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
> >watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
> >
> >
> > I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF
>
> >probe.
> >
> >
> > 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
> >
> > 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
> >
> >
> >PA cage) voltage was 66.0 volts (77.5).
> >
> >
> > See Page 44 of service manual for test conditions. The Heath VTVM is not true
> >rms but close enough for this testing. Terry
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> >wrote:
> > >
> > > Hi Terry,
> > >
> > > The voltages at the tubes seem a little low from memory, I will measure them
>
> >again tonight.
> > > The Driver tube voltages (from memory) looked ok though... but again, I will
>
> >double check tonight.
> > >
> > > Terry, the situation is that if I tune for maximum power out (about 60 - 70
> >W), then the IP is around 140-160mA.
> > > If I adjust for 225mA my output power is almost non existent, hence me
> >wanting to get this thing resolved.
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> > >
> > > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > > >

> > > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4
> >and DRV
> >
> > > > on RF board are good place to look with your RF VTVM. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > OK..... well Mike (nor anyone else) answered this question... so...
> > > > >
> > > > > One thing that springs to mind is that I did change the RF board that was
> >faulty
> >
> > > > in my TS-830s for one from Bob Mansker (which he and I of course assume
> >work ok)
> >
> > > > but thinking back, it's the time that my Power out was reduced to around
> > > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > > > >
> > > > > Is the RF board a good place to start looking and if so, around what are?
> > > > >
> > > > > Thanks
> > > > > Chris, ZL1CDP
> > > > >
> > > > > Begin forwarded message:
> > > > >
> > > > > > From: Chris Parnell <cparnell1001@...>
> > > > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > > > >
> > > > > > Mike,
> > > > > >
> > > > > > Any idea where would be a good place to start the voltage measurements?
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > > > >
> > > > > >> Hi Chris,
> > > > > >>
> > > > > >> Based on the HV and power output levels you provided, 850VDC high
> >voltage and
> >
> > > > >>70 watts output, that equates to an IP current level of approximately

> >150ma.
> >
> > > > >>Therefore, with those levels the INPUT power in the final amplifier would
> >
> >
> >be;
> > > > > >>
> > > > > >> .150 x 850 = 127.5 watts
> > > > > >>
> > > > > >> Since the 830 final amplifier has an efficiency rating of approximately
> >
> >55%,
> > >
> > > > > >>power output would be
> > > > > >>
> > > > > >> 127.5 - 45% = 70.125 watts
> > > > > >>
> > > > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
> > >
> > >
> >Unit
> > >
> > > > > >>supplies are within specifications and operating as they should.
> > > > > >>
> > > > > >> I recommend you troubleshoot the 830's transmit signal path, take level
> >
> > > > > >>measurements and compare your findings with the 830 service manual Level
> >
> >Diagram
> > >
> > > > > >>on page 44.
> > > > > >>
> > > > > >> 73s
> > > > > >> Mike
> > > > > >> W5RKL
> > > > > >>
> > > > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >
> > >
> > >
> > > > > >>wrote:
> > > > > >>>
> > > > > >>> Hi Terry,
> > > > > >>>
> > > > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
> > >
> > >
> >re: the
> > >
> > > > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which

> >
> >
> >it is),
> >
> > > > >>>then the voltages would be about right for 60-70W output.
> > > > >>>
> > > > >>> My 830 was working "OK" originally, although the alignment was miles
> >off.
> > > > >>> Then I had an issue with a tube that failed in the final unit, and it
> >caused a
> >
> > > > >>>number of issues.. one of which was NO output etc.
> > > > >>>
> > > > >>> I swapped the RF board as the one that came with the unit was broke in
>
> >a number
> >
> > > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > > >>> To which I decided to re-align the radio.
> > > > >>>
> > > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the
> >
> >
> >output
> >
> > > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
> >now.
> > > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
> >and CW,
> >
> > > > >>>but I was hoping to get the radio at 100W and factory aligned (as close
>
> >as can
> >
> > > > >>>be).
> > > > >>> I purchased a new front fascia and it looks great.. needs to work great
> >
> >
> >now
> >
> > > > >>:-)
> > > > >>>
> > > > >>> Cheers
> > > > >>> Chris
> > > > >>>
> > > > >>>
> > > > >>>
> > > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > > >>>
> > > > >>>> Chris--No one ever accused me of being very smart, but I will never

> >fail due to
> >
> > > > >>>>lack of effort!
> > > > >>>>
> > > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
> >injected into
> >
> > > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
> >meter in ALC
> >
> > > > >>>>position, that when you flip to send the meter pegs off scale right
> >hand side of
> >
> > > > >>>>the meter. Is this true?
> > > > >>>>
> > > > >>>> 2. The expected response would be for the meter to deflect to the far
>
> >end of
> >
> > > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
> >range and
> >
> > > > >>>>not peg.
> > > > >>>>
> > > > >>>> 3. I dont believe this has anything to do with your Processor or Comp
>
> >Level
> >
> > > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > > >>>>
> > > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
> >
> >
> >had
> >
> > > > >>>>difficulty doing this step as written and you had not completed it yet.
> >
> >
> >I
> >
> > > > >>>>suggest you go back and repeat this step.
> > > > >>>>
> > > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
> >adjust the
> >
> > > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
> >pot VR-7.
> >
> > > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
> >you should

> >
> > > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
> >reading and
> >
> > > > >>>>not peg the meter full scale or any ALC indication very far past the
> >black
> >
> > > > >>>>border. If that is not how you left this step then this is likely your
>
> >problem.
> >
> > > > >>>>
> > > > >>>>
> > > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
> >Processor
> >
> > > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
> >
> >
> >off the
> >
> > > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You
>
> >should be
> >
> > > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > > >>>>
> > > > >>>>
> > > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
> >before
> >
> > > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > > >>>>
> > > > >>>>
> > > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
> >there is
> >
> > > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
> >and Q20 on
> >
> > > > >>>>the AF board.
> > > > >>>>
> > > > >>>>
> > > > >>>> Good Luck-Terry K9TW
> > > > >>>>
> > > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > > > >>>wrote:
> > > > >>>>

> > > > >>>>> Hi Terry,
> > > > >>>>>
> > > > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
> >
> >
> >and Mike
> >
> > > > > >>>>>an email off list with some voltage measurements.
> > > > > >>>>>
> > > > > >>>>> Cheers
> > > > > >>>>> Chris
> > > > > >>>>>
> > > > > >>>>>
> > > > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > > > >>>>>
> > > > > >>>>>> Chris--
> > > > > >>>>>>
> > > > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each
> >
> >step
> >
> > > > > >>>>>> together on our rigs and see at what step we differ. Not sure if we
> >
> >could have
> >
> > > > > >>>>>>
> > > > > >>>>>> clear enough real time video or not for this to work. Not sure about
> >
> >
> >our time
> >
> > > > > >>>>
> > > > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > > > >>>>>>
> > > > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
> >repair these
> >
> > > > > >>>>
> > > > > >>>>>> rigs for a living? As you know I had never performed this step until
> >
> >
> >you asked
> >
> > > > > >>>>>>
> > > > > >>>>>> about it. In fact I have never completed a full alignment as I dont
> >
> >have sweep
> >
> > > > > >>>>>>
> > > > > >>>>>> generator. I have just done selected steps.

> > > > >>>>>>
> > > > >>>>>> Terry
> > > > >>>>>>
> > > > >>>>>> _____
> > > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>
> > > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF
>
> >Gen (as I
> >
> > > > >>>>
> > > > >>>>>> have no attenuation in there)...
> > > > >>>>>>
> > > > >>>>>> So I got some test reference dBmA numbers against my calibrated
> >probe and wrote
> >
> > > > >>>>>>
> > > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > >>>>>> So... re-did the whole thing and of course, its more in line with
> >your "Mic
> >
> > > > >>>>>>Gain
> > > > >>>>>>
> > > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
> >
> >
> >to PROC ON
> >
> > > > >>>>>>
> > > > >>>>>> with regards to ALC readings.
> > > > >>>>>>
> > > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
> >second I turn
> >
> > > > >>>>>>
> > > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
> >the
> >
> > > > >>meter.
> > > > >>>>>>
> > > > >>>>>> I may record a small video and send it to you... easier to see what
>
> >I mean and
> >
> > > > >>>>>
> > > > >>>>>> what i'm doing.
> > > > >>>>>>

> > > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
> >the point
> >
> > > > > >>>>>>is,
> > > > > >>>>>>
> > > > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
> >readings.
> > > > > >>>>>>
> > > > > >>>>>> Cheers
> > > > > >>>>>> Chris
> > > > > >>>>>>
> > > > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > > >>>>>>
> > > > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50
> >
> >mv 1500hz
> >
> > > > > > >>>>
> > > > > > >>>>>>> test signals.
> > > > > > >>>>>>>
> > > > > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
> > >
> > >
> >I do in my
> >
> > > > > > >>>>>>
> > > > > > >>>>>>
> > > > > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4
> >
> >it is just
> >
> > > > > > >>>>>
> > > > > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > > > > >>>>>>>
> > > > > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
> >right around the
> >
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
> >back and have
> >
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
> >very close to
> >
> > > > > > >>>>>
> > > > > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
> >box.

> >
> > > > >>>>>>>
> > > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
> >required 10mv
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> signal injected? I found it a little touchy. When you first
> >reported no meter
> >
> > > > >>>>>
> > > > >>>>>>> indication that is why I suggested turning mic gain up a little.
> >Maybe I am
> >
> > > > >>>
> > > > >>>>>>> starting to get confused regards what your problem is.
> > > > >>>>>>>
> > > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
> >is on to
> >
> > > > >>
> > > > >>>>>>> troubleshooting with Mike.
> > > > >>>>>>>
> > > > >>>>>>> Terry
> > > > >>>>>>>
> > > > >>>>>>> _____
> > > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>
> > > > >>>>>>> Hi Terry / Mike.....
> > > > >>>>>>>
> > > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
> >Set. - Good
> >
> > > > >>>
> > > > >>>>>>> piece of kit.
> > > > >>>>>>> Here's what I see when I follow your instructions:
> > > > >>>>>>>
> > > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
> >
> >
> >with
> >
> > > > >
> > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > >>>>>>>>
> > > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
> >directly to

> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
> differemce.
> > > > >>>>>>>
> > > > >>>>>>>> I have the mic gain set exactly at
> > > > >>>>>>>> No. 4 position.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> >wave from
> >
> > > > >>
> > > > >>>>>>> Wave
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> Tek generator to exactly 10 mv
> > > > >>>>>>>>
> > > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > >>>>>>>
> > > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
> >
> >
> >USB. I
> >
> > > > >>
> > > > >>>>>>>> place meter switch in ALC position.
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > >>>>>>>>
> > > > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
> >1500Hz and 10mV
> >

> > > > >>>>>
> > > > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection
> >
> >
> >in ALC mode
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
> >you look at
> >
> > > > > >>>>
> > > > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> >
> >
> >ALC
> >
> > > > > >>>>>>> position
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> and I have not touched mic gain pot.
> > > > > >>>>>>>>
> > > > > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
> >gains at either
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
> >
> >
> >S9+20dB
> >
> > > > > >>>
> > > > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to
>
> >gauge what
> >
> > > > > >>>>>
> > > > > >>>>>>> I'm saying and seeing.
> > > > > >>>>>>>
> > > > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get
>
> >maximum
> >
> > > > > >>
> > > > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
> >reading without

> >
> > > > >>>>>
> > > > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
> >almost at
> >
> > > > >
> > > > > >>>>>>> minimum.
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
> >outside the
> >
> > > > > >>>>>
> > > > > >>>>>>
> > > > > >>>>>>>> black ALC box.
> > > > > >>>>>>>>
> > > > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
> >reading, with PROC
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
> >letter C of
> >
> > > > > >>>>>
> > > > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > > >>>>>>>
> > > > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > > > >>>>>>>> off, but close enough.
> > > > > >>>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
> >and align
> >
> > > > > >>>
> > > > > >>>>>>> them
> > > > > >>>>>>>
> > > > > >>>>>>> with the PROC ON.
> > > > > >>>>>>>
> > > > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > > >>>>>>>>
> > > > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
> >meter, so I
> >
> > > > > >>>
> > > > > >>>>>>> adjust L26 for 20dB reading.
> > > > > >>>>>>>
> > > > > >>>>>>> I will need to do some component checking in the circuit around the

> >
> >
> >Processor
> >
> > > > >>>>>
> > > > > >>>>>>> as
> > > > > >>>>>>>
> > > > > >>>>>>> Mike and yourself have recommended.
> > > > > >>>>>>>
> > > > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > > > >mentioned.
> > > > > >>>>>>>
> > > > > >>>>>>> Thanks
> > > > > >>>>>>> Chris, ZL1CDP
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
> >
> >
> >short my
> >
> > > > > >>>>
> > > > > >>>>>>> as
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> found condition for my daily operator is very close to being right
> >
> >
> >on the
> >
> > > > > >>
> > > > > >>>>>>> same
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
> >
> >
> >with Proc
> >
> > > > > >>>>>
> > > > > >>>>>>> on
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> and off.
> > > > > >>>>>>>>
> > > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it
> >
> > > > > >>>>>>
> > > > > >>>>>>>

> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
>
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
> >
> >
> >gain in
> >
> > > > >>>
> > > > >>>>>>>> your
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> rig you may have to be a little higher than position 4 on the mic
>
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>>> I
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> wouldnt think much higher.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> >
> >
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.
> >
> > > > >>
> > > > >>>>>>>> Good
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> luck Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>

> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased the
>
> >"gain" on
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> >
> >
> >sure
> >
> > > > >
> > > > >>>>>>> why...
> > > > >>>>>>>>
> > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > >>>>compensate.
> > > > >>>>>>>>
> > > > >>>>>>>> Based on what you are reporting I would expect it to
> > > > >>>>>>>> be something less than far right of ALC black box? Assuming it is
> >
> >
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>
> >the far
> >
> > > > >>
> > > > >>>>>>> right
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
> >same.

> > > > >>>>>>>>
> > > > >>>>>>>> Hope this makes sense..
> > > > >>>>>>>>
> > > > >>>>>>>> Cheers
> > > > >>>>>>>> Chris
> > > > >>>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>
> > > > >>>>>>>>> Chris--This appears different than what you originally reported
> >of getting
> >
> > > > >>>>
> > > > >>>>>>> no
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
> >different?
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> Where
> > > > >>>>>>>>>
> > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
> >as it is
> >
> > > > >>
> > > > >>>>>>> hard
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> on
> > > > >>>>>>>>>
> > > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
> >
> >
> >meter off
> >
> > > > >>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>> peg.
> > > > >>>>>>>>>
> > > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
> >
> >
> >at least
> >
> > > > >>>>
> > > > >>>>>>

> > > > >>>>>>>> off
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>
> >report
> >
> > > > >
> > > > >>>>>>> back
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
> >
> >
> >expect it
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> >
> >
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>>
> > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
>
> >black ALC
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)

> >deflection
> >
> > > > >>>>>>> without
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris
> > > > >>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> It doesn't weigh up here.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Following to the letter the service manual and then taking into
> >
> >account
> > >
> > > > > >>
> > > > >>>>>>>> your
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
> >deflection
> > >
> > > > >>>>
> > > > >>>>>>> of
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> ALC
> > > > >>>>>>>>>
> > > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
> >
> >(pegged
> > >
> > > > > >>
> > > > >>>>>>>> meter)
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
> >PROC OFF.
> > >
> > > > >>>
> > > > >>>>>>
> > > > >>>>>>>>>>

> > > > >>>>>>>>>> Thanks
> > > > >>>>>>>>>> Chris
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
> >applied to
> >
> > > > >>>>>>> have
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> same
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not
> >have to
> >
> > > > >>>>>>>>> adjust
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> mic
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> gain or input signal level once balanced. You should be able to
> >
> >
> >flip to
> >
> > > > >>>
> > > > >>>>>>>>
> > > > >>>>>>>>> Tune
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> with Proc on and off and see approx the same max ALC
> >indication.
> >
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> If you initially get no indication (I think that is your
> >problem?) you
> >
> > > > >>>
> > > > >>>>>>>>
> > > > >>>>>>>>> can
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> move
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> mic gain up slightly until you get an indication. It wont take
> >

> >much and
> >
> > > > >>>
> > > > >>>>>>>
> > > > >>>>>>>>> will
> > > > >>>>>>>>>
> > > > >>>>>>>>>> be
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
> >you have
> >
> > > > >>
> > > > >>>>>>> is
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> set
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to
> >just
> >
> > > > >>>>>>>>> increase
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> mic gain until I got an indication. After I found that point I
>
> >no
> >
> > > > >>>>>>> longer
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> needed
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
>
> >then it
> >
> > > > >>
> > > > >>>>>>
> > > > >>>>>>>>> would
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
> >pretty
> >
> > > > >>>>>>> good
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> matched

> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> _____
> > > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >alignment
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Thanks Terry,
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
> > >
> >
> >OFF
> >
> > > > >>>>>>> then
> > > > >>>>>>>>
> > > > >>>>>>>>> ON
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> to
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> same point? that's what it states from memory... point of
> >exercise is
> > >
> > > > > >
> > > > >>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> have
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Cheers
> > > > >>>>>>>>>>> Chris
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
> >good
> > >
> > > > >>>>>>> equal
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>> indications at far right of ALC black box or S-9 on the
> >S-meter scale
> > >

> > > > >>
> > > > >>>>>>
> > > > >>>>>>>> with
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
>
> >adjusted
> >
> > > > >>>
> > > > >>>>>>> I
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> no
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I
> >cant go
> >
> > > > >
> > > > >>>>>>> any
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> lower on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > >>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Thanks Terry....
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later
> >tonight
> >
> > > > >>>>>>> NZ
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> time.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>

> > > > >>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
> >(meter
> >
> > > > >>>>>>>>> switch
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> in
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
> >
> >
> >level
> >
> > > > > >
> > > > >>>>>>>> at
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> 20db
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> on
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> the Compression scale as opposed to down at the high end of
> >the ALC
> >
> > > > >
> > > > >>>>>>> box.
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Less
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> decay time to mess with. Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > >>>>>>>>> <wagstw46@>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> wrote:
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> Chris--OK you are telling me the following:
> > > > >>>>>>>>>>>>> Step A:
> > > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression level
> >
> >pot
> >
> > > > > >
> > > > >>>>>>>>> max
> > > > >>>>>>>>>

> > > > >>>>>>>>
> > > > >>>>>>>>>>>> clockwise.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> You are in USB mode.
> > > > >>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > > >>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > > >>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > > >>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
> >right
> >
> > > > >>>>>>
> > > > >>>>>>>>> end
> > > > >>>>>>>>>
> > > > >>>>>>>>>> of
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> ALC
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> black bordered box.
> > > > >>>>>>>>>>>>>>> 6. You return to Stand-by.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
> >
> >
> >be
> >
> > > > >>>>>>
> > > > >>>>>>>>>> between
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> 1000 and
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> 1100.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
> >would
> >
> > > > >>>>>>> you
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> expect
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> the ALC
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
> >expect
> >
> > > > >>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>>

> > > > >>>>>>>>>> meter
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> to peg
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
> >whistled
> >
> > > > >>>>>>>
> > > > >>>>>>>>> what
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> would you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Step B:
> > > > >>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the
>
> >mic
> >
> > > > >>>>>>
> > > > >>>>>>>>> gain
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> not
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> touched
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> from above you are telling me that you have no ALC
> >indication
> >
> > > > >>>>>>>>> when
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> flip to
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
> >obtain
> >
> > > > >>>>>>> any
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> meter
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>> indication and get no ALC indication. Is This correct?

> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
>
> >very
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> sensitive
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> and
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>
> > > > >>>>>>> scale.
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Quickly
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> turn
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
> >black
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> box.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> Mic
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> gain
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
> >
> >
> >at
> >
> > > > >>>>>>
> > > > >>>>>>>>> far
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> end of
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> ALC
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
> >several
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> times
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> until you

> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> >
> >
> >
> > > > >>>>>>> This
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>>>> adjustment is
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
>
> > > > >>>>>>> tends
> > > > >>>>>>>
> > > > >>>>>>>>>>> to
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> peg
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> hard
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to
> >float
> >
> > > > >>>>>>
> > > > >>>>>>>>>>> around
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> the
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> max
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>>>>> to
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> Comp
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> you
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Terry
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> _____

> > > > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >>>>>>> alignment
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> >
> >
> >
> > > > >>>>>>>> (Heater
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> on
> > > > >>>>>>>>
> > > > >>>>>>>>>> etc), but
> > > > >>>>>>>>
> > > > >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > > >>>>>>> "align"
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> speech
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
> >
> >
> > >Set
> >
> > > > >>>>>>>
> > > > >>>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> AG
> > > > >>>>>>>>
> > > > >>>>>>>>>> output to
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>>>> 10 mV
> > > > >>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > > >>>>>>> maximum
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> on-scale ALC
> > > > >>>>>>>>>>

> > > > >>>>>>>>>>>>>>> reading. Set the PROC to ON.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
> >ALC
> >
> > > > >>>>>>>>>>> on-scaled).
> > > > >>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point
> >where I
> >
> > > > >>>>>>>
> > > > >>>>>>>>> turn
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> Proc ON
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> and
> > > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>>> at
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> this
> > > > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > > >>>>>>> reading.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
> >on
> >
> > > > >>>>>>> pages
> > > > >>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> 40&41. As
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > > >>>>>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off
>
> >SG
> >
> > > > >>>>>>
> > > > >>>>>>>>> switch
> > > > >>>>>>>>>
> > > > >>>>>>>>>> and
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> LEAVE
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
> >
> >
> >the
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> heater
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> off of the
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> >
> >
> >
> > > > >>>>>>> step
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> conditions still
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> being in force?
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>
> > > > >>>>>>> "max
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> meter
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> reading on
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> the Compression Scale".
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > > >>>>>>> reading.
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> That
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>

> > > > >>>>>>>>>>>> would be on
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > > >>>>>>> indication
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> of
> > > > >>>>>>>>>
> > > > >>>>>>>>>> 20db
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> and
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> >
> >
> >
> > > > > >>>>>>> with
> > > > > >>>>>>>
> > > > > >>>>>>>> a
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> multi-scale
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> meter for them to tell you the expected value and on what
> >
> > > > > >>>>>>> meter
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>> scale.
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to
> >
> > >set
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>> mic
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> gain
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
> > >at
> > >
> > > > > >>>>>>> 1200
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> and
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>

> > > > >>>>>>>>>>>> peaked L27.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > >>>>>>> would
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> say
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> something
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>> like "top or far right end of black bordered ALC meter
> >scale
> >
> > > > >>>>>>>> box".
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> Just
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>> make it
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > > >>>>>> read.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
> >leave
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> heater
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> switch on
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> >
> >
> >
> > > > >>>>>>> -K9TW
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > >>>>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Ok Terry, thank you.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
> >much

> >
> > > > >>>>>>
> > > > >>>>>>>>> chance
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> check
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>
> > > > >>>>>>> so
> > > > >>>>>>>
> > > > >>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> will
> > > > >>>>>>>
> > > > >>>>>>>>>> give it a
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>> try today and report back. Terry
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> >
> >
> >
> > > > >>>>>>
> > > > >>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > > >>>>>>> in
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>>> 830
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>> at the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>>> weekend?
> > > > >>>>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > > >>>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> ------------------------------------
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> ------------------------------------
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>

> > > > >>>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>> ------------------------------------
> > > > >>>>>>>>>
> > > > >>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>
> > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I
> >
> >
> >am just
> >
> > > > > >>>
> > > > > >>>>>>>>> about
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> out of ideas.
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> I just repeated the test on my daily operating TS-830 with the
> >covers on the
> >
> > > > > > >>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> rig. I just unplugged the mic and brought the test equipment to
> >the operating
> >
> > > > > > >>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> position.
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> I use a spare mic connector and clipped the generator output to it
> >
> >
> >with
> >
> > > > > >
> > > > > > >>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain

> >set exactly
> >
> > > > >>>>
> > > > >>>>>>> at
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on
>
> >rig and
> >
> > > > >>
> > > > >>>>>>>> heater
> > > > >>>>>>>>
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> >wave from
> >
> > > > >>
> > > > >>>>>>> Wave
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> Tek generator to exactly 10 mv.
> > > > >>>>>>>>
> > > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch
>
> >to USB. I
> >
> > > > >>>>
> > > > >>>>>>>> place meter switch in ALC position.
> > > > >>>>>>>>
> > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > >>>>>>>>
> > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> >
> >
> >ALC
> >
> > > > >>>>>>> position
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and I have not touched mic gain pot.
> > > > >>>>>>>>
> > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
> >outside the

> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
> >had the
> >
> > > > > >
> > > > >>>>>>> covers
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it
>
> >indicates
> >
> > > > >>>>
> > > > >>>>>>>> just
> > > > >>>>>>>>
> > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > >>>>>>>>
> > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
> >
> >
> >short my
> >
> > > > >>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> found condition for my daily operator is very close to being right
> >
> >
> >on the
> >
> > > > > >>
> > > > >>>>>>> same
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
> >
> >
> >with Proc
> >
> > > > > >>>>>
> > > > >>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> and off.
> > > > >>>>>>>>
> > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it

> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
>
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
> >
> >
> >gain in
> >
> > > > >>>
> > > > >>>>>>> your
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
>
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> wouldnt think much higher.
> > > > >>>>>>>>
> > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> >
> >
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.
> >
> > > > >>
> > > > >>>>>>> Good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> luck Terry

> > > > >>>>>>>>
> > > > >>>>>>>> _____
> > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased the
>
> >"gain" on
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> >
> >
> >sure
> >
> > > > >
> > > > >>>>>>> why...
> > > > >>>>>>>>
> > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > >>>>compensate.
> > > > >>>>>>>>
> > > > >>>>>>>> Based on what you are reporting I would expect it to
> > > > >>>>>>>> be something less than far right of ALC black box? Assuming it is
> >
> >
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>
> >the far
> >
> > > > >>
> > > > >>>>>>> right
> > > > >>>>>>>
```
```

> > > > >>>>>>>>
> > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
> >same.
> > > > >>>>>>>>
> > > > >>>>>>>> Hope this makes sense..
> > > > >>>>>>>>
> > > > >>>>>>>> Cheers
> > > > >>>>>>>> Chris
> > > > >>>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>
> > > > >>>>>>>>> Chris--This appears different than what you originally reported
> >of getting
> >
> > > > >>>>
> > > > >>>>>>> no
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
> >different?
> >
> > > > >>>>
> > > > >>>>>>>
> > > > >>>>>>>>> Where
> > > > >>>>>>>>>
> > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
> >as it is
> >
> > > > >>
> > > > >>>>>>> hard
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> on
> > > > >>>>>>>>>
> > > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
> >
> >
> >meter off
> >
> > > > >>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> peg.
> > > > >>>>>>>>>
> > > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
> >
> >
> >at least

> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>> off
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>
> >report
> >
> > > > > >
> > > > >>>>>>> back
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
> >
> >
> >expect it
> >
> > > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> >
> >
> >somewhere
> >
> > > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> >Terry
> > > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > >
(Message over 64 KB, truncated)

32048. Re: [TS-520_820_530_830] Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 20:07:59 UTC
From: Steve
Topic: 32040 Message: 32048

Roy,

Low impedance stereo earphones work well. I've gone through about a dozen of various manufacturers picked up at garage sales or flea markets, never paying more than $1.00, until I found ones that I liked the sound. Right now I'm using Koss TD/60 but will probably keep looking.

Steve W4IMF

----- Original Message -----
From: rkersey tds.net
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 23, 2011 12:00 PM
Subject: [TS-520_820_530_830] Recommended headsets?

Hello All,

I am still a ways from getting on the air with my TS-830S. I have a nice old Shure mike for it, but I was recently thinking that, with my hearing problems, I might do better with a headset that would seal out extraneous noise and allow me to use the direct connection afforded by the voice coil switch on my hearing aids. I see that at eham there are several cheap headsets that are touted as being pretty good. Does anyone have some recommendations for a headset that would work well with the TS-830S?

TIA &73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

32049. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 20:38:59 UTC
From: Terry Wagoner
Topic: 31926 Message: 32049

Chris--I am sorry It was meant as a joke. Apparently a very poor one. I have nothing but respect for you and your country. Terry

---
From: Chris Parnell <cparnell1001@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thu, June 23, 2011 3:54:40 PM
Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment

> I suppose we will be talking about "aerials" next!
>

Hmmm Thanks Terry. Appreciate your thoughts on this, but no, we won't.
In fact, I won't be asking any more from you following this. I will sort it myself.

73
Chris

On 23/06/2011, at 11:50 PM, Terry Wagoner wrote:

> Chris--You mentioned "bad earth". When you measure the RF drive levels try to
> keep meter or scope ground lead short. Ground post TP-G is provided on the RF
> board for this. Do not connect meter or scope ground lead to the frames of the

> three VC variable caps as they are floating above ground. OK to use chassis
> "earth" (ground) if you cant get on TP-G.
>
> I suppose we will be talking about "aerials" next!
>
> The small cap on VC-3 is C77 which is part of the neutralizing circuit. Terry
>
> ---
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 7:18:31 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Chris--TYPO--VC-2 should be VC-3 sorry. Also, you should not have read any dc
> voltage at VC-3 DRV blue wire. Not sure why you saw erratic 38 volts? C1 at
>6146
>
>
> grids should block tube -100 vdc bias and C29 from plate of 12BY7 should block

> plate voltage. If you do have 38 volts on DRV blue wire in RX mode it appears
> bad cap which would be rare? Terry

>
> _____
> From: Terry Wagoner <wagstw46@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 7:02:46 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Chris--The page you need is the Level Diagram page. You can view it on Gordons

> N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages
>in
>
>
> RX mode.
>
> You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I
>went
>
>
> there for conveniencetto keep RF probe ground lead short and be able to move
> probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube
> socket board as well.
>
> If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz
>
> bandwidth or greater) and 10/1 probe.
>
> You will be taking the RF drive level readings with SG off, in CW mode, with
>ALC
>
>
> level set with Carrier Level, and Standby switched to Send.
>
> You have to have some level of drive to get 70 watts out at 160ma.
>
> If your drive level readings and 6146 tube voltages are good then I would try
> swapping out tubes again and I would very carefully try to read anode voltage
>on
>
>
> each tube under the plastic plate caps. I once had a very high resistance
> connection from top of plate choke at the back tube and best I could get out
>was
>
>
> slightly more than half power. I found it by using insulated tuning tool and
> gently pushing on plate cap and parasitic choke and could see output power move
>
> around. Turns out the anode wire coming out of glass envelop was not soldered
> well to top of silver anode cap on the tube.

>
> Typically with low output power and high plate current it means one of two
> things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage
> swings at the final tube plates. (low drive). Good luck - Terry K9TW
>
> _____
> From: Chris Parnell <cparnell1001@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Thu, June 23, 2011 2:11:57 AM
> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>
> Hi Terry,
>
> I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX
> and at the "back lug" of VC-3 (which I assume is the one with the small cap
> attached to it that goes to VC-2?) has "variable" readings in RX - I
> occasionally see +38V for split second, then it drops to zero (or close to
> zero), with the reading varying around a bit.
>
> Sounds like a bad connection / earth maybe? I hope I am reading your test
> procedures correctly
>
> Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230
>
> schematic.
>
> Cheers
> Chris
>
> On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:
>
> > Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
> >watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
> >
> >
> > I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C
>RF
>
>
> >probe.
> >
> >
> > 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
> >
> > 2. At output of driver tube DRV)at back lug of variable capacitor VC-3
>(nearest
>
> >
> >
> >PA cage) voltage was 66.0 volts (77.5).

> >
> >
> > See Page 44 of service manual for test conditions. The Heath VTVM is not true
>
> >rms but close enough for this testing. Terry
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@...>
> >wrote:
> > >
> > > Hi Terry,
> > >
> > > The voltages at the tubes seem a little low from memory, I will measure
>them
>
>
> >again tonight.
> > > The Driver tube voltages (from memory) looked ok though... but again, I
>will
>
>
> >double check tonight.
> > >
> > > Terry, the situation is that if I tune for maximum power out (about 60 - 70
>
> >W), then the IP is around 140-160mA.
> > > If I adjust for 225mA my output power is almost non existent, hence me
> >wanting to get this thing resolved.
> > >
> > > Cheers
> > > Chris
> > >
> > >
> > > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> > >
> > > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > > >
> > > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4

> >and DRV
> >
> > > > on RF board are good place to look with your RF VTVM. Terry
> > > >
> > > > _____
> > > > From: Chris Parnell <cparnell1001@...>
> > > > To: TS830 <TS-520_820_530_830@yahoogroups.com>
> > > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > > >
> > > > OK..... well Mike (nor anyone else) answered this question... so...

> > > >
> > > > One thing that springs to mind is that I did change the RF board that was
>
> >faulty
> >
> > > > in my TS-830s for one from Bob Mansker (which he and I of course assume
> >work ok)
> >
> > > > but thinking back, it's the time that my Power out was reduced to around

> > > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > > > >
> > > > Is the RF board a good place to start looking and if so, around what
are?
> > > > >
> > > > Thanks
> > > > Chris, ZL1CDP
> > > > >
> > > > Begin forwarded message:
> > > > >
> > > > > From: Chris Parnell <cparnell1001@...>
> > > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > > > >
> > > > > Mike,
> > > > > >
> > > > > Any idea where would be a good place to start the voltage
measurements?
> > > > > >
> > > > > Cheers
> > > > > Chris
> > > > > >
> > > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > > > >
> > > > >> Hi Chris,
> > > > >>
> > > > >> Based on the HV and power output levels you provided, 850VDC high
> >voltage and
> >
> > > > >>70 watts output, that equates to an IP current level of approximately
> >150ma.
> >
> > > > >>Therefore, with those levels the INPUT power in the final amplifier
>would
>
> >
> >
> >be;

> > > > >>
> > > > >> .150 x 850 = 127.5 watts
> > > > >>
> > > > >> Since the 830 final amplifier has an efficiency rating of
>approximately
>
>
> >55%,
> >
> > > > >>power output would be
> > > > >>
> > > > >> 127.5 - 45% = 70.125 watts
> > > > >>
> > > > >> the same as your 830 is producing. That tells me the HV and LV
>Rectifier
>
> >
> >
> >Unit
> >
> > > > >>supplies are within specifications and operating as they should.
> > > > >>
> > > > >> I recommend you troubleshoot the 830's transmit signal path, take
>level
>
>
> > > > >>measurements and compare your findings with the 830 service manual
>Level
>
>
> >Diagram
> >
> > > > >>on page 44.
> > > > >>
> > > > >> 73s
> > > > >> Mike
> > > > >> W5RKL
> > > > >>
> > > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
><cparnell1001@>
>
> >
> >
> >
> > > > >>wrote:
> > > > >>>
> > > > >>> Hi Terry,
> > > > >>>
> > > > >>> Sorry for the delay, I was hoping to get feedback from Mike or
>yourself

>
> >
> >
> >re: the
> >
> > > > >>>voltages... Mike did respond saying that if my IP is around 150mA
>(which
>
> >
> >
> >it is),
> >
> > > > >>>then the voltages would be about right for 60-70W output.
> > > > >>>
> > > > >>> My 830 was working "OK" originally, although the alignment was miles

> >off.
> > > > >>> Then I had an issue with a tube that failed in the final unit, and it
>
> >caused a
> >
> > > > >>>number of issues.. one of which was NO output etc.
> > > > >>>
> > > > >>> I swapped the RF board as the one that came with the unit was broke
>in
>
>
> >a number
> >
> > > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > > >>> To which I decided to re-align the radio.
> > > > >>>
> > > > >>> On doing so, I noticed that the Speech Processor wouldn't align and
>the
>
> >
> >
> >output
> >
> > > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent

> >now.
> > > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)

> >and CW,
> >
> > > > >>>but I was hoping to get the radio at 100W and factory aligned (as
>close
>
>
> >as can

> >
> > > > >>>be).
> > > > >>> I purchased a new front fascia and it looks great.. needs to work
>great
>
> >
> >
> >now
> >
> > > > >>:-)
> > > > >>>
> > > > >>> Cheers
> > > > >>> Chris
> > > > >>>
> > > > >>>
> > > > >>>
> > > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > > >>>
> > > > >>>> Chris--No one ever accused me of being very smart, but I will never

> >fail due to
> >
> > > > >>>>lack of effort!
> > > > >>>>
> > > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
> >injected into
> >
> > > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
> >meter in ALC
> >
> > > > >>>>position, that when you flip to send the meter pegs off scale right
> >hand side of
> >
> > > > >>>>the meter. Is this true?
> > > > >>>>
> > > > >>>> 2. The expected response would be for the meter to deflect to the
>far
>
>
> >end of
> >
> > > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
>
> >range and
> >
> > > > >>>>not peg.
> > > > >>>>
> > > > >>>> 3. I dont believe this has anything to do with your Processor or
>Comp
>

>
> >Level
> >
> > > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > > >>>>
> > > > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that
>I
>
> >
> >
> >had
> >
> > > > > >>>>difficulty doing this step as written and you had not completed it
>yet.
>
> >
> >
> >I
> >
> > > > > >>>>suggest you go back and repeat this step.
> > > > > >>>>
> > > > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you

> >adjust the
> >
> > > > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
>
> >pot VR-7.
> >
> > > > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
>
> >you should
> >
> > > > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
> >reading and
> >
> > > > > >>>>not peg the meter full scale or any ALC indication very far past the

> >black
> >
> > > > > >>>>border. If that is not how you left this step then this is likely
>your
>
>
> >problem.
> >
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
> >Processor
> >

> > > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get
>if
>
> >
> >
> >off the
> >
> > > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31).
>You
>
>
> >should be
> >
> > > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > > >>>>
> > > > >>>>
> > > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
>
> >before
> >
> > > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > > >>>>
> > > > >>>>
> > > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then

> >there is
> >
> > > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19

> >and Q20 on
> >
> > > > >>>>the AF board.
> > > > >>>>
> > > > >>>>
> > > > >>>> Good Luck-Terry K9TW
> > > > >>>>
> > > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> ><cparnell1001@>
> >
> > > > >>>wrote:
> > > > >>>>>
> > > > >>>>> Hi Terry,
> > > > >>>>>
> > > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent
>you
>
> >
> >
> >and Mike
> >
> > > > >>>>>an email off list with some voltage measurements.

> > > > >>>>>
> > > > >>>>> Cheers
> > > > >>>>> Chris
> > > > >>>>>
> > > > >>>>>
> > > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > > >>>>>
> > > > >>>>>> Chris--
> > > > >>>>>>
> > > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform
>each
>
>
> >step
> >
> > > > >>>>>> together on our rigs and see at what step we differ. Not sure if
>we
>
>
> >could have
> >
> > > > >>>>>
> > > > >>>>>> clear enough real time video or not for this to work. Not sure
>about
>
> >
> >
> >our time
> >
> > > > > >>>>
> > > > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
>
> > > > >>>>>>
> > > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
> >repair these
> >
> > > > > >>>>
> > > > > >>>>>> rigs for a living? As you know I had never performed this step
>until
>
> >
> >
> >you asked
> >
> > > > >>>>>
> > > > >>>>>> about it. In fact I have never completed a full alignment as I
>dont
>
>
> >have sweep

> >
> > > > >>>>>
> > > > >>>>>> generator. I have just done selected steps.
> > > > >>>>>>
> > > > >>>>>> Terry
> > > > >>>>>>
> > > > >>>>>> _____
> > > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>
> > > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the
>AF
>
>
> >Gen (as I
> >
> > > > > >>>>
> > > > >>>>>> have no attenuation in there)...
> > > > >>>>>>
> > > > >>>>>> So I got some test reference dBmA numbers against my calibrated
> >probe and wrote
> >
> > > > >>>>>>
> > > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > >>>>>> So... re-did the whole thing and of course, its more in line with

> >your "Mic
> >
> > > > > >>>>>>Gain
> > > > >>>>>>
> > > > >>>>>> 4" setting now, but still a huge difference when going from PROC
>OFF
>
> >
> >
> >to PROC ON
> >
> > > > >>>>>>
> > > > >>>>>> with regards to ALC readings.
> > > > >>>>>>
> > > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the

> >second I turn
> >
> > > > >>>>>>
> > > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of

> >the
> >

> > > > >>meter.
> > > > >>>>>>
> > > > > >>>>>> I may record a small video and send it to you... easier to see
>what
>
>
> >I mean and
> >
> > > > > >>>>>
> > > > > >>>>>> what i'm doing.
> > > > > >>>>>>
> > > > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
>
> >the point
> >
> > > > > >>>>>>is,
> > > > > >>>>>>
> > > > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
> >readings.
> > > > > >>>>>>
> > > > > >>>>>> Cheers
> > > > > >>>>>> Chris
> > > > > >>>>>>
> > > > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > > >>>>>>
> > > > > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and
>50
>
>
> >mv 1500hz
> >
> > > > > > >>>>
> > > > > > >>>>>>> test signals.
> > > > > > >>>>>>>
> > > > > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain
>than
>
> >
> >
> >I do in my
> >
> > > > > > >>>>>>
> > > > > > >>>>>>
> > > > > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of
>4
>
>
> >it is just
> >
> > > > > > >>>>>

> > > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > > >>>>>>>
> > > > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
> >right around the
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
>
> >back and have
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
> >very close to
> >
> > > > > >>>>>
> > > > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC

> >box.
> >
> > > > > >>>>>>>
> > > > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving
>
> >required 10mv
> >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> signal injected? I found it a little touchy. When you first
> >reported no meter
> >
> > > > > >>>>>
> > > > > >>>>>>> indication that is why I suggested turning mic gain up a little.

> >Maybe I am
> >
> > > > > >>>
> > > > > >>>>>>> starting to get confused regards what your problem is.
> > > > > >>>>>>>
> > > > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
>
> >is on to
> >
> > > > > >>
> > > > > >>>>>>> troubleshooting with Mike.
> > > > > >>>>>>>
> > > > > >>>>>>> Terry
> > > > > >>>>>>>
> > > > > >>>>>>> _____
> > > > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com

> > > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >>>>>>>
> > > > >>>>>>> Hi Terry / Mike.....
> > > > >>>>>>>
> > > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
> >Set. - Good
> >
> > > > >>>
> > > > >>>>>>> piece of kit.
> > > > >>>>>>> Here's what I see when I follow your instructions:
> > > > >>>>>>>
> > > > >>>>>>>> I use a spare mic connector and clipped the generator output to
>it
>
> >
> >
> >with
> >
> > > > >
> > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > >>>>>>>>
> > > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected

> >directly to
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
> differemce.
> > > > >>>>>>>
> > > > >>>>>>>> I have the mic gain set exactly at
> > > > >>>>>>>> No. 4 position.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
>
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine

> >wave from
> >
> > > > >>
> > > > >>>>>>> Wave
> > > > >>>>>>>
> > > > >>>>>>>

> > > > >>>>>>>> Tek generator to exactly 10 mv
> > > > >>>>>>>>
> > > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > >>>>>>>
> > > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch
>to
>
> >
> >
> >USB. I
> >
> > > > >>
> > > > >>>>>>>> place meter switch in ALC position.
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> Same here
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > >>>>>>>>
> > > > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
> >1500Hz and 10mV
> >
> > > > >>>>>
> > > > >>>>>>> and USB mode, I flick to send and I get full scale meter
>deflection
>
> >
> >
> >in ALC mode
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if

> >you look at
> >
> > > > >>>>
> > > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still
>in
>
> >

> >
> >ALC
> >
> > > > >>>>>>> position
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and I have not touched mic gain pot.
> > > > >>>>>>>>
> > > > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
> >gains at either
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of
>around
>
> >
> >
> >S9+20dB
> >
> > > > >>>
> > > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you
>to
>
>
> >gauge what
> >
> > > > >>>>
> > > > >>>>>>> I'm saying and seeing.
> > > > >>>>>>>
> > > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I
>get
>
>
> >maximum
> >
> > > > >>
> > > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
> >reading without
> >
> > > > >>>>>
> > > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
> >almost at
> >
> > > >
> > > > >>>>>>> minimum.
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more

>
> >outside the
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> black ALC box.
> > > > >>>>>>>>
> > > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
> >reading, with PROC
> >
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
>
> >letter C of
> >
> > > > >>>>>
> > > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > >>>>>>>
> > > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
>
> > > > >>>>>>>> off, but close enough.
> > > > >>>>>>>>
> > > > >>>>>>>
> > > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
>
> >and align
> >
> > > > >>>
> > > > >>>>>>> them
> > > > >>>>>>>
> > > > >>>>>>> with the PROC ON.
> > > > >>>>>>>
> > > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > >>>>>>>>
> > > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
> >meter, so I
> >
> > > > >>>
> > > > >>>>>>> adjust L26 for 20dB reading.
> > > > >>>>>>>
> > > > >>>>>>> I will need to do some component checking in the circuit around
>the
>
> >
> >
> >Processor
> >
> > > > >>>>>

> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>> Mike and yourself have recommended.
> > > > >>>>>>>
> > > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > > >mentioned.
> > > > >>>>>>>
> > > > >>>>>>> Thanks
> > > > >>>>>>> Chris, ZL1CDP
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results.
>In
>
> >
> >
> >short my
> >
> > > > > >>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> found condition for my daily operator is very close to being
>right
>
> >
> >
> >on the
> >
> > > > > >>
> > > > >>>>>>> same
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> indicated level on the ALC meter scale (near max on black
>border)
>
> >
> >
> >with Proc
> >
> > > > > >>>>>
> > > > >>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> and off.
> > > > >>>>>>>>
> > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it
> >
> > > > > >>>>>>

> > > > >>>>>>>
> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain
>position
>
>
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the
>pre-amp
>
> >
> >
> >gain in
> >
> > > > >>>
> > > > >>>>>>>> your
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> rig you may have to be a little higher than position 4 on the
>mic
>
>
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> wouldnt think much higher.
> > > > >>>>>>>>
> > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does
>not
>
> >
> >
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.

> >
> > > > >>
> > > > >>>>>>> Good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> luck Terry
> > > > >>>>>>>>
> > > > >>>>>>>> _____
> > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
alignment
> > > > >>>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased
>the
>
>
> >"gain" on
> >
> > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF...
>not
>
> >
> >
> >sure
> >
> > > > >
> > > > >>>>>>> why...
> > > > >>>>>>>>
> > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>
> > > > >>>>compensate.
> > > > >>>>>>>>
> > > > >>>>>>>>> Based on what you are reporting I would expect it to
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it
>is
>
> >
> >
> >somewhere
> >
> > > > >>>>>

> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>
> > > > >>>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC
>to
>
>
> >the far
> >
> > > > >>
> > > > >>>>>>> right
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the

> >same.
> > > > >>>>>>>>
> > > > >>>>>>>> Hope this makes sense..
> > > > >>>>>>>>
> > > > >>>>>>>> Cheers
> > > > >>>>>>>> Chris
> > > > >>>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>
> > > > >>>>>>>>> Chris--This appears different than what you originally reported
>
> >of getting
> >
> > > > >>>>
> > > > >>>>>>> no
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>
> >different?
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> Where
> > > > >>>>>>>>
> > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>
> >as it is
> >
> > > > >>

> > > > >>>>>>> hard
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> on
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the movement. I would slowly turn down mic gain until I could
>get
>
> >
> >
> >meter off
> >
> > > > > >>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> the
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> peg.
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db
>or
>
> >
> >
> >at least
> >
> > > > > >>>>
> > > > > >>>>>>
> > > > > >>>>>>>>> off
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig
>and
>
>
> >report
> >
> > > > > >
> > > > > >>>>>>> back
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> what your ALC reading is. Based on what you are reporting I
>would
>
> >
> >
> >expect it
> >
> > > > > >>>>>
> > > > > >>>>>>>

> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it
>is
>
> >
> >
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>
> >Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > > >>>>>>>>>
> > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end
>of
>
>
> >black ALC
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
> >deflection
> >
> > > > >>>>>>> without
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris
> > > > >>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@>
>wrote:

> > > > >>>>>>>>>
> > > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> It doesn't weigh up here.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Following to the letter the service manual and then taking
>into
>
>
> >account
> >
> > > > >>
> > > > >>>>>>>> your
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>
> >deflection
> >
> > > > >>>>
> > > > >>>>>>> of
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> ALC
> > > > >>>>>>>>>
> > > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full
>scale
>
>
> >(pegged
> >
> > > > >>
> > > > >>>>>>>> meter)
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>
> >PROC OFF.
> >
> > > > >>>
> > > > >>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Thanks
> > > > >>>>>>>>>> Chris
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>>

> > > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
> >applied to
> >
> > > > > >>>>>>> have
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> same
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
> >have to
> >
> > > > > >>>>>>>>> adjust
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> mic
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> gain or input signal level once balanced. You should be able
>to
>
> >
> >
> >flip to
> >
> > > > > >>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> Tune
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> with Proc on and off and see approx the same max ALC
> >indication.
> >
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> If you initially get no indication (I think that is your
> >problem?) you
> >
> > > > > >>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> can
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> move
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> mic gain up slightly until you get an indication. It wont
>take
>
>
> >much and

> >
> > > > >>>
> > > > >>>>>>>
> > > > >>>>>>>>> will
> > > > >>>>>>>>>
> > > > >>>>>>>>>> be
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>
> >you have
> >
> > > > >>
> > > > >>>>>>> is
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> set
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> audio generator output higher as others suggested. I chose to
>
> >just
> >
> > > > >>>>>>>>> increase
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> mic gain until I got an indication. After I found that point
>I
>
>
> >no
> >
> > > > >>>>>>> longer
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> needed
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each
>time
>
>
> >then it
> >
> > > > >>
> > > > >>>>>>
> > > > >>>>>>>>> would
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting

> >pretty
> >
> > > > >>>>>>> good
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> matched
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> _____
> > > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> >alignment
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Thanks Terry,
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with
>Proc
>
> >
> >
> >OFF
> >
> > > > >>>>>>> then
> > > > >>>>>>>
> > > > >>>>>>>>> ON
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> same point? that's what it states from memory... point of
> >exercise is
> >
> > > > > >
> > > > >>>>>>> to
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> have
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Cheers
> > > > >>>>>>>>>>> Chris
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty

> >good
> >
> > > > >>>>>>> equal
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>>>>> indications at far right of ALC black box or S-9 on the
> >S-meter scale
> >
> > > > >>
> > > > >>>>>>
> > > > >>>>>>>> with
> > > > >>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got
>L27
>
>
> >adjusted
> >
> > > > >>>
> > > > >>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> no
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I

> >cant go
> >
> > > >
> > > > >>>>>>> any
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> lower on
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > >>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Thanks Terry....
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>> Will hopefully get around to confirming all of this later
> >tonight

> >
> > > > >>>>>>> NZ
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>>> time.
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
> >(meter
> >
> > > > >>>>>>>> switch
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> in
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the ALC position) to do your adjustment with the ALC
>indicated
>
> >
> >
> >level
> >
> > > > > >
> > > > >>>>>>> at
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> 20db
> > > > >>>>>>>
> > > > >>>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>> the Compression scale as opposed to down at the high end of

> >the ALC
> >
> > > > >
> > > > >>>>>>> box.
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> Less
> > > > >>>>>>>
> > > > >>>>>>>> decay time to mess with. Terry
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > >>>>>>>> <wagstw46@>

> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> Chris--OK you are telling me the following:
> > > > >>>>>>>>>>>>>> Step A:
> > > > >>>>>>>>>>>>>> 1. You have the Processor button off and Compression
>level
>
>
> >pot
> >
> > > > >>>>>>
> > > > >>>>>>>> max
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>> clockwise.
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>>> You are in USB mode.
> > > > >>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > > >>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > > >>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > > >>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far

> >right
> >
> > > > >>>>>>
> > > > >>>>>>>> end
> > > > >>>>>>>>
> > > > >>>>>>>> of
> > > > >>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> ALC
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>>> black bordered box.
> > > > >>>>>>>>>>>>>> 6. You return to Stand-by.
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You
>should
>
> >
> >
> >be
> >
> > > > >>>>>>
> > > > >>>>>>>>>> between
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>> 1000 and
> > > > >>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>> 1100.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
> >would
> >
> > > > >>>>>>> you
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> expect
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> the ALC
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
> >expect
> >
> > > > >>>>>>> the
> > > > >>>>>>>
> > > > >>>>>>>>>> meter
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> to peg
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
> >whistled
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> what
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> would you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> Step B:
> > > > >>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and
>the
>
>
> >mic
> >
> > > > >>>>>>
> > > > >>>>>>>>> gain
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> not
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> touched
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> from above you are telling me that you have no ALC
> >indication

> >
> > > > >>>>>>>> when
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> you
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> flip to
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
> >obtain
> >
> > > > >>>>>>> any
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> ALC
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> meter
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will
>be
>
>
> >very
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> sensitive
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> and
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> you should reach a point where it will drive meter hard
>up
>
>
> > > > >>>>>>> scale.
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> Quickly
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> turn
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
>
> >black
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> box.
> > > > >>>>>>>>>

> > > > >>>>>>>>>> Mic
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> gain
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication
>staying
>
> >
> >
> >at
> >
> > > > >>>>>>
> > > > >>>>>>>> far
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> end of
> > > > >>>>>>>>>
> > > > >>>>>>>>>> ALC
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> box you can peak L27. You may have to go back and forth
> >several
> >
> > > > >>>>>>>
> > > > >>>>>>>>> times
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> until you
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step
>A.
>
> >
> >
> >
> > > > >>>>>>> This
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> adjustment is
> > > > >>>>>>>>>
> > > > >>>>>>>>>>>> a little difficult due to the ALC time constant. The
>meter
>
>
> > > > >>>>>>> tends
> > > > >>>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> peg
> > > > >>>>>>>>>>

> > > > >>>>>>>>>>>> hard
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to

> >float
> >
> > > > >>>>>>
> > > > >>>>>>>>> around
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> max
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> end of the ALC box until things settle down. If you
>switch
>
>
> > > > >>>>>>> meter
> > > > >>>>>>>>
> > > > >>>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Comp
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> you
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> should see about 20db on Comp Scale.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Terry
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> _____
> > > > >>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > > >>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > >>>>>>> alignment
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Hi Terry, thanks for this.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to
>be
>
> >
> >
> >
> > > > >>>>>>>> (Heater
> > > > >>>>>>>>

> > > > >>>>>>>>>
> > > > >>>>>>>>>> on
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> etc), but
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>
> > > > >>>>>>> "align"
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> speech
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to
>maximum.
>
> >
> >
> >Set
> >
> > > > >>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> AG
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> output to
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> 10 mV
> > > > >>>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>
> > > > >>>>>>> maximum
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> on-scale ALC
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> reading. Set the PROC to ON.
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX

> >ALC
> >
> > > > >>>>>>>>>> on-scaled).
> > > > >>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading
10mV......
> > > > >>>>>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point
> >where I
> >
> > > > >>>>>>>
> > > > >>>>>>>>> turn
> > > > >>>>>>>>>
> > > > >>>>>>>>>> the
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> Proc ON
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> and
> > > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is
off.
> > > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on
>the
>
>
> > > > >>>>>>> meter
> > > > >>>>>>>
> > > > >>>>>>>>> at
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> this
> > > > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > > >>>>>>> reading.
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
>
> >on
> >
> > > > >>>>>>> pages
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> 40&41. As
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch
>off
>
>

> >SG
> >
> > > > >>>>>>
> > > > >>>>>>>>> switch
> > > > >>>>>>>>>
> > > > >>>>>>>>>> and
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> LEAVE
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication
>with
>
> >
> >
> >the
> >
> > > > >>>>>>>
> > > > >>>>>>>>>> heater
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> off of the
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on
>previous
>
> >
> >
> >
> > > > >>>>>>> step
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> conditions still
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>> being in force?
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would
>say
>
>
> > > > >>>>>>> "max
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>> meter
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> reading on
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> the Compression Scale".
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > > >>>>>>> reading.
> > > > >>>>>>>

> > > > >>>>>>>
> > > > >>>>>>>>> That
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>> would be on
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > > >>>>>>> indication
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>> of
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> 20db
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>>> and
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be
>better
>
> >
> >
> >
> > > > > >>>>>>> with
> > > > > >>>>>>>
> > > > > >>>>>>>>> a
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>>>> multi-scale
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>> meter for them to tell you the expected value and on
>what
>
>
> > > > > >>>>>>> meter
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>> scale.
> > > > > >>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you
>to
>
>
> >set
> >
> > > > > >>>>>>>
> > > > > >>>>>>>>> mic
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> gain
> > > > > >>>>>>>>>>

> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
>
> >at
> >
> > > > >>>>>>> 1200
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> and
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> peaked L27.
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>
> > > > >>>>>>> would
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> say
> > > > >>>>>>>>>
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> something
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
> >scale
> >
> > > > >>>>>>>> box".
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> Just
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> make it
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> very clear what meter position and what scale you are to
>
> > > > >>>>> read.
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and

> >leave
> >
> > > > >>>>>>
> > > > >>>>>>>>> heater
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> switch on
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>> you will be able to complete this Item. Let me know.
>Terry
>
> >

> >
> >
> > > > >>>>>>> -K9TW
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>
> > > > >>>>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
> >much
> >
> > > > >>>>>>
> > > > >>>>>>>>> chance
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> to
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> check
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>>>> Chris
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all
>day
>
>
> > > > >>>>>>> so
> > > > >>>>>>>>
> > > > >>>>>>>>> I
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>>>> will
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>>> give it a
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>> try today and report back. Terry
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris
>Parnell

>
> >
> >
> >
> > > > >>>>>>
> > > > >>>>>>>>>>>> <cparnell1001@>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> wrote:
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>
> > > > >>>>>>> in
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> the
> > > > >>>>>>>>>
> > > > >>>>>>>>>> 830
> > > > >>>>>>>>>>
> > > > >>>>>>>>>>> at the
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> weekend?
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>> Cheers
> > > > >>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> ------------------------------------
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>>>>>>

> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> ----------
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> ----------
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> Yahoo! Groups Links
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>>>>
> > > > >>>>>>>>>>>> Chris--I will give some more thought. Not sure what is going on.
>I
>
> >
> >
> >am just
> >

> > > > >>>
> > > > >>>>>>>> about
> > > > >>>>>>>>
> > > > >>>>>>>> out of ideas.
> > > > >>>>>>>>
> > > > >>>>>>>> I just repeated the test on my daily operating TS-830 with the
> >covers on the
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to

> >the operating
> >
> > > > >>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> position.
> > > > >>>>>>>>
> > > > >>>>>>>> I use a spare mic connector and clipped the generator output to
>it
>
> >
> >
> >with
> >
> > > > >
> > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain

> >set exactly
> >
> > > > > >>>>
> > > > >>>>>>>> at
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn
>on
>
>
> >rig and
> >
> > > > > >>
> > > > >>>>>>>> heater
> > > > >>>>>>>>
> > > > >>>>>>>> switches. Let it warm up a little.
> > > > >>>>>>>>
> > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine

> >wave from
> >
> > > > > >>
> > > > >>>>>>>> Wave

> > > > >>>>>>>
> > > > >>>>>>>
> > > > > >>>>>>>> Tek generator to exactly 10 mv.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode
>switch
>
>
> >to USB. I
> >
> > > > > >>>>
> > > > > >>>>>>>> place meter switch in ALC position.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> >outside the max
> >
> > > > > >>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still
>in
>
> >
> >
> >ALC
> >
> > > > > >>>>>>> position
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> and I have not touched mic gain pot.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>
> >outside the
> >
> > > > > >>>>>
> > > > > >>>>>>
> > > > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
>
> >had the
> >
> > > > > > >
> > > > > >>>>>>>> covers
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and
>it
>
>

> >indicates
> >
> > > > >>>>
> > > > >>>>>>>> just
> > > > >>>>>>>>
> > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > >>>>>>>>
> > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results.
>In
>
> >
> >
> >short my
> >
> > > > >>>>
> > > > >>>>>>> as
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> found condition for my daily operator is very close to being
>right
>
> >
> >
> >on the
> >
> > > > > >>
> > > > >>>>>>> same
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> indicated level on the ALC meter scale (near max on black
>border)
>
> >
> >
> >with Proc
> >
> > > > > >>>>>
> > > > >>>>>>> on
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> and off.
> > > > >>>>>>>>
> > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> >think about it
> >
> > > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> some more and if I come up with something will write.
> > > > >>>>>>>>
> > > > >>>>>>>> Whatever you do you should not have to increase mic gain

>position
>
>
> >or increase
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> audio generator output level above 10 mv. Depending on the
>pre-amp
>
> >
> >
> >gain in
> >
> > > > >>>
> > > > >>>>>>> your
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> rig you may have to be a little higher than position 4 on the
>mic
>
>
> >gain , but
> >
> > > > >>>>>
> > > > >>>>>>> I
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> wouldnt think much higher.
> > > > >>>>>>>>
> > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> >connection when
> >
> > > > >>>>>>
> > > > >>>>>>>
> > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does
>not
>
> >
> >
> >vary from
> >
> > > > >>>>>
> > > > >>>>>>
> > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> >experience.
> >
> > > > >>
> > > > >>>>>>> Good
> > > > >>>>>>>

> > > > >>>>>>>
> > > > >>>>>>>> luck Terry
> > > > >>>>>>>>
> > > > >>>>>>>> _____
> > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
alignment
> > > > >>>>>>>>
> > > > >>>>>>>> Hi Terry,
> > > > >>>>>>>>
> > > > >>>>>>>> The only difference from my original post is that I increased
>the
>
>
> >"gain" on
> >
> > > > > >>>>
> > > > >>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF...
>not
>
> >
> >
> >sure
> >
> > > > >
> > > > >>>>>>> why...
> > > > >>>>>>>>
> > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>
> > > > >>>>compensate.
> > > > >>>>>>>>
> > > > >>>>>>>> Based on what you are reporting I would expect it to
> > > > >>>>>>>> be something less than far right of ALC black box? Assuming it
>is
>
> >
> >
> >somewhere
> >
> > > > > >>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>

> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>
> > > > >>>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC
>to
>
>
> >the far
> >
> > > > >>
> > > > >>>>>>> right
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the

> >same.
> > > > >>>>>>>>
> > > > >>>>>>>> Hope this makes sense..
> > > > >>>>>>>>
> > > > >>>>>>>> Cheers
> > > > >>>>>>>> Chris
> > > > >>>>>>>>
> > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > >>>>>>>>
> > > > >>>>>>>>> Chris--This appears different than what you originally reported
>
> >of getting
> >
> > > > >>>>
> > > > >>>>>>> no
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>
> >different?
> >
> > > > >>>>
> > > > >>>>>>>
> > > > >>>>>>>>> Where
> > > > >>>>>>>>
> > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>
> >as it is
> >
> > > > >>
> > > > >>>>>>> hard
> > > > >>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> on

> > > > >>>>>>>>>
> > > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could
>get
>
> >
> >
> >meter off
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> the
> > > > >>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> peg.
> > > > >>>>>>>>>
> > > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db
>or
>
> >
> >
> >at least
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>> off
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig
>and
>
>
> >report
> >
> > > > > >
> > > > >>>>>>> back
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I
>would
>
> >
> >
> >expect it
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> to
> > > > >>>>>>>>>
> > > > >>>>>>>>>
> > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it

>is
>
> >
> >
> >somewhere
> >
> > > > >>>>>
> > > > >>>>>>>
> > > > >>>>>>>> in
> > > > >>>>>>>>
> > > > >>>>>>>>
> > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>
> >Terry
> > > > >>>>>>>>>
> > > > >>>>>>>>> _____
> > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > >>>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>alignment
> > > > >>>>>>>>>
> > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end
>of
>
>
> >black ALC
> >
> > > > >>>>
> > > > >>>>>>
> > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
> >deflection
> >
> > > > >>>>>>> without
> > > > >>>>>>>
> > > > >>>>>>>
> > > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > > >>>>>>>>>
> > > > >>>>>>>>> Chris
> > > > >>>>>>>>> Sent from my iPhone
> > > > >>>>>>>>>
> > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@>
>wrote:
> > > > >>>>>>>>>
> > > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > > >>>>>>>>>>
> > > > >>>>>>>>>> It doesn't weigh up here.

> > > > >>>>>>>>>>
> > > > >>>>>>>>>> Following to the letter the service manual and then taking
>into
>
>
> >account
> >
> > > > >>
> > > > > >>>>>>>> your
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
>
> >deflection
> >
> > > > > >>>>
> > > > > >>>>>>> o
(Message over 64 KB, truncated)

32050. TS 520S DRIVE CONTROL STICKY??

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-23 22:25:59 UTC
From: jeffrey l
Topic: 32050 Message: 32050

Hi all,
I am having a small issue with the DRIVE control when tuning-up,

The control seems to be sticking? I cannot get a meter reading unless I wiggle the drive control and then it is very touchy .

Would this be due to dirty contacts in the set???, and how do I correct it please.

The SET is working very well apart from this.

Many Thanks,

Jeff
VK4FNRS

32051. Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 02:04:23 UTC
From: kb9wwq
Topic: 31926 Message: 32051

The bandwidth on this thread is getting pretty wide. How about starting a new one?

32052. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 08:45:32 UTC
From: Chris Parnell
Topic: 31926 Message: 32052

Thanks Mike...

Just to let you know that in the Svc Manual I have, it goes page 43 (Location of adjustments bottom view), to page 45 (which was my error, I noted it as page 44, but as it came after page 43, you'd assume... you get the picture) ;-)

So, Alas, I am missing page 44, which explains a lot.

Cheers
Chris

On 24/06/2011, at 12:47 AM, w5rkl wrote:

> The transmit mixer's RF signal level at TP4 should be approximately 2.4 volt rms.
>
> The RF signal level at the output of the driver tube should be approximately 77.5 volts rms.
>
> The driver's RF signal level at the grids of the final tubes should be approximately 53.3 volts rms.
>
> The "TIF" signal from the IF Unit, RF unit plug 7 pin 2, should have an approximately RF signal level of 12.4mv rms.
>
> These RF signal level voltages came from the 830 service manual's Level Diagram on page 44. Chris you said page 44 in your 830 service manual is the remote VFO. Page 45 in the 830 service manual is the remote VFO-230. You may be confusing that page with page 44.
>
> The setup is what Terry said, frequency 14.2Mhz, SG switch OFF, and the CAR control is adjusted for maximum ALC scale indication. Connection grounds should be as close to the RF probe or scope connection as possible.
>
> I hope this helps.
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
> >
> > Chris--The page you need is the Level Diagram page. You can view it on Gordons
> > N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in
> > RX mode.
> >
> > You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went
> > there for conveniencetto keep RF probe ground lead short and be able to move

> > probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube
> > socket board as well.
> >
> > If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz
> > bandwidth or greater) and 10/1 probe.
> >
> > You will be taking the RF drive level readings with SG off, in CW mode, with ALC
> > level set with Carrier Level, and Standby switched to Send.
> >
> > You have to have some level of drive to get 70 watts out at 160ma.
> >
> > If your drive level readings and 6146 tube voltages are good then I would try
> > swapping out tubes again and I would very carefully try to read anode voltage on
> > each tube under the plastic plate caps. I once had a very high resistance
> > connection from top of plate choke at the back tube and best I could get out was
> > slightly more than half power. I found it by using insulated tuning tool and
> > gently pushing on plate cap and parasitic choke and could see output power move
> > around. Turns out the anode wire coming out of glass envelop was not soldered
> > well to top of silver anode cap on the tube.
> >
> > Typically with low output power and high plate current it means one of two
> > things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage
> > swings at the final tube plates. (low drive). Good luck - Terry K9TW
> >
> >
> >
> > _____
> > From: Chris Parnell <cparnell1001@...>
> > To: TS-520_820_530_830@yahoogroups.com
> > Sent: Thu, June 23, 2011 2:11:57 AM
> > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> >
> > Hi Terry,
> >
> > I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX
> > and at the "back lug" of VC-3 (which I assume is the one with the small cap
> > attached to it that goes to VC-2?) has "variable" readings in RX - I
> > occasionally see +38V for split second, then it drops to zero (or close to
> > zero), with the reading varying around a bit.
> >
> > Sounds like a bad connection / earth maybe? I hope I am reading your test
> > procedures correctly
> >
> > Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230
> > schematic.
> >
> > Cheers
> > Chris
> >
> > On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:

> >
> > > Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
> > >watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
> > >
> > >
> > > I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF
> > >probe.
> > >
> > >
> > > 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
> > >
> > > 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
> > >PA cage) voltage was 66.0 volts (77.5).
> > >
> > >
> > > See Page 44 of service manual for test conditions. The Heath VTVM is not true
> > >rms but close enough for this testing. Terry
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > >wrote:
> > > >
> > > > Hi Terry,
> > > >
> > > > The voltages at the tubes seem a little low from memory, I will measure them
> > >again tonight.
> > > > The Driver tube voltages (from memory) looked ok though... but again, I will
> > >double check tonight.
> > > >
> > > > Terry, the situation is that if I tune for maximum power out (about 60 - 70
> > >W), then the IP is around 140-160mA.
> > > > If I adjust for 225mA my output power is almost non existent, hence me
> > >wanting to get this thing resolved.
> > > >
> > > > Cheers
> > > > Chris
> > > >
> > > >
> > > > On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
> > > >
> > > > > Chris--Are you saying you cannot load to any higher than 150ma IP?
> > > > >
> > > > > If all 6146 tube voltages are normal, that sounds like drive to me. TP-4
> > >and DRV
> > > >
> > > > > on RF board are good place to look with your RF VTVM. Terry
> > > > >
> > > > > _____
> > > > > From: Chris Parnell <cparnell1001@>
> > > > > To: TS830 <TS-520_820_530_830@...m>

> > > > > Sent: Wed, June 22, 2011 6:51:21 AM
> > > > > Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > >
> > > > > OK..... well Mike (nor anyone else) answered this question... so...
> > > > >
> > > > > One thing that springs to mind is that I did change the RF board that was
> > >faulty
> > >
> > > > > in my TS-830s for one from Bob Mansker (which he and I of course assume
> > >work ok)
> > >
> > > > > but thinking back, it's the time that my Power out was reduced to around
> > > > > 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
> > > > >
> > > > > Is the RF board a good place to start looking and if so, around what are?
> > > > >
> > > > > Thanks
> > > > > Chris, ZL1CDP
> > > > >
> > > > > Begin forwarded message:
> > > > >
> > > > > > From: Chris Parnell <cparnell1001@>
> > > > > > Date: 20 June 2011 10:10:55 AM NZST
> > > > > > To: TS-520_820_530_830@yahoogroups.com
> > > > > > Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > Reply-To: TS-520_820_530_830@yahoogroups.com
> > > > > >
> > > > > > Mike,
> > > > > >
> > > > > > Any idea where would be a good place to start the voltage measurements?
> > > > > >
> > > > > > Cheers
> > > > > > Chris
> > > > > >
> > > > > > On 19/06/2011, at 11:31 PM, w5rkl wrote:
> > > > > >
> > > > > >> Hi Chris,
> > > > > >>
> > > > > >> Based on the HV and power output levels you provided, 850VDC high
> > >voltage and
> > >
> > > > > >>70 watts output, that equates to an IP current level of approximately
> > >150ma.
> > >
> > > > > >>Therefore, with those levels the INPUT power in the final amplifier would
> > >be;
> > > > > > >>
> > > > > > >> .150 x 850 = 127.5 watts
> > > > > > >>
> > > > > > >> Since the 830 final amplifier has an efficiency rating of approximately

> > >55%,
> > >
> > > > > >>power output would be
> > > > > > >>
> > > > > > >> 127.5 - 45% = 70.125 watts
> > > > > > >>
> > > > > > >> the same as your 830 is producing. That tells me the HV and LV Rectifier
> > >Unit
> > >
> > > > > > >>supplies are within specifications and operating as they should.
> > > > > > >>
> > > > > > >> I recommend you troubleshoot the 830's transmit signal path, take level
> >
> > > > > > >>measurements and compare your findings with the 830 service manual Level
> > >Diagram
> > >
> > > > > > >>on page 44.
> > > > > > > >>
> > > > > > > >> 73s
> > > > > > > >> Mike
> > > > > > > >> W5RKL
> > > > > > > >>
> > > > > > > >> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
> > > >
> > > > > > > >>wrote:
> > > > > > > >>>
> > > > > > > >>> Hi Terry,
> > > > > > > >>>
> > > > > > > >>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
> > >re: the
> > >
> > > > > > > >>>voltages... Mike did respond saying that if my IP is around 150mA (which
> > >it is),
> > >
> > > > > > > >>>then the voltages would be about right for 60-70W output.
> > > > > > > >>>
> > > > > > > >>> My 830 was working "OK" originally, although the alignment was miles
> > >off.
> > > > > > > >>> Then I had an issue with a tube that failed in the final unit, and it
> > >caused a
> > >
> > > > > > > >>>number of issues.. one of which was NO output etc.
> > > > > > > >>>
> > > > > > > >>> I swapped the RF board as the one that came with the unit was broke in
> > >a number
> > >
> > > > > > > >>>of areas, so I purchased one from Bob Mansker and swapped it.
> > > > > > > >>> To which I decided to re-align the radio.
> > > > > > > >>>
> > > > > > > >>> On doing so, I noticed that the Speech Processor wouldn't align and the

> > >output
> > >
> > > > > >>>was 50 -70W maximum. - It still is the same, although RX is excellent
> > >now.
> > > > > > >>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
> > >and CW,
> > >
> > > > > > >>>but I was hoping to get the radio at 100W and factory aligned (as close
> > >as can
> > >
> > > > > > >>>be).
> > > > > > >>> I purchased a new front fascia and it looks great.. needs to work great
> > >now
> > >
> > > > > > >>:-)
> > > > > > >>>
> > > > > > >>> Cheers
> > > > > > >>> Chris
> > > > > > >>>
> > > > > > >>>
> > > > > > >>>
> > > > > > >>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
> > > > > > >>>
> > > > > > >>>> Chris--No one ever accused me of being very smart, but I will never
> > >fail due to
> > >
> > > > > > >>>>lack of effort!
> > > > > > >>>>
> > > > > > >>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
> > >injected into
> > >
> > > > > > >>>>mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
> > >meter in ALC
> > >
> > > > > > >>>>position, that when you flip to send the meter pegs off scale right
> > >hand side of
> > >
> > > > > > >>>>the meter. Is this true?
> > > > > > >>>>
> > > > > > >>>> 2. The expected response would be for the meter to deflect to the far
> > >end of
> > >
> > > > > > >>>>the ALC black box scale or somewhere close either side of the Max ALC
> > >range and
> > >
> > > > > > >>>>not peg.
> > > > > > >>>>
> > > > > > >>>> 3. I dont believe this has anything to do with your Processor or Comp
> > >Level
> > >

> > > > > >>>>setting. Comp level pot is not in the circuit when Processor is off.
> > > > > >>>>
> > > > > >>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
> > >had
> > >
> > > > > >>>>difficulty doing this step as written and you had not completed it yet.
> > >I
> > >
> > > > > >>>>suggest you go back and repeat this step.
> > > > > >>>>
> > > > > >>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
> > >adjust the
> > >
> > > > > >>>>Maximum ALC reading (far right end of ALC black box)by adjusting trim
> > >pot VR-7.
> > >
> > > > > >>>>VR-6 is easy and VR-7 is a little tricky. When you complete this step
> > >you should
> > >
> > > > > >>>>be able to flip to send with 10 mv signal injected and get max ALC
> > >reading and
> > >
> > > > > >>>>not peg the meter full scale or any ALC indication very far past the
> > >black
> > >
> > > > > >>>>border. If that is not how you left this step then this is likely your
> > >problem.
> > >
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
> > >Processor
> > >
> > > > > >>>>off. When meter pegs hard right reduce mic gain slightly to just get if
> > >off the
> > >
> > > > > >>>>peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You
> > >should be
> > >
> > > > > >>>>able to move meter indication down to the ALC box max border or S9.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 7. If you can move ALC reading down then go ahead and repeat Step 31
> > >before
> > >
> > > > > >>>>returning to Step 32. Make sure Step 31 is as accurate as you ca.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
> > >there is

> > >
> > > > > >>>>likely something wrong with ALC meter driver Q30 and Q31 or with Q19
> > >and Q20 on
> > >
> > > > > >>>>the AF board.
> > > > > >>>>
> > > > > >>>>
> > > > > >>>> Good Luck-Terry K9TW
> > > > > >>>>
> > > > > >>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > ><cparnell1001@>
> > >
> > > > > >>>wrote:
> > > > > >>>>>
> > > > > >>>>> Hi Terry,
> > > > > >>>>>
> > > > > >>>>> Yes I do have Skype, and am happy to try this... I have just sent you
> > >and Mike
> > >
> > > > > >>>>>an email off list with some voltage measurements.
> > > > > >>>>>
> > > > > >>>>> Cheers
> > > > > >>>>> Chris
> > > > > >>>>>
> > > > > >>>>>
> > > > > >>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
> > > > > >>>>>
> > > > > >>>>>> Chris--
> > > > > >>>>>>
> > > > > >>>>>> Do you have Skype? Maybe we could connect on Skype and perform each
> > >step
> > >
> > > > > >>>>>> together on our rigs and see at what step we differ. Not sure if we
> > >could have
> > >
> > > > > >>>>>
> > > > > >>>>>> clear enough real time video or not for this to work. Not sure about
> > >our time
> > >
> > > > > >>>>
> > > > > >>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
> > > > > >>>>>>
> > > > > >>>>>> Maybe Mike or Gordon would be better to do this with you as they
> > >repair these
> > >
> > > > > >>>>
> > > > > >>>>>> rigs for a living? As you know I had never performed this step until
> > >you asked
> > >
> > > > > >>>>>

> > > > > >>>>>> about it. In fact I have never completed a full alignment as I dont
> > > >have sweep
> > > >
> > > > > >>>>>
> > > > > > >>>>>> generator. I have just done selected steps.
> > > > > > >>>>>>
> > > > > > >>>>>> Terry
> > > > > > >>>>>>
> > > > > > >>>>>> _____
> > > > > > >>>>>> From: Chris Parnell <cparnell1001@>
> > > > > > >>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > > >>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
> > > > > > >>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > > >>>>>>
> > > > > > >>>>>> Hi Terry, you got me thinking about the signal coming out of the AF
> > > >Gen (as I
> > > >
> > > > > > >>>>
> > > > > > >>>>>> have no attenuation in there)...
> > > > > > >>>>>>
> > > > > > >>>>>> So I got some test reference dBmA numbers against my calibrated
> > > >probe and wrote
> > > >
> > > > > > >>>>>>
> > > > > > >>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
> > > > > > >>>>>> So... re-did the whole thing and of course, its more in line with
> > > >your "Mic
> > > >
> > > > > > >>>>>>Gain
> > > > > > >>>>>>
> > > > > > >>>>>> 4" setting now, but still a huge difference when going from PROC OFF
> > > >to PROC ON
> > > >
> > > > > > >>>>>>
> > > > > > >>>>>> with regards to ALC readings.
> > > > > > >>>>>>
> > > > > > >>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
> > > >second I turn
> > > >
> > > > > > >>>>>>
> > > > > > >>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
> > > >the
> > > >
> > > > > > >>meter.
> > > > > > >>>>>>
> > > > > > >>>>>> I may record a small video and send it to you... easier to see what
> > > >I mean and
> > > >
> > > > > > >>>>>
> > > > > > >>>>>> what i'm doing.

> > > > > >>>>>>
> > > > > >>>>>> Turning the Mic gain up and down of course makes a difference, but
> > >the point
> > >
> > > > > >>>>>>is,
> > > > > >>>>>>
> > > > > >>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
> > >readings.
> > > > > >>>>>>
> > > > > >>>>>> Cheers
> > > > > >>>>>> Chris
> > > > > >>>>>>
> > > > > >>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
> > > > > >>>>>>
> > > > > >>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50
> > >mv 1500hz
> > >
> > > > > >>>>
> > > > > >>>>>>> test signals.
> > > > > >>>>>>>
> > > > > >>>>>>> With your mic gain at No. 4 it appears you have much more gain than
> > >I do in my
> > >
> > > > > >>>>>>
> > > > > >>>>>>
> > > > > >>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4
> > >it is just
> > >
> > > > > >>>>>
> > > > > >>>>>>> where I can get a good match at far right end of ALC black box.
> > > > > >>>>>>>
> > > > > >>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
> > >right around the
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
> > >back and have
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> no meter indication. I do know with both of my rigs I end up at
> > >very close to
> > >
> > > > > >>>>>
> > > > > >>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
> > >box.
> > >
> > > > > >>>>>>>
> > > > > >>>>>>> I assume you have tried adjusting the mic gain down while leaving

> > >required 10mv
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> signal injected? I found it a little touchy. When you first
> > >reported no meter
> > >
> > > > > >>>>>
> > > > > >>>>>>> indication that is why I suggested turning mic gain up a little.
> > >Maybe I am
> > >
> > > > > >>>
> > > > > >>>>>>> starting to get confused regards what your problem is.
> > > > > >>>>>>>
> > > > > >>>>>>> If turning mic gain down a little doesnt help then I would say it
> > >is on to
> > >
> > > > > >>
> > > > > >>>>>>> troubleshooting with Mike.
> > > > > >>>>>>>
> > > > > >>>>>>> Terry
> > > > > >>>>>>>
> > > > > >>>>>>> _____
> > > > > >>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
> > > > > >>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >>>>>>>
> > > > > >>>>>>> Hi Terry / Mike.....
> > > > > >>>>>>>
> > > > > >>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
> > >Set. - Good
> > >
> > > > > >>>
> > > > > >>>>>>> piece of kit.
> > > > > >>>>>>> Here's what I see when I follow your instructions:
> > > > > >>>>>>>
> > > > > >>>>>>> I use a spare mic connector and clipped the generator output to it
> > >with
> > >
> > > > > >
> > > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
> > > > > >>>>>>>>
> > > > > >>>>>>> Exactly the same as me Terry, except my mini clips are connected
> > >directly to
> > >
> > > > > >>>>
> > > > > >>>>>>> the
> > > > > >>>>>>>
> > > > > >>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no

> > differemce.
> > > > > >>>>>>>
> > > > > >>>>>>>> I have the mic gain set exactly at
> > > > > >>>>>>>> No. 4 position.
> > > > > >>>>>>>>
> > > > > >>>>>>> Same here
> > > > > >>>>>>>
> > > > > >>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
> > > > > >>>>>>>> switches. Let it warm up a little.
> > > > > >>>>>>>>
> > > > > >>>>>>> Same here
> > > > > >>>>>>>
> > > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> > >wave from
> > >
> > > > > >>
> > > > > >>>>>>> Wave
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> Tek generator to exactly 10 mv
> > > > > >>>>>>>>
> > > > > >>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
> > > > > >>>>>>>
> > > > > >>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
> > >USB. I
> > >
> > > > > >>
> > > > > >>>>>>>> place meter switch in ALC position.
> > > > > >>>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> Same here
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> > >outside the max
> > >
> > > > > >>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > > >>>>>>>>
> > > > > >>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
> > >1500Hz and 10mV
> > >
> > > > > >>>>>
> > > > > >>>>>>> and USB mode, I flick to send and I get full scale meter deflection
> > >in ALC mode
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if

> > >you look at
> > >
> > > > > >>>>
> > > > > > >>>>>>> s-meter scale, it's S9+40dB +).
> > > > > > >>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> > > >ALC
> > > >
> > > > > > >>>>>>> position
> > > > > > >>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> and I have not touched mic gain pot.
> > > > > > >>>>>>>>>
> > > > > > >>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
> > > >gains at either
> > > >
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
> > > >S9+20dB
> > > >
> > > > > > >>>
> > > > > > >>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to
> > > >gauge what
> > > >
> > > > > > >>>>>
> > > > > > >>>>>>> I'm saying and seeing.
> > > > > > >>>>>>>
> > > > > > >>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get
> > > >maximum
> > > >
> > > > > > >>
> > > > > > >>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
> > > >reading without
> > > >
> > > > > > >>>>>
> > > > > > >>>>>>> PROC ON, which on the S-Meter is S-9.
> > > > > > >>>>>>> I check where VR-7 is now within it's VR scale and notice it's
> > > >almost at
> > > >
> > > > > >
> > > > > > >>>>>>> minimum.
> > > > > > >>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>> I flip to Send and the ALC meter indication is a little bit more
> > > >outside the
> > > >
> > > > > > >>>>>
> > > > > > >>>>>>

> > > > > >>>>>>>> black ALC box.
> > > > > >>>>>>>>
> > > > > >>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
> > >reading, with PROC
> > >
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
> > >letter C of
> > >
> > > > > >>>>>
> > > > > >>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
> > > > > >>>>>>>
> > > > > >>>>>>>> It could be adjusted a little to get a match if I had the covers
> > > > > >>>>>>>> off, but close enough.
> > > > > >>>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
> > >and align
> > >
> > > > > >>>
> > > > > >>>>>>> them
> > > > > >>>>>>>
> > > > > >>>>>>> with the PROC ON.
> > > > > >>>>>>>
> > > > > >>>>>>>> I switch the meter from ALC to Comp and it indicates just
> > > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > > >>>>>>>>
> > > > > >>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
> > >meter, so I
> > >
> > > > > >>>
> > > > > >>>>>>> adjust L26 for 20dB reading.
> > > > > >>>>>>>
> > > > > >>>>>>> I will need to do some component checking in the circuit around the
> > >Processor
> > >
> > > > > >>>>>
> > > > > >>>>>>> as
> > > > > >>>>>>>
> > > > > >>>>>>> Mike and yourself have recommended.
> > > > > >>>>>>>
> > > > > >>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I
> > > > > > >mentioned.
> > > > > >>>>>>>
> > > > > >>>>>>> Thanks
> > > > > >>>>>>> Chris, ZL1CDP
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In

> > >short my
> > >
> > > > > >>>>
> > > > > > >>>>>>> as
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> found condition for my daily operator is very close to being right
> > >on the
> > >
> > > > > >>
> > > > > > >>>>>>> same
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
> > >with Proc
> > >
> > > > > >>>>>
> > > > > > >>>>>>> on
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> and off.
> > > > > > >>>>>>>
> > > > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> > >think about it
> > >
> > > > > >>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> some more and if I come up with something will write.
> > > > > > >>>>>>>
> > > > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
> > >or increase
> > >
> > > > > >>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
> > >gain in
> > >
> > > > > >>>
> > > > > > >>>>>>> your
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
> > >gain , but
> > >
> > > > > >>>>>
> > > > > > >>>>>>> I
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> wouldnt think much higher.
> > > > > > >>>>>>>

> > > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> > >connection when
> > >
> > > > > >>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> > >vary from
> > >
> > > > > >>>>>
> > > > > >>>>>>
> > > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> > >experience.
> > >
> > > > > >>
> > > > > >>>>>>> Good
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> luck Terry
> > > > > >>>>>>>
> > > > > >>>>>>>> _____
> > > > > >>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >>>>>>>
> > > > > >>>>>>>> Hi Terry,
> > > > > >>>>>>>
> > > > > >>>>>>>> The only difference from my original post is that I increased the
> > >"gain" on
> > > > >
> > > > > >>>>
> > > > > >>>>>>> the
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> > >sure
> > > > >
> > > > > >
> > > > > >>>>>>> why...
> > > > > >>>>>>>
> > > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > > >>>>>>>>compensate.
> > > > > >>>>>>>
> > > > > >>>>>>>> Based on what you are reporting I would expect it to
> > > > > >>>>>>>> be something less than far right of ALC black box? Assuming it is
> > >somewhere
> > > > >
> > > > > >>>>>
> > > > > >>>>>>>

> > > > > >>>>>>>> in
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > > > > >>>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
> > > >the far
> > > >
> > > > > >>
> > > > > >>>>>>> right
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
> > > >same.
> > > > > >>>>>>>>
> > > > > >>>>>>>> Hope this makes sense..
> > > > > >>>>>>>>
> > > > > >>>>>>>> Cheers
> > > > > >>>>>>>> Chris
> > > > > >>>>>>>>
> > > > > >>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Chris--This appears different than what you originally reported
> > > >of getting
> > > >
> > > > > >>>>
> > > > > >>>>>>> no
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
> > > >different?
> > > >
> > > > > >>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Where
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
> > > >as it is
> > > >
> > > > > >>
> > > > > >>>>>>> hard
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> on
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> the movement. I would slowly turn down mic gain until I could get
> > > >meter off
> > > >
> > > > > >>>>>

> > > > > >>>>>>>
> > > > > >>>>>>>> the
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> peg.
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
> > >at least
> > >
> > > > > >>>>
> > > > > >>>>>>
> > > > > >>>>>>>> off
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
> > >report
> > >
> > > > > > >
> > > > > >>>>>>> back
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> what your ALC reading is. Based on what you are reporting I would
> > >expect it
> > >
> > > > > >>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> to
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> be something less than far right of ALC black box? Assuming it is
> > >somewhere
> > >
> > > > > >>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> in
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
> > >Terry
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> _____
> > > > > >>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
> > > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > > >>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
> > > > > >>>>>>> <TS-520_820_530_830@yahoogroups.com>
> > > > > >>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
> > > > > >>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of

> > >black ALC
> > >
> > > > > >>>>
> > > > > >>>>>>
> > > > > >>>>>>>>> setting), with processor on and full scale (pegged meter)
> > >deflection
> > >
> > > > > >>>>>>> without
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> PROC NOT engaged, just Mic.
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> Chris
> > > > > >>>>>>>>> Sent from my iPhone
> > > > > >>>>>>>>>
> > > > > >>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> Hi Terry, in a nutshell,
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> It doesn't weigh up here.
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> Following to the letter the service manual and then taking into
> > >account
> > > > >>
> > > > > >>>>>>>> your
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> notes, the final situation is that I end up with full on-scale
> > >deflection
> > > > > >>>>
> > > > > >>>>>>> of
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> ALC
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
> > >(pegged
> > > > >>
> > > > > >>>>>>>> meter)
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> deflection without PROC engaged, just Mic.
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
> > >PROC OFF.
> > > > >

> > > > > >>>
> > > > > >>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> Thanks
> > > > > >>>>>>>>>> Chris
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> Sent from my iPhone
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
> > >applied to
> > >
> > > > > >>>>>>> have
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> same
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> ALC reading (max) with Processor on and off. You should not
> > >have to
> > >
> > > > > >>>>>>>> adjust
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> mic
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> gain or input signal level once balanced. You should be able to
> > >flip to
> > >
> > > > > >>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Tune
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> with Proc on and off and see approx the same max ALC
> > >indication.
> > >
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> If you initially get no indication (I think that is your
> > >problem?) you
> > >
> > > > > >>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> can
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> move
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>> mic gain up slightly until you get an indication. It wont take

> > >much and
> > >
> > > > > >>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>>>> will
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>> be
> > > > > > >>>>>>>>>>
> > > > > > >>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
> > > >you have
> > > >
> > > > > > >>
> > > > > > >>>>>>> is
> > > > > > >>>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>> to
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>> set
> > > > > > >>>>>>>>>>
> > > > > > >>>>>>>>>>> audio generator output higher as others suggested. I chose to
> > > >just
> > > >
> > > > > > >>>>>>>>> increase
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>>
> > > > > > >>>>>>>>>>> mic gain until I got an indication. After I found that point I
> > > >no
> > > >
> > > > > > >>>>>>> longer
> > > > > > >>>>>>>>
> > > > > > >>>>>>>>
> > > > > > >>>>>>>>>> needed
> > > > > > >>>>>>>>>>
> > > > > > >>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
> > > >then it
> > > >
> > > > > > >>
> > > > > > >>>>>>
> > > > > > >>>>>>>>> would
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>
> > > > > > >>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
> > > >pretty
> > > >
> > > > > > >>>>>>> good
> > > > > > >>>>>>>>
> > > > > > >>>>>>>>
> > > > > > >>>>>>>>>> matched
> > > > > > >>>>>>>>>>
> > > > > > >>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry

> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> _____
> > > > > >>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
> > > > > >>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > >alignment
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Thanks Terry,
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
> > >OFF
> > >
> > > > > >>>>>>> then
> > > > > >>>>>>>
> > > > > >>>>>>>> ON
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> to
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> same point? that's what it states from memory... point of
> > >exercise is
> > >
> > > > > >
> > > > > >>>>>>> to
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> have
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> ALC reading same position with Proc ON and OFF.
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Cheers
> > > > > >>>>>>>>>>> Chris
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
> > >good
> > >
> > > > > >>>>>>> equal
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> indications at far right of ALC black box or S-9 on the
> > >S-meter scale
> > >
> > > > > >>
> > > > > >>>>>>
> > > > > >>>>>>>> with
> > > > > >>>>>>>>

> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> the
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
> > >adjusted
> > >
> > > > > >>>
> > > > > >>>>>>> I
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> no
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I
> > >cant go
> > >
> > > > >
> > > > > >>>>>>> any
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> lower on
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > >>>>>>>>> <cparnell1001@>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> wrote:
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Thanks Terry....
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Will hopefully get around to confirming all of this later
> > >tonight
> > >
> > > > > >>>>>>> NZ
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> time.
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Cheers
> > > > > >>>>>>>>>>> Chris
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
> > >(meter
> > >

> > > > > >>>>>>>> switch
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> in
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
> > >level
> > >
> > > > > >
> > > > > >>>>>>> at
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> 20db
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> on
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> the Compression scale as opposed to down at the high end of
> > >the ALC
> > >
> > > > > >
> > > > > >>>>>>> box.
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> Less
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> decay time to mess with. Terry
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
> > > > > >>>>>>>>> <wagstw46@>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> wrote:
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> Chris--OK you are telling me the following:
> > > > > >>>>>>>>>>>> Step A:
> > > > > >>>>>>>>>>>> 1. You have the Processor button off and Compression level
> > >pot
> > >
> > > > > >
> > > > > >>>>>>
> > > > > >>>>>>>>> max
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> clockwise.
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> You are in USB mode.
> > > > > >>>>>>>>>>>> 2. You have the meter switch to ALC position.
> > > > > >>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
> > > > > >>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
> > > > > >>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far

> > >right
> > >
> > > > > >>>>>>
> > > > > >>>>>>>> end
> > > > > >>>>>>>>
> > > > > >>>>>>>>> of
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> the
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> ALC
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> black bordered box.
> > > > > >>>>>>>>>>>>> 6. You return to Stand-by.
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
> > >be
> > >
> > > > > >>>>>>
> > > > > >>>>>>>> between
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> 1000 and
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> 1100.
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
> > >would
> > >
> > > > > >>>>>>>> you
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> expect
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> the ALC
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> reading to do for the same mic gain setting? Would you
> > >expect
> > >
> > > > > >>>>>>>> the
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> meter
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> to peg
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> hard upscale far right? If you had a mic connected and
> > >whistled
> > >
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> what
> > > > > >>>>>>>>>>

> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>>> would you
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> Step B:
> > > > > >>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the
> > >mic
> > >
> > > > >>>>>>
> > > > > >>>>>>>> gain
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> not
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> touched
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>> from above you are telling me that you have no ALC
> > >indication
> > >
> > > > >>>>>>>> when
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> you
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> flip to
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
> > >obtain
> > >
> > > > >>>>>>> any
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> ALC
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> meter
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
> > >very
> > >
> > > > >>>>>>>>
> > > > > >>>>>>>>>> sensitive
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> and
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
> >

> > > > > >>>>>>> scale.
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> Quickly
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> turn
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
> > >black
> > >
> > > > >>>>>>>>
> > > > > >>>>>>>>>> box.
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> Mic
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> gain
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
> > >at
> > >
> > > > >>>>>>
> > > > > >>>>>>>>> far
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> end of
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> ALC
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
> > >several
> > >
> > > > >>>>>>>>
> > > > > >>>>>>>>>> times
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> until you
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
> > >
> > > > >>>>>>> This
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> adjustment is
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
> > >
> > > > >>>>>>> tends
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> to
> > > > > >>>>>>>>>>>>

> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> peg
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> hard
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> right and then slowly come back down. So it will tend to
> > >float
> > >
> > > > > >>>>>>
> > > > > >>>>>>>>> around
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> the
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> max
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
> >
> > > > > >>>>>>> meter
> > > > > >>>>>>>>
> > > > > >>>>>>>>> to
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> Comp
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> you
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> should see about 20db on Comp Scale.
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> Terry
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> _____
> > > > > >>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
> > > > > >>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
> > > > > >>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
> > > > > >>>>>>> alignment
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> Hi Terry, thanks for this.
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be
> > >
> > > > > >>>>>>>> (Heater
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> on
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> etc), but

> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
> > > > > >>>>>>> "align"
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> the
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> speech
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>> processor based on this step at the top of page 41:-
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
> > > >Set
> > > >
> > > > > >>>>>>>>
> > > > > >>>>>>>>> the
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> AG
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> output to
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> 10 mV
> > > > > >>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
> > > > > >>>>>>> maximum
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> on-scale ALC
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> reading. Set the PROC to ON.
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
> > > >ALC
> > > >
> > > > > >>>>>>>>>> on-scaled).
> > > > > >>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
> > > > > >>>>>>>>>>>>>>> Every step up until here works fine. I get to the point
> > > >where I
> > > >
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> turn
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> the
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> Proc ON
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> and

> > > > > >>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
> > > > > >>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
> >
> > > > > >>>>>>> meter
> > > > > >>>>>>>
> > > > > >>>>>>>> at
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> this
> > > > > >>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
> > > > > >>>>>>> reading.
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> Cheers
> > > > > >>>>>>>>>>>>>>> Chris
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
> > >on
> > >
> > > > > >>>>>>>> pages
> > > > > >>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> 40&41. As
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
> > > > > >>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off
> > >SG
> > >
> > > > > >>>>>>
> > > > > >>>>>>>>> switch
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>> and
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> LEAVE
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
> > >the
> > >
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> heater
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> off of the
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
> > >

> > > > > >>>>>>> step
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>>>>> conditions still
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> being in force?
> > > > > >>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
> >
> > > > > >>>>>>> "max
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>>> meter
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> reading on
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> the Compression Scale".
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
> > > > > >>>>>>> reading.
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>>>> That
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> would be on
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
> > > > > >>>>>>> indication
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>>> of
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> 20db
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> and
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
> > >
> > > > > >>>>>>> with
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>>>> a
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> multi-scale
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
> >
> > > > > >>>>>>> meter
> > > > > >>>>>>>

> > > > > >>>>>>>
> > > > > >>>>>>>>>> scale.
> > > > > >>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to
> > >set
> > >
> > > > > >>>>>>>>
> > > > > >>>>>>>>> mic
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> gain
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
> > >at
> > >
> > > > > >>>>>>>> 1200
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> and
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> peaked L27.
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
> > > > > >>>>>>>> would
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>> say
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> something
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
> > >scale
> > >
> > > > > >>>>>>>>> box".
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>> Just
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> make it
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
> > > > > >>>>>>>> read.
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
> > >leave
> > >
> > > > > >>>>>>>>

> > > > > >>>>>>>>>> heater
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> switch on
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
> > >
> > > > > >>>>>>> -K9TW
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
> > > > > >>>>>>>>>>> <cparnell1001@>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> wrote:
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> Ok Terry, thank you.
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
> > >much
> > >
> > > > > >>>>>> chance
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> to
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> check
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> Cheers
> > > > > >>>>>>>>>>>>>>>>>> Chris
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
> > >
> > > > > >>>>>>> so
> > > > > >>>>>>>>
> > > > > >>>>>>>>> I
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> will
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> give it a
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>> try today and report back. Terry
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell

> > >
> > > > > >>>>>>
> > > > > >>>>>>>>>>>> <cparnell1001@>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>> wrote:
> > > > > >>>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
> > > > > >>>>>>> in
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>>> the
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> 830
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>>>> at the
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>> weekend?
> > > > > >>>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>>> Cheers
> > > > > >>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
> > > > > >>>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> ------------------------------------
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> Yahoo! Groups Links
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>>>>>>

> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>>>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> ----------
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> Yahoo! Groups Links
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>>
> > > > > >>>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>
> > > > > >>>>>>>>> ----------
> > > > > >>>>>>>>
> > > > > >>>>>>>>> Yahoo! Groups Links
> > > > > >>>>>>>>
> > > > > >>>>>>>>> [Non-text portions of this message have been removed]
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
> > > > > >>>>>>>
> > > > > >>>>>>> Chris--I will give some more thought. Not sure what is going on. I
> > > >am just
> > > >
> > > > > >>>
> > > > > >>>> about
> > > > > >>>>
> > > > > >>>> out of ideas.
> > > > > >>>>
> > > > > >>>> I just repeated the test on my daily operating TS-830 with the
> > > >covers on the
> > > >

> > > > > >>>>>
> > > > > >>>>>>
> > > > > > >>>>>>>> rig. I just unplugged the mic and brought the test equipment to
> > >the operating
> > >
> > > > > >>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> position.
> > > > > > >>>>>>>>
> > > > > > >>>>>>>> I use a spare mic connector and clipped the generator output to it
> > >with
> > >
> > > > > >
> > > > > > >>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain
> > >set exactly
> > >
> > > > > > >>>>
> > > > > > >>>>>>> at
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on
> > >rig and
> > >
> > > > > >>
> > > > > > >>>>>>>> heater
> > > > > > >>>>>>>>
> > > > > > >>>>>>>> switches. Let it warm up a little.
> > > > > > >>>>>>>>
> > > > > > >>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
> > >wave from
> > >
> > > > > >>
> > > > > > >>>>>>> Wave
> > > > > > >>>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> Tek generator to exactly 10 mv.
> > > > > > >>>>>>>>
> > > > > > >>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch
> > >to USB. I
> > >
> > > > > >>>>
> > > > > > >>>>>>>> place meter switch in ALC position.
> > > > > > >>>>>>>>
> > > > > > >>>>>>>> I then flip to Send and get ALC meter indication that is just
> > >outside the max
> > >
> > > > > >>>>>>
> > > > > > >>>>>>>
> > > > > > >>>>>>>> end of the black ALC box. Maybe a needles worth.
> > > > > > >>>>>>>>

> > > > > >>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
> > >ALC
> > >
> > > > > >>>>>>> position
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> and I have not touched mic gain pot.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I flip to Send and the ALC meter indication is a little bit more
> > >outside the
> > >
> > > > > >>>>>
> > > > > >>>>>>
> > > > > >>>>>>>> black ALC box. It could be adjusted a little to get a match if I
> > >had the
> > >
> > > > > > >
> > > > > >>>>>>> covers
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it
> > >indicates
> > >
> > > > > >>>>
> > > > > >>>>>>>> just
> > > > > >>>>>>>>
> > > > > >>>>>>>> a little above 20db on the Comp scale.
> > > > > >>>>>>>>
> > > > > >>>>>>>> I repeatedly switched Proc on and off and get the same results. In
> > >short my
> > >
> > > > > >>>>
> > > > > >>>>>>> as
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> found condition for my daily operator is very close to being right
> > >on the
> > >
> > > > > >>
> > > > > >>>>>>> same
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> indicated level on the ALC meter scale (near max on black border)
> > >with Proc
> > >
> > > > > >>>>>
> > > > > >>>>>>> on
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> and off.

> > > > > >>>>>>>>
> > > > > >>>>>>>> At this point Chris not sure I can be of any more help? I will
> > >think about it
> > >
> > > > > >>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> some more and if I come up with something will write.
> > > > > >>>>>>>>
> > > > > >>>>>>>> Whatever you do you should not have to increase mic gain position
> > >or increase
> > >
> > > > > >>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
> > >gain in
> > >
> > > > > >>>
> > > > > >>>>>>>> your
> > > > > >>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> rig you may have to be a little higher than position 4 on the mic
> > >gain , but
> > >
> > > > > >>>>>
> > > > > >>>>>>>> I
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> wouldnt think much higher.
> > > > > >>>>>>>>
> > > > > >>>>>>>> Also, you might want to measure the sig gen level at your mic
> > >connection when
> > >
> > > > > >>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
> > >vary from
> > >
> > > > > >>>>>
> > > > > >>>>>>
> > > > > >>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
> > >experience.
> > >
> > > > > >>
> > > > > >>>>>>> Good
> > > > > >>>>>>>
> > > > > >>>>>>>
> > > > > >>>>>>>> luck Terry
> > > > > >>>>>>>>
> > > > > >>>>>>>> _____
> > > > > >>>>>>>> From: Chris Parnell <cparnell1001@>

> > > > > >>>>>>>> To: TS-520_820_530_830@yahoogroups.com
> > > > > >>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
> > > > > >>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
> > > > > >>>>>>>>
> > > > > >>>>>>>> Hi Terry,
> > > > > >>>>>>>>
> > > > > >>>>>>>> The only difference from my original post is that I increased the
> > > >"gain" on
> > > >
> > > > > >>>>
> > > > > >>>>>>> the
> > > > > >>>>>>>>
> > > > > >>>>>>>>
> > > > > >>>>>>>> input (Mic gain), therefore got an ALC reading.
> > > > > >>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
> > > >sure
> > > >
> > > > > >
> > > > > >>>>>>> why...
> > > > > >>>>>>>>
> > > > > >>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
> > > > > >>>>compensate.
> > > > > >>>>>>>>
> > > > > >>>>>>>>>> Based on what you are reporting I would expect it to
> > > > > >>>>>>>>>> be something less than far right of ALC black box? Assuming it is
> > > >somewhere
> > > >
> > > > > >
(Message over 64 KB, truncated)

32053. Re: [TS-520_820_530_830] Re: Speech Processor alignment

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 08:50:25 UTC
From: Chris Parnell
Topic: 31926 Message: 32053

OK... now I have it (Thanks to Gordon's website)

Chris

On 24/06/2011, at 8:45 PM, Chris Parnell wrote:

> Thanks Mike...
>
> Just to let you know that in the Svc Manual I have, it goes page 43 (Location of adjustments bottom view), to page 45 (which was my error, I noted it as page 44, but as it came after page 43, you'd assume... you get the picture) ;-)
>
> So, Alas, I am missing page 44, which explains a lot.
>
> Cheers
> Chris
>
>
> On 24/06/2011, at 12:47 AM, w5rkl wrote:
>
>> The transmit mixer's RF signal level at TP4 should be approximately 2.4 volt rms.
>>
>> The RF signal level at the output of the driver tube should be approximately 77.5 volts rms.
>>
>> The driver's RF signal level at the grids of the final tubes should be approximately 53.3 volts rms.
>>
>> The "TIF" signal from the IF Unit, RF unit plug 7 pin 2, should have an approximately RF signal level of 12.4mv rms.
>>
>> These RF signal level voltages came from the 830 service manual's Level Diagram on page 44. Chris you said page 44 in your 830 service manual is the remote VFO. Page 45 in the 830 service manual is the remote VFO-230. You may be confusing that page with page 44.
>>
>> The setup is what Terry said, frequency 14.2Mhz, SG switch OFF, and the CAR control is adjusted for maximum ALC scale indication. Connection grounds should be as close to the RF probe or scope connection as possible.
>>
>> I hope this helps.
>>
>> 73s
>> Mike
>> W5RKL
>>
>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:

>>>
>>> Chris--The page you need is the Level Diagram page. You can view it on Gordons
>>> N6WK website. The readings in question are RF at 14.2 Mhz and not DC voltages in
>>> RX mode.
>>>
>>> You need an RF probe. Yes the lug on VC-2 has a small cap soldered to it. I went
>>> there for conveniencetto keep RF probe ground lead short and be able to move
>>> probe tip from TP-4 to DRV, but you can go to Blue wire on foil side of tube
>>> socket board as well.
>>>
>>> If you dont have a high Z meter and rf probe you can use an oscilloscope (20mhz
>>> bandwidth or greater) and 10/1 probe.
>>>
>>> You will be taking the RF drive level readings with SG off, in CW mode, with ALC
>>> level set with Carrier Level, and Standby switched to Send.
>>>
>>> You have to have some level of drive to get 70 watts out at 160ma.
>>>
>>> If your drive level readings and 6146 tube voltages are good then I would try
>>> swapping out tubes again and I would very carefully try to read anode voltage on
>>> each tube under the plastic plate caps. I once had a very high resistance
>>> connection from top of plate choke at the back tube and best I could get out was
>>> slightly more than half power. I found it by using insulated tuning tool and
>>> gently pushing on plate cap and parasitic choke and could see output power move
>>> around. Turns out the anode wire coming out of glass envelop was not soldered
>>> well to top of silver anode cap on the tube.
>>>
>>> Typically with low output power and high plate current it means one of two
>>> things 1. Tank not tuned to resonance or 2. Not getting sufficient RF voltage
>>> swings at the final tube plates. (low drive). Good luck - Terry K9TW
>>>
>>>
>>>
>>> _____
>>> From: Chris Parnell <cparnell1001@...>
>>> To: TS-520_820_530_830@yahoogroups.com
>>> Sent: Thu, June 23, 2011 2:11:57 AM
>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>
>>> Hi Terry,
>>>
>>> I am seeing nothing like that on my RF board! - I see +12.0V DC at TP-4 in RX
>>> and at the "back lug" of VC-3 (which I assume is the one with the small cap
>>> attached to it that goes to VC-2?) has "variable" readings in RX - I
>>> occasionally see +38V for split second, then it drops to zero (or close to
>>> zero), with the reading varying around a bit.
>>>
>>> Sounds like a bad connection / earth maybe? I hope I am reading your test
>>> procedures correctly
>>>

>>> Unfortunately, in the copy of the service manual I have, page 44 is the VFO-230
>>> schematic.
>>>
>>> Cheers
>>> Chris
>>>
>>> On 23/06/2011, at 1:56 PM, Terry Wagoner wrote:
>>>
>>>> Chris--I just tuned up to 225ma IP on my spare TS-830 on 14.200. Approx 105
>>>> watts on Drake W4 wattmeter into Heath cantenna dummy load at 225ma IP.
>>>>
>>>>
>>>> I then measured drive on RF board using a Heath IM-18 VTVM and a Heath 309C RF
>>>> probe.
>>>>
>>>>
>>>> 1. At TP-4 g1 of driver tube the voltage was 3.1 volts (2.1).
>>>>
>>>> 2. At output of driver tube DRV)at back lug of variable capacitor VC-3 (nearest
>>>> PA cage) voltage was 66.0 volts (77.5).
>>>>
>>>>
>>>> See Page 44 of service manual for test conditions. The Heath VTVM is not true
>>>> rms but close enough for this testing. Terry
>>>>
>>>>
>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>>>> wrote:
>>>>>
>>>>> Hi Terry,
>>>>>
>>>>> The voltages at the tubes seem a little low from memory, I will measure them
>>>> again tonight.
>>>>> The Driver tube voltages (from memory) looked ok though... but again, I will
>>>> double check tonight.
>>>>>
>>>>> Terry, the situation is that if I tune for maximum power out (about 60 - 70
>>>> W), then the IP is around 140-160mA.
>>>>> If I adjust for 225mA my output power is almost non existent, hence me
>>>> wanting to get this thing resolved.
>>>>>
>>>>> Cheers
>>>>> Chris
>>>>>
>>>>>
>>>>> On 22/06/2011, at 11:46 PM, Terry Wagoner wrote:
>>>>>
>>>>>> Chris--Are you saying you cannot load to any higher than 150ma IP?
>>>>>>
>>>>>> If all 6146 tube voltages are normal, that sounds like drive to me. TP-4

>>>> and DRV
>>>>
>>>>>> on RF board are good place to look with your RF VTVM. Terry
>>>>>>
>>>>>> _____
>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>> To: TS830 <TS-520_820_530_830@yahoogroups.com>
>>>>>> Sent: Wed, June 22, 2011 6:51:21 AM
>>>>>> Subject: Fwd: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>
>>>>>> OK..... well Mike (nor anyone else) answered this question... so...
>>>>>>
>>>>>> One thing that springs to mind is that I did change the RF board that was
>>>> faulty
>>>>
>>>>>> in my TS-830s for one from Bob Mansker (which he and I of course assume
>>>> work ok)
>>>>
>>>>>> but thinking back, it's the time that my Power out was reduced to around
>>>>>> 60-W..... So, Mike et all (if you could respond I'd appreciate it)...
>>>>>>
>>>>>> Is the RF board a good place to start looking and if so, around what are?
>>>>>>
>>>>>> Thanks
>>>>>> Chris, ZL1CDP
>>>>>>
>>>>>> Begin forwarded message:
>>>>>>
>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>> Date: 20 June 2011 10:10:55 AM NZST
>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>> Reply-To: TS-520_820_530_830@yahoogroups.com
>>>>>>>
>>>>>>> Mike,
>>>>>>>
>>>>>>> Any idea where would be a good place to start the voltage measurements?
>>>>>>>
>>>>>>> Cheers
>>>>>>> Chris
>>>>>>>
>>>>>>> On 19/06/2011, at 11:31 PM, w5rkl wrote:
>>>>>>>
>>>>>>>> Hi Chris,
>>>>>>>>
>>>>>>>> Based on the HV and power output levels you provided, 850VDC high
>>>> voltage and
>>>>
>>>>>>>> 70 watts output, that equates to an IP current level of approximately
>>>> 150ma.

>>>>
>>>>>>>> Therefore, with those levels the INPUT power in the final amplifier would
>>>> be;
>>>>>>>>
>>>>>>>> .150 x 850 = 127.5 watts
>>>>>>>>
>>>>>>>> Since the 830 final amplifier has an efficiency rating of approximately
>>>> 55%,
>>>>
>>>>>>>> power output would be
>>>>>>>>
>>>>>>>> 127.5 - 45% = 70.125 watts
>>>>>>>>
>>>>>>>> the same as your 830 is producing. That tells me the HV and LV Rectifier
>>>> Unit
>>>>
>>>>>>>> supplies are within specifications and operating as they should.
>>>>>>>>
>>>>>>>> I recommend you troubleshoot the 830's transmit signal path, take level
>>>
>>>>>>>> measurements and compare your findings with the 830 service manual Level
>>>> Diagram
>>>>
>>>>>>>> on page 44.
>>>>>>>>
>>>>>>>> 73s
>>>>>>>> Mike
>>>>>>>> W5RKL
>>>>>>>>
>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell <cparnell1001@>
>>>>
>>>>>>>> wrote:
>>>>>>>>>
>>>>>>>>> Hi Terry,
>>>>>>>>>
>>>>>>>>> Sorry for the delay, I was hoping to get feedback from Mike or yourself
>>>> re: the
>>>>
>>>>>>>>> voltages... Mike did respond saying that if my IP is around 150mA (which
>>>> it is),
>>>>
>>>>>>>>> then the voltages would be about right for 60-70W output.
>>>>>>>>>
>>>>>>>>> My 830 was working "OK" originally, although the alignment was miles
>>>> off.
>>>>>>>>> Then I had an issue with a tube that failed in the final unit, and it
>>>> caused a
>>>>
>>>>>>>>> number of issues.. one of which was NO output etc.
>>>>>>>>>

>>>>>>>>> I swapped the RF board as the one that came with the unit was broke in
>>>> a number
>>>>
>>>>>>>>> of areas, so I purchased one from Bob Mansker and swapped it.
>>>>>>>>> To which I decided to re-align the radio.
>>>>>>>>>
>>>>>>>>> On doing so, I noticed that the Speech Processor wouldn't align and the
>>>> output
>>>>
>>>>>>>>> was 50 -70W maximum. - It still is the same, although RX is excellent
>>>> now.
>>>>>>>>> It works OK and I can happily QSO on SSB (proc in or out, it's fine)
>>>> and CW,
>>>>
>>>>>>>>> but I was hoping to get the radio at 100W and factory aligned (as close
>>>> as can
>>>>
>>>>>>>>> be).
>>>>>>>>> I purchased a new front fascia and it looks great.. needs to work great
>>>> now
>>>>
>>>>>>>>> :-)
>>>>>>>>>
>>>>>>>>> Cheers
>>>>>>>>> Chris
>>>>>>>>>
>>>>>>>>>
>>>>>>>>>
>>>>>>>>> On 19/06/2011, at 8:31 AM, Terry Wagoner wrote:
>>>>>>>>>
>>>>>>>>>> Chris--No one ever accused me of being very smart, but I will never
>>>> fail due to
>>>>
>>>>>>>>>> lack of effort!
>>>>>>>>>>
>>>>>>>>>> 1. You are telling us your problem is that with 1500 hz @ 10 mv
>>>> injected into
>>>>
>>>>>>>>>> mic jack,mic gain setting around No. 4(Processor OFF), in USB mode,
>>>> meter in ALC
>>>>
>>>>>>>>>> position, that when you flip to send the meter pegs off scale right
>>>> hand side of
>>>>
>>>>>>>>>> the meter. Is this true?
>>>>>>>>>>
>>>>>>>>>> 2. The expected response would be for the meter to deflect to the far
>>>> end of
>>>>
>>>>>>>>>> the ALC black box scale or somewhere close either side of the Max ALC

>>>> range and
>>>>
>>>>>>>>>>> not peg.
>>>>>>>>>>
>>>>>>>>>>> 3. I dont believe this has anything to do with your Processor or Comp
>>>> Level
>>>>
>>>>>>>>>>> setting. Comp level pot is not in the circuit when Processor is off.
>>>>>>>>>>
>>>>>>>>>>> 4. I am suspicious of Alignment Step 31. I remember telling you that I
>>>> had
>>>>
>>>>>>>>>>> difficulty doing this step as written and you had not completed it yet.
>>>> I
>>>>
>>>>>>>>>>> suggest you go back and repeat this step.
>>>>>>>>>>
>>>>>>>>>>> 5. In Step 31 you adjust the ALC meter Zero (trim pot VR-6) and you
>>>> adjust the
>>>>
>>>>>>>>>>> Maximum ALC reading (far right end of ALC black box)by adjusting trim
>>>> pot VR-7.
>>>>
>>>>>>>>>>> VR-6 is easy and VR-7 is a little tricky. When you complete this step
>>>> you should
>>>>
>>>>>>>>>>> be able to flip to send with 10 mv signal injected and get max ALC
>>>> reading and
>>>>
>>>>>>>>>>> not peg the meter full scale or any ALC indication very far past the
>>>> black
>>>>
>>>>>>>>>>> border. If that is not how you left this step then this is likely your
>>>> problem.
>>>>
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> 6. As an experiment. Record the setting of VR-7. Flip to Send with
>>>> Processor
>>>>
>>>>>>>>>>> off. When meter pegs hard right reduce mic gain slightly to just get if
>>>> off the
>>>>
>>>>>>>>>>> peg. Then slowly tweak trim pot VR-7 (on IF board at base of Q31). You
>>>> should be
>>>>
>>>>>>>>>>> able to move meter indication down to the ALC box max border or S9.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>>> 7. If you can move ALC reading down then go ahead and repeat Step 31

>>>> before
>>>>
>>>>>>>>>> returning to Step 32. Make sure Step 31 is as accurate as you ca.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> 8. If you cannot adjust ALC indication down with trim pot VR-7 then
>>>> there is
>>>>
>>>>>>>>>> likely something wrong with ALC meter driver Q30 and Q31 or with Q19
>>>> and Q20 on
>>>>
>>>>>>>>>> the AF board.
>>>>>>>>>>
>>>>>>>>>>
>>>>>>>>>> Good Luck-Terry K9TW
>>>>>>>>>>
>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>> <cparnell1001@>
>>>>
>>>>>>>>>> wrote:
>>>>>>>>>>>
>>>>>>>>>>> Hi Terry,
>>>>>>>>>>>
>>>>>>>>>>> Yes I do have Skype, and am happy to try this... I have just sent you
>>>> and Mike
>>>>
>>>>>>>>>>> an email off list with some voltage measurements.
>>>>>>>>>>>
>>>>>>>>>>> Cheers
>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>> On 18/06/2011, at 3:04 PM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>> Chris--
>>>>>>>>>>>>
>>>>>>>>>>>> Do you have Skype? Maybe we could connect on Skype and perform each
>>>> step
>>>>
>>>>>>>>>>>> together on our rigs and see at what step we differ. Not sure if we
>>>> could have
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> clear enough real time video or not for this to work. Not sure about
>>>> our time
>>>>
>>>>>>>>>>
>>>>>>>>>>>> difference, but could schedule it Zulu/GMT just as we would a QSO.
>>>>>>>>>>>>
>>>>>>>>>>>> Maybe Mike or Gordon would be better to do this with you as they

>>>> repair these
>>>>
>>>>>>>>>>
>>>>>>>>>>>> rigs for a living? As you know I had never performed this step until
>>>> you asked
>>>>
>>>>>>>>>>
>>>>>>>>>>>> about it. In fact I have never completed a full alignment as I dont
>>>> have sweep
>>>>
>>>>>>>>>>
>>>>>>>>>>>> generator. I have just done selected steps.
>>>>>>>>>>>
>>>>>>>>>>>> Terry
>>>>>>>>>>>
>>>>>>>>>>>> _____
>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>> Sent: Fri, June 17, 2011 9:55:30 PM
>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>
>>>>>>>>>>>> Hi Terry, you got me thinking about the signal coming out of the AF
>>>> Gen (as I
>>>>
>>>>>>>>>>
>>>>>>>>>>>> have no attenuation in there)...
>>>>>>>>>>>
>>>>>>>>>>>> So I got some test reference dBmA numbers against my calibrated
>>>> probe and wrote
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> down the numbers for 5mV, 10mV and 50mV before I started again.
>>>>>>>>>>>> So... re-did the whole thing and of course, its more in line with
>>>> your "Mic
>>>>
>>>>>>>>>>>> Gain
>>>>>>>>>>>
>>>>>>>>>>>> 4" setting now, but still a huge difference when going from PROC OFF
>>>> to PROC ON
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> with regards to ALC readings.
>>>>>>>>>>>
>>>>>>>>>>>> When the ALC meter is at full ALC gauge reading with PROC ON, the
>>>> second I turn
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> the PROC OFF, the ALC shoots right over to the right hand side of
>>>> the
>>>>

>>>>>>>> meter.
>>>>>>>>>>>
>>>>>>>>>>>> I may record a small video and send it to you... easier to see what
>>>> I mean and
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> what i'm doing.
>>>>>>>>>>>
>>>>>>>>>>>> Turning the Mic gain up and down of course makes a difference, but
>>>> the point
>>>>
>>>>>>>>>>>> is,
>>>>>>>>>>>
>>>>>>>>>>>> I still cannot get PROC OFF and PROC ON to align with the ALC
>>>> readings.
>>>>>>>>>>>
>>>>>>>>>>>> Cheers
>>>>>>>>>>>> Chris
>>>>>>>>>>>
>>>>>>>>>>>> On 18/06/2011, at 11:32 AM, Terry Wagoner wrote:
>>>>>>>>>>>
>>>>>>>>>>>>> Chris-- I trust with that test equip you have accurate 10mv and 50
>>>> mv 1500hz
>>>>
>>>>>>>>>>
>>>>>>>>>>>>> test signals.
>>>>>>>>>>>>>
>>>>>>>>>>>>> With your mic gain at No. 4 it appears you have much more gain than
>>>> I do in my
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>> mic pre-amp circuit. There is nothing magic about mic setting of 4
>>>> it is just
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> where I can get a good match at far right end of ALC black box.
>>>>>>>>>>>>>
>>>>>>>>>>>>> With Proc off and 10mv injected it doesnt take much adjustment
>>>> right around the
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> No. 4 setting of the mic gain to peg the meter or to have it fall
>>>> back and have
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> no meter indication. I do know with both of my rigs I end up at
>>>> very close to

>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> No.4 on the mic gain to get a meter indication at the end of ALC
>>>> box.
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> I assume you have tried adjusting the mic gain down while leaving
>>>> required 10mv
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> signal injected? I found it a little touchy. When you first
>>>> reported no meter
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> indication that is why I suggested turning mic gain up a little.
>>>> Maybe I am
>>>>
>>>>>>>>>>
>>>>>>>>>>>>> starting to get confused regards what your problem is.
>>>>>>>>>>>>>
>>>>>>>>>>>>> If turning mic gain down a little doesnt help then I would say it
>>>> is on to
>>>>
>>>>>>>>>
>>>>>>>>>>>>> troubleshooting with Mike.
>>>>>>>>>>>>>
>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>
>>>>>>>>>>>>> _____
>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>> Sent: Fri, June 17, 2011 7:04:54 PM
>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>>>
>>>>>>>>>>>>> Hi Terry / Mike.....
>>>>>>>>>>>>>
>>>>>>>>>>>>> I am using a Marconi Instruments 2955 Radio Communications Test
>>>> Set. - Good
>>>>
>>>>>>>>>
>>>>>>>>>>>>> piece of kit.
>>>>>>>>>>>>> Here's what I see when I follow your instructions:
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> I use a spare mic connector and clipped the generator output to it
>>>> with
>>>>
>>>>>>>>
>>>>>>>>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins).
>>>>>>>>>>>>>>>

>>>>>>>>>>>>> Exactly the same as me Terry, except my mini clips are connected
>>>> directly to
>>>>
>>>>>>>>>>
>>>>>>>>>>>>> the
>>>>>>>>>>>>>
>>>>>>>>>>>>> Mic Socket on the Rig not a 4 pin Mic connector, but no
>>> differemce.
>>>>>>>>>>>>>
>>>>>>>>>>>>>> I have the mic gain set exactly at
>>>>>>>>>>>>>> No. 4 position.
>>>>>>>>>>>>>>
>>>>>>>>>>>>> Same here
>>>>>>>>>>>>>
>>>>>>>>>>>>>> I set SG switch on rear of rig to off and turn on rig and heater
>>>>>>>>>>>>>> switches. Let it warm up a little.
>>>>>>>>>>>>>>
>>>>>>>>>>>>> Same here
>>>>>>>>>>>>>
>>>>>>>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>>>> wave from
>>>>
>>>>>>>>>
>>>>>>>>>>>>> Wave
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Tek generator to exactly 10 mv
>>>>>>>>>>>>>>
>>>>>>>>>>>>> Using the above I set it to AF Generator - 1.5Khz 10mV output.
>>>>>>>>>>>>>
>>>>>>>>>>>>>> turned Proc off and set Comp level to max CW. I set mode switch to
>>>> USB. I
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> place meter switch in ALC position.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> Same here
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I then flip to Send and get ALC meter indication that is just
>>>> outside the max
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>>>>>>>
>>>>>>>>>>>>> At this point in my TS-830s, with Mic set to 4, AF Gen set to
>>>> 1500Hz and 10mV
>>>>

>>>>>>>>>>>
>>>>>>>>>>>> and USB mode, I flick to send and I get full scale meter deflection
>>>> in ALC mode
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> (Full meter deflection, not on-scale ALC meter deflection, so if
>>>> you look at
>>>>
>>>>>>>>>>
>>>>>>>>>>>> s-meter scale, it's S9+40dB +).
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>>>> ALC
>>>>
>>>>>>>>>>>> position
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>>>>>>
>>>>>>>>>>>> With Proc on, and Proc level fully clockwise, not adjusting any
>>>> gains at either
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>> the AF Gen or Mic gain, I get a meter reading in ALC mode of around
>>>> S9+20dB
>>>>
>>>>>>>>>
>>>>>>>>>>>> now.. (I am only using the S-Meter scale as it's easier for you to
>>>> gauge what
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> I'm saying and seeing.
>>>>>>>>>>>>
>>>>>>>>>>>> At this point, I turn PROC OFF, and adjust VR-7 down so that I get
>>>> maximum
>>>>
>>>>>>>>>
>>>>>>>>>>>> "On-Scale" ALC reading, so now I get an accurate end of scale
>>>> reading without
>>>>
>>>>>>>>>>>
>>>>>>>>>>>> PROC ON, which on the S-Meter is S-9.
>>>>>>>>>>>> I check where VR-7 is now within it's VR scale and notice it's
>>>> almost at
>>>>
>>>>>>>>
>>>>>>>>>>>> minimum.

>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>>>> outside the
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> black ALC box.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> So now that I have adjusted VR-7 for full on-scale ALC meter
>>>> reading, with PROC
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> OFF, I put PROC ON and the reading drops to around the end of the
>>>> letter C of
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> the word ALC on the meter, which is about S-6 on the S-Meter.
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> It could be adjusted a little to get a match if I had the covers
>>>>>>>>>>>>>>> off, but close enough.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I check L27 and find it's at it's peak, so I cannot go any higher
>>>> and align
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> them
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> with the PROC ON.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> I switch the meter from ALC to Comp and it indicates just
>>>>>>>>>>>>>>> a little above 20db on the Comp scale.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Mine (at this point) indicates around +40dB of Comp on the Comp
>>>> meter, so I
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> adjust L26 for 20dB reading.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I will need to do some component checking in the circuit around the
>>>> Processor
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> as
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Mike and yourself have recommended.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I have a HP scope, RF Millivoltmeter and the Marconi Test set I

>>>>>>> mentioned.
>>>>>>>>>>>>
>>>>>>>>>>>>> Thanks
>>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>>>> short my
>>>>
>>>>>>>>>>
>>>>>>>>>>>>> as
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> found condition for my daily operator is very close to being right
>>>> on the
>>>>
>>>>>>>>>
>>>>>>>>>>>>> same
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> indicated level on the ALC meter scale (near max on black border)
>>>> with Proc
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> on
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> and off.
>>>>>>>>>>>>>
>>>>>>>>>>>>>> At this point Chris not sure I can be of any more help? I will
>>>> think about it
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> some more and if I come up with something will write.
>>>>>>>>>>>>>
>>>>>>>>>>>>>> Whatever you do you should not have to increase mic gain position
>>>> or increase
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>>>> gain in
>>>>
>>>>>>>>>
>>>>>>>>>>>>> your
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> rig you may have to be a little higher than position 4 on the mic
>>>> gain , but

>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> I
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> wouldnt think much higher.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Also, you might want to measure the sig gen level at your mic
>>>> connection when
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>>>> vary from
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>>>> experience.
>>>>
>>>>>>>>>
>>>>>>>>>>>>> Good
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> luck Terry
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Hi Terry,
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> The only difference from my original post is that I increased the
>>>> "gain" on
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> the
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>>>> sure
>>>>
>>>>>>>
>>>>>>>>>>>>> why...
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>>>>>>>>>>> compensate.

>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>>>>>>>> be something less than far right of ALC black box? Assuming it is
>>>> somewhere
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> in
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>>>> the far
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> right
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the
>>>> same.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Hope this makes sense..
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Chris--This appears different than what you originally reported
>>>> of getting
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> no
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>>>> different?
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Where
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>>>> as it is
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> hard
>>>>>>>>>>>>>

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> on
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>>>> meter off
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> peg.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>>>> at least
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> off
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>>>> report
>>>>
>>>>>>>>
>>>>>>>>>>>>>> back
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>>>> expect it
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> be something less than far right of ALC black box? Assuming it is
>>>> somewhere
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> in
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>> Terry
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"

>>>>>>>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
>>>> black ALC
>>>>
>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> setting), with processor on and full scale (pegged meter)
>>>> deflection
>>>>
>>>>>>>>>>>>> without
>>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Following to the letter the service manual and then taking into
>>>> account
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>> your
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> notes, the final situation is that I end up with full on-scale
>>>> deflection
>>>>
>>>>>>>>>>
>>>>>>>>>>>>>>> of
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> ALC
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
>>>> (pegged
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>> meter)
>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>>>> PROC OFF.
>>>>
>>>>>>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Thanks
>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>>>> applied to
>>>>
>>>>>>>>>>>>>> have
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> same
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>>>> have to
>>>>
>>>>>>>>>>>>>>> adjust
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> mic
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> gain or input signal level once balanced. You should be able to
>>>> flip to
>>>>
>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Tune
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> with Proc on and off and see approx the same max ALC
>>>> indication.
>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> If you initially get no indication (I think that is your
>>>> problem?) you
>>>>
>>>>>>>>>>

>>>>>>>>>>>>>
>>>>>>>>>>>>>> can
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> move
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
>>>> much and
>>>>
>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> will
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> be
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>>>> you have
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>> is
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> set
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> audio generator output higher as others suggested. I chose to
>>>> just
>>>>
>>>>>>>>>>>>>>> increase
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> mic gain until I got an indication. After I found that point I
>>>> no
>>>>
>>>>>>>>>>>>>>> longer
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> needed
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
>>>> then it
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> would
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>>>> pretty

>>>>
>>>>>>>>>>>>> good
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> matched
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>> alignment
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>>>> OFF
>>>>
>>>>>>>>>>>>> then
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> ON
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> same point? that's what it states from memory... point of
>>>> exercise is
>>>>
>>>>>>>>
>>>>>>>>>>>>> to
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> have
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Chris--Just repeated adjustments and was able to get pretty
>>>> good
>>>>
>>>>>>>>>>>>> equal
>>>>>>>>>>>>>
>>>>>>>>>>>>>

>>>>>>>>>>>>>>>>>> indications at far right of ALC black box or S-9 on the
>>>> S-meter scale
>>>>
>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> with
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> mic gain at just a hair beyond No. 4 position. Once I got L27
>>>> adjusted
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> I
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> no
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> longer needed to tweak the mic gain to get an indication. I
>>>> cant go
>>>>
>>>>>>
>>>>>>>>>>>>>> any
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> lower on
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> mic gain with 10mv input. Good Luck-Terry
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Thanks Terry....
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Will hopefully get around to confirming all of this later
>>>> tonight
>>>>
>>>>>>>>>>>>>> NZ
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> time.
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>>>> Chris

>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> On 17/06/2011, at 10:11 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Chris -- I forgot to mention it may be easier initially
>>>> (meter
>>>>
>>>>>>>>>>>>>> switch
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> in
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> the ALC position) to do your adjustment with the ALC indicated
>>>> level
>>>>
>>>>>>>>
>>>>>>>>>>>>>> at
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> 20db
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> on
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> the Compression scale as opposed to down at the high end of
>>>> the ALC
>>>>
>>>>>>>>>>>>>> box.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Less
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> decay time to mess with. Terry
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner
>>>>>>>>>>>>>>>> <wagstw46@>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Chris--OK you are telling me the following:
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> Step A:
>>>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>>>> 1. You have the Processor button off and Compression level
>>>> pot
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> max
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>>>> clockwise.
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> You are in USB mode.
>>>>>>>>>>>>>>>>>>>> 2. You have the meter switch to ALC position.
>>>>>>>>>>>>>>>>>>>> 3. You inject 1500hz @10 mv into mic input.
>>>>>>>>>>>>>>>>>>>> 4. You flip Stand-by switch to Tune.
>>>>>>>>>>>>>>>>>>>> 5. You adjust mic gain until meter pointer is at the far
>>>> right
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>> end
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> of
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ALC
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> black bordered box.
>>>>>>>>>>>>>>>>>>>> 6. You return to Stand-by.
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Is the above correct? Where is your mic gain at? You should
>>>> be
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> between
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> 1000 and
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> 1100.
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> You then turn Processor on with Comp Level max cw. What
>>>> would
>>>>
>>>>>>>>>>>>>> you
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> expect
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> the ALC
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> reading to do for the same mic gain setting? Would you
>>>> expect
>>>>
>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> to peg

>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> hard upscale far right? If you had a mic connected and
>>>> whistled
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> what
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> would you
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> expect ALC meter to do? Just some food for thought.
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Step B:
>>>>>>>>>>>>>>>>>>>>>> With Processor on and Comp level set max clockwise and the
>>>> mic
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> gain
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> not
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> touched
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> from above you are telling me that you have no ALC
>>>> indication
>>>>
>>>>>>>>>>>>>>> when
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> you
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> flip to
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Tune position? You then try to tweak L27 in attempt to
>>>> obtain
>>>>
>>>>>>>>>>>>>>> any
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> ALC
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> indication and get no ALC indication. Is This correct?
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> If so, try slowly turning mic gain up a little. It will be
>>>> very
>>>>

>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> sensitive
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> you should reach a point where it will drive meter hard up
>>>
>>>>>>>>>>>>> scale.
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Quickly
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> turn
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> mic gain back down until meter is at far right end of ALC
>>>> black
>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> box.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Mic
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> gain
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> pot will be sensitive. Once you have ALC indication staying
>>>> at
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> far
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> end of
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> ALC
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> box you can peak L27. You may have to go back and forth
>>>> several
>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> times
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> until you
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> no longer have to tweak the mic gain up a hair from Step A.
>>>>
>>>>>>>>>>>>>> This
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> adjustment is

>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> a little difficult due to the ALC time constant. The meter
>>>
>>>>>>>>>>>>> tends
>>>>>>>>>>>>>
>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> peg
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> hard
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> right and then slowly come back down. So it will tend to
>>>> float
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> around
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> max
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> end of the ALC box until things settle down. If you switch
>>>
>>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Comp
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> you
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> should see about 20db on Comp Scale.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Terry
>>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 5:00:42 PM
>>>>>>>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>>>>>>>>>>>> alignment
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Hi Terry, thanks for this.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> All of that makes sense, and is exactly how I read it to be

>>>>
>>>>>>>>>>>>>> (Heater
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> on
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> etc), but
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> none of it explains why I (and evidently others), can not
>>>>>>>>>>>>> "align"
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> speech
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> processor based on this step at the top of page 41:-
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Set the PROC to OFF and the COM P LEVEL control to maximum.
>>>> Set
>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> AG
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> output to
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> 10 mV
>>>>>>>>>>>>>>>>>>>>> Adjust the MIC GAIN control until the meter indicates the
>>>>>>>>>>>>>> maximum
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> on-scale ALC
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> reading. Set the PROC to ON.
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Adjust L27 until the same meter reading is obtained (MAX
>>>> ALC
>>>>
>>>>>>>>>>>>>>>>> on-scaled).
>>>>>>>>>>>>>>>>>>>>> Mic input providing the same ALC meter reading 10mV......
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> This is where my 830 (or me) gets stuck..
>>>>>>>>>>>>>>>>>>>>> Every step up until here works fine. I get to the point
>>>> where I
>>>>
>>>>>>>>>>>>>>

>>>>>>>>>>>>>>> turn
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Proc ON
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>>>>> adjust L27 for the same reading as where the PROC is off.
>>>>>>>>>>>>>>>>>>>>> On adjusting L27 with the PROC ON I get no movement on the
>>>
>>>>>>>>>>>>> meter
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> at
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> this
>>>>>>>>>>>>>>>>>>> point, and therefore cannot obtain the same ALC maximum
>>>>>>>>>>>>> reading.
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> On 17/06/2011, at 4:19 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> Chris-Just completed Item 32 Speech Processor Adjustment
>>>> on
>>>>
>>>>>>>>>>>>>>> pages
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> 40&41. As
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> usual the service manual leaves out a few thing!
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> They should tell you to load up normally. Then switch off
>>>> SG
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> switch
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> LEAVE
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> THE HEATER SWITCH ON. You wont get any ALC indication with
>>>> the
>>>>

>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> heater
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> off of the
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Driver Tube. A minor detail. I think they rely on previous
>>>>
>>>>>>>>>>>>> step
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> conditions still
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> being in force?
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> 1. Step 1 is OK except I would prefer that they would say
>>>
>>>>>>>>>>>>> "max
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> reading on
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> the Compression Scale".
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> 2. Step 2 is OK but again they tell you to obtain S-1
>>>>>>>>>>>>> reading.
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> That
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> would be on
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> the S-meter scale. Then they tell you to obtain meter
>>>>>>>>>>>>> indication
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> of
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> 20db
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> that would be on the Compression Scale. So would be better
>>>>
>>>>>>>>>>>>> with
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> a
>>>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> multi-scale
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> meter for them to tell you the expected value and on what
>>>
>>>>>>>>>>>>> meter
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> scale.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> 3. Step 3 is OK but I would prefer they would tell you to
>>>> set
>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> mic
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> gain
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> approximately 1200 o'clock or No. 5 position. I set mine
>>>> at
>>>>
>>>>>>>>>>>>>> 1200
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> and
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> peaked L27.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> 4. Step 4 (top of page 41) Is ok, but might help if they
>>>>>>>>>>>>>> would
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> say
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> something
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> like "top or far right end of black bordered ALC meter
>>>> scale
>>>>
>>>>>>>>>>>>>>>> box".
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Just
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> make it
>>>>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>>>>>>>> very clear what meter position and what scale you are to
>>>>>>>>>>> read.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> So, I think if you load up, place SG switch to off, and
>>>> leave
>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> heater
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> switch on
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> you will be able to complete this Item. Let me know. Terry
>>>>
>>>>>>>>>>>> -K9TW
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>>>>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Ok Terry, thank you.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Been troubleshooting my 990 for a week so haven't had
>>>> much
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> chance
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> check
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> myself, but would be keen to know how it works for you.
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> On 16/06/2011, at 11:05 PM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Chris --Sorry I did not. It is supposed to rain all day
>>>>
>>>>>>>>>>>>>>> so
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> I
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>> will
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> give it a
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> try today and report back. Terry
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> --- In TS-520_820_530_830@yahoogroups.com, Chris Parnell
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> <cparnell1001@>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> wrote:
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> Hi Terry, did you get chance to test the SP alignment
>>>>>>>>>>>>>> in
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> 830
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> at the
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> weekend?
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>>>>>>> Chris, ZL1CDP
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> ------------------------------------
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> ----------
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
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>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> ----------
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Yahoo! Groups Links
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> [Non-text portions of this message have been removed]
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> On 18/06/2011, at 3:13 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>> Chris--I will give some more thought. Not sure what is going on. I
>>>> am just
>>>>
>>>>>>>>>

>>>>>>>>>>>>>> about
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> out of ideas.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I just repeated the test on my daily operating TS-830 with the
>>>> covers on the
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> rig. I just unplugged the mic and brought the test equipment to
>>>> the operating
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> position.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I use a spare mic connector and clipped the generator output to it
>>>> with
>>>>
>>>>>>>
>>>>>>>>>>>>>> mini-clips to pins 1 and 2 (bottom 2 pins). I have the mic gain
>>>> set exactly
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> at
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> No. 4 position. I set SG switch on rear of rig to off and turn on
>>>> rig and
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> heater
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> switches. Let it warm up a little.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I used accurate HP True RMS audio voltmeter to set 1500 hz sine
>>>> wave from
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> Wave
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Tek generator to exactly 10 mv.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I turned Proc off and set Comp level to max CW. I set mode switch
>>>> to USB. I
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> place meter switch in ALC position.
>>>>>>>>>>>>>>

>>>>>>>>>>>>>> I then flip to Send and get ALC meter indication that is just
>>>> outside the max
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> end of the black ALC box. Maybe a needles worth.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I flip back to Stand-by and turn on Proc button. Meter is still in
>>>> ALC
>>>>
>>>>>>>>>>>>>> position
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> and I have not touched mic gain pot.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I flip to Send and the ALC meter indication is a little bit more
>>>> outside the
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> black ALC box. It could be adjusted a little to get a match if I
>>>> had the
>>>>
>>>>>>>>
>>>>>>>>>>>>>> covers
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> off, but close enough. I switch the meter from ALC to Comp and it
>>>> indicates
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> just
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> a little above 20db on the Comp scale.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I repeatedly switched Proc on and off and get the same results. In
>>>> short my
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> as
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> found condition for my daily operator is very close to being right
>>>> on the
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> same
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> indicated level on the ALC meter scale (near max on black border)

>>>> with Proc
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> on
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> and off.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> At this point Chris not sure I can be of any more help? I will
>>>> think about it
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> some more and if I come up with something will write.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Whatever you do you should not have to increase mic gain position
>>>> or increase
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> audio generator output level above 10 mv. Depending on the pre-amp
>>>> gain in
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> your
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> rig you may have to be a little higher than position 4 on the mic
>>>> gain , but
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>> I
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> wouldnt think much higher.
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Also, you might want to measure the sig gen level at your mic
>>>> connection when
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> flipped to Send to make sure it is staying at 10 mv. Mine does not
>>>> vary from
>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Stand-by to Send. Other than that I think I have exhausted my
>>>> experience.
>>>>
>>>>>>>>>

>>>>>>>>>>>>> Good
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>> luck Terry
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>> Sent: Fri, June 17, 2011 10:08:00 AM
>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Hi Terry,
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> The only difference from my original post is that I increased the
>>>> "gain" on
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> the
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> input (Mic gain), therefore got an ALC reading.
>>>>>>>>>>>>>> Point is that I cannot align the ALC for PROC ON & PROC OFF... not
>>>> sure
>>>>
>>>>>>
>>>>>>>>>>>>> why...
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> I don't leave it pegged, I immediately back down the Mic gain to
>>>>>>>>>>> compensate.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Based on what you are reporting I would expect it to
>>>>>>>>>>>>>>>> be something less than far right of ALC black box? Assuming it is
>>>> somewhere
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>> in
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> Once I have done the initial adjustment Terry, and get the ALC to
>>>> the far
>>>>
>>>>>>>>>
>>>>>>>>>>>>> right
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> of the "ALC BOX" I cannot get L27 to peak the reading up to the

>>>> same.
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Hope this makes sense..
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> On 18/06/2011, at 1:13 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Chris--This appears different than what you originally reported
>>>> of getting
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>> no
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> ALC indication? Why now getting ALC indication? What did you do
>>>> different?
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Where
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> is your mic gain set at? I would not leave meter pegged to long
>>>> as it is
>>>>
>>>>>>>>>
>>>>>>>>>>>>>> hard
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> on
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the movement. I would slowly turn down mic gain until I could get
>>>> meter off
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> the
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> peg.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> With Proc off key rig and back off mic gain to get ALC at 20db or
>>>> at least
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>> off
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>

>>>>>>>>>>>>>>> the peg and on the meter scale. Now turn on Proc and key rig and
>>>> report
>>>>
>>>>>>>
>>>>>>>>>>>>> back
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> what your ALC reading is. Based on what you are reporting I would
>>>> expect it
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> be something less than far right of ALC black box? Assuming it is
>>>> somewhere
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> in
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> the ALC box window can you adjust L27 and bring the reading up?
>>>> Terry
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>>> To: "TS-520_820_530_830@yahoogroups.com"
>>>>>>>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>>>>>>>>> Cc: "TS-520_820_530_830@yahoogroups.com"
>>>>>>>>>>>>> <TS-520_820_530_830@yahoogroups.com>
>>>>>>>>>>>>>>>> Sent: Fri, June 17, 2011 8:36:35 AM
>>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor alignment
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Terry I meant to say "full on-scale deflection of ALC (ie end of
>>>> black ALC
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>> setting), with processor on and full scale (pegged meter)
>>>> deflection
>>>>
>>>>>>>>>>>>> without
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> PROC NOT engaged, just Mic.
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>> Sent from my iPhone

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> On 18/06/2011, at 12:33 AM, Chris Parnell <cparnell1001@> wrote:
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Hi Terry, in a nutshell,
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> It doesn't weigh up here.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Following to the letter the service manual and then taking into
>>>> account
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>>> your
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> notes, the final situation is that I end up with full on-scale
>>>> deflection
>>>>
>>>>>>>>>>>
>>>>>>>>>>>>>>> of
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> ALC
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> (ie end of black ALC setting), with processor on and full scale
>>>> (pegged
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>>> meter)
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> deflection without PROC engaged, just Mic.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> God knows but I cannot get ALC to be the same with PROC ON and
>>>> PROC OFF.
>>>>
>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Thanks
>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> Sent from my iPhone
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> On 17/06/2011, at 11:52 AM, Terry Wagoner <wagstw46@> wrote:
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Yes--Objective is for a given mic gain setting with 10mv
>>>> applied to
>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>> have

>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> same
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> ALC reading (max) with Processor on and off. You should not
>>>> have to
>>>>
>>>>>>>>>>>>>> adjust
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> mic
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> gain or input signal level once balanced. You should be able to
>>>> flip to
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Tune
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> with Proc on and off and see approx the same max ALC
>>>> indication.
>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> If you initially get no indication (I think that is your
>>>> problem?) you
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> can
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> move
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> mic gain up slightly until you get an indication. It wont take
>>>> much and
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> will
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> be
>>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>>>> very touchy and will want to peg the meter. Only other choice
>>>> you have
>>>>
>>>>>>>>>
>>>>>>>>>>>>>>> is
>>>>>>>>>>>>>>

>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> set
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> audio generator output higher as others suggested. I chose to
>>>> just
>>>>
>>>>>>>>>>>>>> increase
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> mic gain until I got an indication. After I found that point I
>>>> no
>>>>
>>>>>>>>>>>>> longer
>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> needed
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> to touch the mic gain. If I had to increase mic gain each time
>>>> then it
>>>>
>>>>>>>>>
>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> would
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> not be a valid adjustment. As I mentioned I ended up getting
>>>> pretty
>>>>
>>>>>>>>>>>>> good
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> matched
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> ALC indication with mic gain just a hair past No.4. Terry
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> _____
>>>>>>>>>>>>>>>>>> From: Chris Parnell <cparnell1001@>
>>>>>>>>>>>>>>>>>> To: TS-520_820_530_830@yahoogroups.com
>>>>>>>>>>>>>>>>>> Sent: Thu, June 16, 2011 7:29:50 PM
>>>>>>>>>>>>>>>>>> Subject: Re: [TS-520_820_530_830] Re: Speech Processor
>>>> alignment
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Thanks Terry,
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> So... just so I'm clear... you are adjusting Mic Gain with Proc
>>>> OFF
>>>>
>>>>>>>>>>>>> then

>>>>>>>>>>>>>
>>>>>>>>>>>>>> ON
>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>> to
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> same point? that's what it states from memory... point of
>>>> exercise is
>>>>
>>>>>>>
>>>>>>>>>>>>> to
>>>>>>>>>>>>>
>>>>>>>>>>>>>
>>>>>>>>>>>>>>> have
>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>> ALC reading same position with Proc ON and OFF.
>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> Cheers
>>>>>>>>>>>>>>>>>> Chris
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>> On 17/06/2011, at 11:27 AM, Terry Wagoner wrote:
>>>>>>>>>>>>>>>>>>
>>>>>>>>>>>>>>>>>>> Chris--Just repeated adjustments and was
(Message over 64 KB, truncated)

32054. Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 12:23:09 UTC
From: g3uhu
Topic: 32017 Message: 32054

Hi Gordon,
Dunno!
I can't seem to find anywhere to check, but I expect it will be blindingly obvious after somebody points me in the right direction!
Using Windows XP and IE8.

73
Dave G3UHU

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Dave,
> are you viewing the messages as Original HTML ?
>
> Gordon
> N6WK
>
>
>
> On 6/23/2011 1:15 AM, g3uhu wrote:
> >
> > Hi Joe,
> > I often see funny characters in posts (not just yours and not just in
> > this group. For instance, in your post I see
> > quote
> > current"Â and
> > unquote
> >
> > I often wonder what causes this, I usually blame Windows and/or
> > Intenet Explorer!
> >
> > 73
> > Dave G3UHU
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > <stilesjoseph@> wrote:
> > >
> > > Greetings group,
> > >
> > > A member of this group contacted me stating that he could not read
> > my post(s) due to "non-text stuff" being included in the msg. Has
> > anybody else had this problem??
> > >
> > > 73's joe wb7uqu

> > >
> > >
> > > [Non-text portions of this message have been removed]
> > >
> >
> >
>

32055. Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 15:50:48 UTC
From: w5rkl
Topic: 32017 Message: 32055

I also see those same funny "A" and other strange characters in posts. My initial thought was the characters came from folks using cell phones to text their response, maybe because of incompatible Cell phone fonts. I can't verify this because I don't own a cell phone (don't want one either) so that's just an idea so don't take that as gospel.

I changed my options for a week to receive responses/postings through e-mail. During that period I don't recall seeing the funny "A" and other strange characters when viewing e-mail. I use Yahoo on-line e-mail. I also use Firefox 5 and have been using Firefox for quite some time, ever since Firefox 3 came out. I don't like Internet Explorer. I no longer receive responses/posts through e-mail, changed options back to web only.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "g3uhu" <dave@...> wrote:
>
> Hi Gordon,
> Dunno!
> I can't seem to find anywhere to check, but I expect it will be blindingly obvious after somebody points me in the right direction!
> Using Windows XP and IE8.
>
> 73
> Dave G3UHU
>
>
> --- In TS-520_820_530_830@yahoogroups.com, n6wk@ wrote:
> >
> > Dave,
> > are you viewing the messages as Original HTML ?
> >
> > Gordon
> > N6WK
> >
> >
> >
> > On 6/23/2011 1:15 AM, g3uhu wrote:
> > >
> > > Hi Joe,
> > > I often see funny characters in posts (not just yours and not just in
> > > this group. For instance, in your post I see
> > > quote
> > > current"Â and
> > > unquote
> > >

> > > I often wonder what causes this, I usually blame Windows and/or
> > > Intenet Explorer!
> > >
> > > 73
> > > Dave G3UHU
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@> wrote:
> > > >
> > > > Greetings group,
> > > >
> > > > A member of this group contacted me stating that he could not read
> > > my post(s) due to "non-text stuff" being included in the msg. Has
> > > anybody else had this problem??
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> >
>

32056. Re: [TS-520_820_530_830] Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 17:05:39 UTC
From: n6wk@n6wk.com
Topic: 32017 Message: 32056

Dave,
what mail program do you use?
Outlook? Gmail? Thunderbird?

73,
Gordon
N6WK

On 6/24/2011 5:23 AM, g3uhu wrote:
>
> Hi Gordon,
> Dunno!
> I can't seem to find anywhere to check, but I expect it will be
> blindingly obvious after somebody points me in the right direction!
> Using Windows XP and IE8.
>
> 73
> Dave G3UHU
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Dave,
> > are you viewing the messages as Original HTML ?
> >
> > Gordon
> > N6WK
> >
> >
> >
> > On 6/23/2011 1:15 AM, g3uhu wrote:
> > >
> > > Hi Joe,
> > > I often see funny characters in posts (not just yours and not just in
> > > this group. For instance, in your post I see
> > > quote
> > > current"? and
> > > unquote
> > >
> > > I often wonder what causes this, I usually blame Windows and/or
> > > Intenet Explorer!
> > >
> > > 73
> > > Dave G3UHU
> > >

> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > <stilesjoseph@> wrote:
> > > >
> > > > Greetings group,
> > > >
> > > > A member of this group contacted me stating that he could not read
> > > my post(s) due to "non-text stuff" being included in the msg. Has
> > > anybody else had this problem??
> > > >
> > > > 73's joe wb7uqu
> > > >
> > > >
> > > > [Non-text portions of this message have been removed]
> > > >
> > >
> > >
> >
>
>

32057. Re: Inspecting filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 17:40:48 UTC
From: rkersey tds.net
Topic: 32041 Message: 32057

Hi Mike,

I have looked at the operating manual. I notice that step #3 in installing the filter says remove eight screws (to remove the board) and step #7 says to replace six screws, and I guess this is a mistake. Aside from that, the manual does not specifically say that all four filters are visible on the top of the board, which is what I was asking about, but I assume that is the case and that, if they have not been harvested, all four filters will be visible once the top cover is removed. Let me know if I am wrong about that.

73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

32058. Bandswitch: solder or silver paint TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 17:25:00 UTC
From: bpierfel
Topic: 32058 Message: 32058

My TS-530S has the too common band switch issues of loose rivets. I've read some posts where people have soldered to repair it and read of others using conductive silver paint. So what do the gurus recommend? I would think that soldering would be more robust long term, but is there danger of heating the switch fingers and them loosing their springiness?

I plan to remove the RF board from the radio and remove all the wafers to perform the repair.

BTW, I'm looking for a CW filter for the 530
tnx
Bob
KB8TL

32059. Re: Inspecting filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 18:09:06 UTC
From: n6wk_skcc3
Topic: 32041 Message: 32059

Roy,
When you remove the top cover and look in, this is what you should see on the TOP of the IF board if you have all four filters.
http://www.n6wk.com/kenwood/TS-830S-4%20filters.jpg
I have them numbered inside red circles
73,
Gordon

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike,
>
> I have looked at the operating manual. I notice that step #3 in installing
> the filter says remove eight screws (to remove the board) and step #7 says
> to replace six screws, and I guess this is a mistake. Aside from that, the
> manual does not specifically say that all four filters are visible on the
> top of the board, which is what I was asking about, but I assume that is the
> case and that, if they have not been harvested, all four filters will be
> visible once the top cover is removed. Let me know if I am wrong about
> that.
>
> 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

32060. Re: Inspecting filters

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 19:53:30 UTC
From: w5rkl
Topic: 32041 Message: 32060

Hi Roy,

Gordon's pictures are exactly what you should see.

Yes, there are "misprints" or "typos" in the manuals. If you removed 8 mounting screws from the IF board then it stands to reason you would put 8 mounting screws back on the IF board.

Don't be fooled into believing that "GOLD" means the 830 is fully loaded with filters. You should always open the top cover and verify the presence of filters in the transceiver.

The larger filters are the 8.830Mhz first IF filter and the smaller filters are the 455Khz second IF filters.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "rkersey tds.net" <rkersey@...> wrote:
>
> Hi Mike,
>
> I have looked at the operating manual. I notice that step #3 in installing
> the filter says remove eight screws (to remove the board) and step #7 says
> to replace six screws, and I guess this is a mistake. Aside from that, the
> manual does not specifically say that all four filters are visible on the
> top of the board, which is what I was asking about, but I assume that is the
> case and that, if they have not been harvested, all four filters will be
> visible once the top cover is removed. Let me know if I am wrong about
> that.
>
> 73,
> Roy Kersey
> KI4HAG
>
>
> [Non-text portions of this message have been removed]
>

32061. Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 20:26:09 UTC
From: g3uhu
Topic: 32017 Message: 32061

Gordon,
I don't read the posts via e-mail, only on the web using IE8.
73
Dave G3UHU

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> Dave,
> what mail program do you use?
> Outlook? Gmail? Thunderbird?
>
> 73,
> Gordon
> N6WK
>
> On 6/24/2011 5:23 AM, g3uhu wrote:
> >
> > Hi Gordon,
> > Dunno!
> > I can't seem to find anywhere to check, but I expect it will be
> > blindingly obvious after somebody points me in the right direction!
> > Using Windows XP and IE8.
> >
> > 73
> > Dave G3UHU
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > >
> > > Dave,
> > > are you viewing the messages as Original HTML ?
> > >
> > > Gordon
> > > N6WK
> > >
> > >
> > >
> > > On 6/23/2011 1:15 AM, g3uhu wrote:
> > > >
> > > > Hi Joe,
> > > > I often see funny characters in posts (not just yours and not just in
> > > > this group. For instance, in your post I see
> > > > quote
> > > > current"Â and
> > > > unquote

> > > >
> > > > I often wonder what causes this, I usually blame Windows and/or
> > > > Intenet Explorer!
> > > >
> > > > 73
> > > > Dave G3UHU
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > > <stilesjoseph@> wrote:
> > > > >
> > > > > Greetings group,
> > > > >
> > > > > A member of this group contacted me stating that he could not read
> > > > my post(s) due to "non-text stuff" being included in the msg. Has
> > > > anybody else had this problem??
> > > > >
> > > > > 73's joe wb7uqu
> > > > >
> > > > >
> > > > > [Non-text portions of this message have been removed]
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32062. Re: [TS-520_820_530_830] Re: can't read post

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 20:37:02 UTC
From: n6wk@n6wk.com
Topic: 32017 Message: 32062

Oh,
I only use Email but will go to the web and check it out.

Thanks,
Gordon
N6WK

On 6/24/2011 1:26 PM, g3uhu wrote:
>
> Gordon,
> I don't read the posts via e-mail, only on the web using IE8.
> 73
> Dave G3UHU
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@... wrote:
> >
> > Dave,
> > what mail program do you use?
> > Outlook? Gmail? Thunderbird?
> >
> > 73,
> > Gordon
> > N6WK
> >
> > On 6/24/2011 5:23 AM, g3uhu wrote:
> > >
> > > Hi Gordon,
> > > Dunno!
> > > I can't seem to find anywhere to check, but I expect it will be
> > > blindingly obvious after somebody points me in the right direction!
> > > Using Windows XP and IE8.
> > >
> > > 73
> > > Dave G3UHU
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>, n6wk@ wrote:
> > > >
> > > > Dave,
> > > > are you viewing the messages as Original HTML ?
> > > >
> > > > Gordon
> > > > N6WK

> > > >
> > > >
> > > >
> > > > On 6/23/2011 1:15 AM, g3uhu wrote:
> > > > >
> > > > > Hi Joe,
> > > > > I often see funny characters in posts (not just yours and not
> just in
> > > > > this group. For instance, in your post I see
> > > > > quote
> > > > > current"? and
> > > > > unquote
> > > > >
> > > > > I often wonder what causes this, I usually blame Windows and/or
> > > > > Intenet Explorer!
> > > > >
> > > > > 73
> > > > > Dave G3UHU
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > > > > <mailto:TS-520_820_530_830%40yahoogroups.com>, Joseph Stiles
> > > > > <stilesjoseph@> wrote:
> > > > > >
> > > > > > Greetings group,
> > > > > >
> > > > > > A member of this group contacted me stating that he could
> not read
> > > > > my post(s) due to "non-text stuff" being included in the msg. Has
> > > > > anybody else had this problem??
> > > > > >
> > > > > > 73's joe wb7uqu
> > > > > >
> > > > > >
> > > > > > [Non-text portions of this message have been removed]
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32063. Re: [TS-520_820_530_830] Bandswitch: solder or silver paint TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 23:21:25 UTC
From: Joseph Stiles
Topic: 32058 Message: 32063

Bob,

"Conductive paint" will not fix a mechanical connection. If the rivet is indeed loose, soldering may only last a short time as it is not designed for mechanical support. I have repaired 3 or 4 "wafer" boards with the problem you are describing with short, fine thread stainless steel screws and lockwashers/nuts, and then checked continuity of connection. Have not have a failure yet. Good luck.....

73's Joe
WB7UQU

From: bpierfel <bpierfel@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Friday, June 24, 2011 10:25 AM
Subject: [TS-520_820_530_830] Bandswitch: solder or silver paint TS-530S

My TS-530S has the too common band switch issues of loose rivets. I've read some posts where people have soldered to repair it and read of others using conductive silver paint. So what do the gurus recommend? I would think that soldering would be more robust long term, but is there danger of heating the switch fingers and them loosing their springiness?

I plan to remove the RF board from the radio and remove all the wafers to perform the repair.

BTW, I'm looking for a CW filter for the 530
tnx
Bob
KB8TL

[Non-text portions of this message have been removed]

32064. Re: No Frequency Display on TS-830

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-24 23:25:03 UTC
From: roberteleazer@rocketmail.com
Topic: 32046 Message: 32064

Paul:

Well, first does the set work otherwise? Does it receive and transmit and seem to be on the correct frequency according to the markings on the dial?

There are two things that can cause this problem.

1. A failure in the display unit itself, with a wee bit of corrosion on the contacts the most common problem. The corrosion does not have to be visible to cause a problem.
2. A failure in the VFO, carrier unit, or VCO/PD. This will take out the whole set, receiver and transmitter and all.

Robert
WB5WSV
--- In TS-520_820_530_830@yahoogroups.com, "Paul Delange" <1cpaul@...> wrote:
>
> Need help with the frequency display panel. i have no display at all. Any idea where to start looking?
>
> Thanks
> Paul, KF7HQ
>

32065. RE: [TS-520_820_530_830] Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 02:54:22 UTC
From: Kevin King
Topic: 32040 Message: 32065

Roy,

I like my behringer hps3000's picked them up by chance at a thrift store. I would buy a new set if these fail..

-Kevin

From: TS-520_820_530_830@yahoogroups.com [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of rkersey tds.net
Sent: Thursday, June 23, 2011 12:00 PM
To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] Recommended headsets?

Hello All,

I am still a ways from getting on the air with my TS-830S. I have a nice old Shure mike for it, but I was recently thinking that, with my hearing problems, I might do better with a headset that would seal out extraneous noise and allow me to use the direct connection afforded by the voice coil switch on my hearing aids. I see that at eham there are several cheap headsets that are touted as being pretty good. Does anyone have some recommendations for a headset that would work well with the TS-830S?

TIA &73,
Roy Kersey
KI4HAG

[Non-text portions of this message have been removed]

[Non-text portions of this message have been removed]

32066. Re: [TS-520_820_530_830] Bandswitch: solder or silver paint TS-530S

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 03:04:23 UTC
From: Jeramy Ross
Topic: 32058 Message: 32066

Agreed. If the rivets are actually loose, you have to either re-rivet them (not an easy job) or use the screw remedy that Joe mentioned. Either way, you have to be careful not to crack the phenolic wafer through which the rivets go. Do that, and you're going to have to replace that entire section of the switch.

73,
Jeramy W5XTL

On Fri, Jun 24, 2011 at 6:21 PM, Joseph Stiles <stilesjoseph@...> wrote:
> Bob,
>
> "Conductive paint" will not fix a mechanical connection. If the rivet is indeed loose, soldering may only last a short time as it is not designed for mechanical support. I have repaired 3 or 4 "wafer" boards with the problem you are describing with short, fine thread stainless steel screws and lockwashers/nuts, and then checked continuity of connection. Have not have a failure yet. Good luck.....
>
>
> 73's Joe
> WB7UQU
>
>
> _____
> From: bpierfel <bpierfel@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Friday, June 24, 2011 10:25 AM
> Subject: [TS-520_820_530_830] Bandswitch: solder or silver paint TS-530S
>
>
>
> My TS-530S has the too common band switch issues of loose rivets. I've read some posts where people have soldered to repair it and read of others using conductive silver paint.
> So what do the gurus recommend? I would think that soldering would be more robust long term, but is there danger of heating the switch fingers and them loosing their springiness?
>
> I plan to remove the RF board from the radio and remove all the wafers to perform the repair.
>
> BTW, I'm looking for a CW filter for the 530
> tnx
> Bob
> KB8TL
>
>

>
>
> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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32067. Re: Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 05:56:24 UTC
From: Craig Zeller
Topic: 32040 Message: 32067

Roy;

I have had a pair of Sony MDR-V6 phones that I've used
for about three years now. They have great sound quality
and articulation, and are very comfortable to wear for
long periods.

The can be purchased from a number of vendors on eBay.

Craig - WA6EKP

32068. VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 13:43:49 UTC
From: ki4ax
Topic: 17839 Message: 32068

Does anyone know if you can use a VFO-820 on a TS-520? And is $80.00 a good price?

Thanks,

Dan KI4AX

32069. Re: [TS-520_820_530_830] VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 14:21:31 UTC
From: Jeramy Ross
Topic: 17839 Message: 32069

Dan,

You can, but there is a caveat. The 520 series of rigs had their VFO running from 5.5 MHz (at "0" on the sub dial) to 4.9 MHz (at "600" on the sub dial). The 820 series had their VFO running from 5.5 MHz (at "0" on the sub dial) to 5.0 MHz (at "500" on the sub dial). This will only affect you on 10M where you won't be able to cover 29.0 MHz through 29.1 MHz and 29.6 MHz through 29.7 MHz with the VFO-820 (obviously you'll still be able to with the internal VFO on the 520). Not likely to be a big issue with anyone, but bears being pointed out.

73,
Jeramy W5XTL

On Sat, Jun 25, 2011 at 8:43 AM, ki4ax <dan8barb@...> wrote:
> Does anyone know if you can use a VFO-820 on a TS-520? And is $80.00 a good price?
>
> Thanks,
>
> Dan KI4AX
>
>
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> Yahoo! Groups Links
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32070. Re: VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 17:32:41 UTC
From: ki4ax
Topic: 17839 Message: 32070

The VFO-820 that I am looking at does not have the hook-up cable. Are they still available or can I get the stuff to make one?

Dan KI4AX

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> Dan,
>
> You can, but there is a caveat. The 520 series of rigs had their
> VFO running from 5.5 MHz (at "0" on the sub dial) to 4.9 MHz (at "600"
> on the sub dial). The 820 series had their VFO running from 5.5 MHz
> (at "0" on the sub dial) to 5.0 MHz (at "500" on the sub dial). This
> will only affect you on 10M where you won't be able to cover 29.0 MHz
> through 29.1 MHz and 29.6 MHz through 29.7 MHz with the VFO-820
> (obviously you'll still be able to with the internal VFO on the 520).
> Not likely to be a big issue with anyone, but bears being pointed
> out.
>
> 73,
> Jeramy W5XTL
>
> On Sat, Jun 25, 2011 at 8:43 AM, ki4ax <dan8barb@...> wrote:
> > Does anyone know if you can use a VFO-820 on a TS-520? And is $80.00 a good price?
> >
> > Thanks,
> >
> > Dan KI4AX
> >
> >
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> > Yahoo! Groups Links
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32071. Re: [TS-520_820_530_830] Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 17:40:27 UTC
From: John Becker
Topic: 32040 Message: 32071

Ron I have the same problem.
I got a pair at "bust buy" that was priced right
for the use plus a adapter to get it from stereo to
mono. But wal mart had some good ones also I saw
after getting these.

I'm happy with them.

John

At 11:00 AM 6/23/2011, you wrote:
>Hello All,
>
>I am still a ways from getting on the air with my TS-830S. I have a nice
>old Shure mike for it, but I was recently thinking that, with my hearing
>problems, I might do better with a headset that would seal out extraneous
>noise and allow me to use the direct connection afforded by the voice coil
>switch on my hearing aids. I see that at eham there are several cheap
>headsets that are touted as being pretty good. Does anyone have some
>recommendations for a headset that would work well with the TS-830S?
>
>TIA &73,
>Roy Kersey
>KI4HAG
>
>
>[Non-text portions of this message have been removed]
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>Yahoo! Groups Links
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32072. bad habits. . . .

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 17:54:40 UTC
From: John Becker
Topic: 31926 Message: 32072

Guys really would it be to much to ask that text in a post the we all have seen 6 or 7 or more times be deleted for your reply?

Those of us on dial up OR satellite that must pay for daily usage and even more for over usage would "really" love you for it.

John, W0JAB

Thank you much for an afford !

32073. Re: [TS-520_820_530_830] Re: VFO-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 18:03:01 UTC
From: n6wk@n6wk.com
Topic: 17839 Message: 32073

Ken K4EAA sells the parts to make the VFO cables.
I also make them up. $25.00 each shipped to your door.
I just need to know the length desired.

73,
Gordon
N6WK

On 6/25/2011 10:32 AM, ki4ax wrote:
>
> The VFO-820 that I am looking at does not have the hook-up cable. Are
> they still available or can I get the stuff to make one?
>
> Dan KI4AX
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, Jeramy Ross
> <jeramy@...> wrote:
> >
> > Dan,
> >
> > You can, but there is a caveat. The 520 series of rigs had their
> > VFO running from 5.5 MHz (at "0" on the sub dial) to 4.9 MHz (at "600"
> > on the sub dial). The 820 series had their VFO running from 5.5 MHz
> > (at "0" on the sub dial) to 5.0 MHz (at "500" on the sub dial). This
> > will only affect you on 10M where you won't be able to cover 29.0 MHz
> > through 29.1 MHz and 29.6 MHz through 29.7 MHz with the VFO-820
> > (obviously you'll still be able to with the internal VFO on the 520).
> > Not likely to be a big issue with anyone, but bears being pointed
> > out.
> >
> > 73,
> > Jeramy W5XTL
> >
> > On Sat, Jun 25, 2011 at 8:43 AM, ki4ax <dan8barb@...> wrote:
> > > Does anyone know if you can use a VFO-820 on a TS-520? And is
> $80.00 a good price?
> > >
> > > Thanks,
> > >
> > > Dan KI4AX
> > >
> > >
> > >
> > > ------------------------------------

> > >
> > > Yahoo! Groups Links
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32074. Re: [TS-520_820_530_830] bad habits. . . .

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 18:40:39 UTC
From: barrie@eos.net
Topic: 31926 Message: 32074

I agree. Just as bad on a Blackberry, having to scroll through the same message time after time. Jim
WA8SDF
Sent via BlackBerry from T-Mobile

-----Original Message-----
From: John Becker <jab@...>
Sender: TS-520_820_530_830@yahoogroups.com
Date: Sat, 25 Jun 2011 12:54:40
To: <TS-520_820_530_830@yahoogroups.com>
Reply-To: TS-520_820_530_830@yahoogroups.com
Subject: [TS-520_820_530_830] bad habits. . . .

Guys really would it be to much to ask that text in a post the we all
have seen 6 or 7 or more times be deleted for your reply?

Those of us on dial up OR satellite that must pay for daily usage
and even more for over usage would "really" love you for it.

John, W0JAB

Thank you much for an afford !

[Non-text portions of this message have been removed]

32075. Re: [TS-520_820_530_830] Recommended headsets?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 19:54:48 UTC
From: Chris Meyer
Topic: 32040 Message: 32075

I like the current production Kenwood HS-5 headphones. Very comfortable for extended use.

Chris
KI6EQW
On Jun 24, 2011, at 7:54 PM, Kevin King wrote:

> Roy,
>
> I like my behringer hps3000's picked them up by chance at a thrift store. I
> would buy a new set if these fail..
>
> -Kevin
>
> _____
>
> From: TS-520_820_530_830@yahoogroups.com
> [mailto:TS-520_820_530_830@yahoogroups.com] On Behalf Of rkersey tds.net
> Sent: Thursday, June 23, 2011 12:00 PM
> To: TS-520_820_530_830@yahoogroups.com
> Subject: [TS-520_820_530_830] Recommended headsets?
>
> Hello All,
>
> I am still a ways from getting on the air with my TS-830S. I have a nice
> old Shure mike for it, but I was recently thinking that, with my hearing
> problems, I might do better with a headset that would seal out extraneous
> noise and allow me to use the direct connection afforded by the voice coil
> switch on my hearing aids. I see that at eham there are several cheap
> headsets that are touted as being pretty good. Does anyone have some
> recommendations for a headset that would work well with the TS-830S?
>
> TIA &73,
> Roy Kersey
> KI4HAG
>
> [Non-text portions of this message have been removed]
>
> [Non-text portions of this message have been removed]
>
>

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32076. TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 20:17:08 UTC
From: unnorml
Topic: 32076 Message: 32076

Have a TS-820 that worked fine when powered up last year.
Recently turned it on last week only to blow the main fuse.
Connected 100W light bulb in series with incoming power to protect transformer.
Disconnected all power from load side of transformer, reconnected back 1 at a time to find that the 800V load was causing the issue.
Disconnected 800V load from rectifier board to find problem still exists.
Disconnected ground jumper from D1, R1, D2, R2 on 800V section of rectifier board (X43-1090-02), which seemed to stop the over current draw.
So I suspected any of the Diodes and/or Resistors in this circuit.
Replaced D1 - D4 (NTE125) and R1 - R4 (470K 1/2W) on Rectifier board.
Problem still exists.
Again I disconnected the Ground Jumper from D1, R1, D2, R2 on 800V section of rectifier board. No over current draw.
Reconnected and problem arises again - repeated this twice just to make sure.
According to the schematic - this section is the only area to cause this problem.
Out of ideas and running out of hair (being pulled out)

Can something else cause the Main Fuse to blow???
Any ideas and/or suggestions would be greatly appreciated.

Mike - KI4FDH

32077. Re: TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 22:06:49 UTC
From: unnorml
Topic: 32076 Message: 32077

OK - Please respond with a comment if my finding is wrong.

Checked the HV Caps and found that 1 of the caps is shorted.
No cap value and less than 2 ohms resistance.
I've ordered a HV cap replacement set from Ken K4EAA.
Hopefully this will solve my problem.

I didn't figure that these would cause this problem with the 800V disconnected from the Rectifier Board and still cause the Fuse to blow.

Any explanations would be greatly appreciated.

Mike - KI4FDH

--- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@...> wrote:
>
> Have a TS-820 that worked fine when powered up last year.
> Recently turned it on last week only to blow the main fuse.
> Connected 100W light bulb in series with incoming power to protect transformer.
> Disconnected all power from load side of transformer, reconnected back 1 at a time to find that the 800V load was causing the issue.
> Disconnected 800V load from rectifier board to find problem still exists.
> Disconnected ground jumper from D1, R1, D2, R2 on 800V section of rectifier board (X43-1090-02), which seemed to stop the over current draw.
> So I suspected any of the Diodes and/or Resistors in this circuit.
> Replaced D1 - D4 (NTE125) and R1 - R4 (470K 1/2W) on Rectifier board.
> Problem still exists.
> Again I disconnected the Ground Jumper from D1, R1, D2, R2 on 800V section of rectifier board. No over current draw.
> Reconnected and problem arises again - repeated this twice just to make sure.
> According to the schematic - this section is the only area to cause this problem.
> Out of ideas and running out of hair (being pulled out)
>
> Can something else cause the Main Fuse to blow???
> Any ideas and/or suggestions would be greatly appreciated.
>
> Mike - KI4FDH
>

32078. Re: TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 22:18:26 UTC
From: w5rkl
Topic: 32076 Message: 32078

If one or both HV filter caps are shorted, the fuse will blow.
Since you replaced the diodes and resistors on the Rectifier Unit,
I would check them to ensure they have not failed again, BEFORE, you power up the 820 after replacing the caps.

Make sure you pay attention to the polarity of the HV replacement caps. Those 2 capacitors are wired in "series". If you wire them wrong you can easily damage other circuits when powering up the 820.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@...> wrote:
>
> OK - Please respond with a comment if my finding is wrong.
>
> Checked the HV Caps and found that 1 of the caps is shorted.
> No cap value and less than 2 ohms resistance.
> I've ordered a HV cap replacement set from Ken K4EAA.
> Hopefully this will solve my problem.
>
> I didn't figure that these would cause this problem with the 800V disconnected from the Rectifier Board and still cause the Fuse to blow.
>
> Any explanations would be greatly appreciated.
>
> Mike - KI4FDH
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@> wrote:
> >
> > Have a TS-820 that worked fine when powered up last year.
> > Recently turned it on last week only to blow the main fuse.
> > Connected 100W light bulb in series with incoming power to protect transformer.
> > Disconnected all power from load side of transformer, reconnected back 1 at a time to find that the 800V load was causing the issue.
> > Disconnected 800V load from rectifier board to find problem still exists.
> > Disconnected ground jumper from D1, R1, D2, R2 on 800V section of rectifier board (X43-1090-02), which seemed to stop the over current draw.
> > So I suspected any of the Diodes and/or Resistors in this circuit.
> > Replaced D1 - D4 (NTE125) and R1 - R4 (470K 1/2W) on Rectifier board.
> > Problem still exists.
> > Again I disconnected the Ground Jumper from D1, R1, D2, R2 on 800V section of rectifier board. No over current draw.

> > Reconnected and problem arises again - repeated this twice just to make sure.
> > According to the schematic - this section is the only area to cause this problem.
> > Out of ideas and running out of hair (being pulled out)
> >
> > Can something else cause the Main Fuse to blow???
> > Any ideas and/or suggestions would be greatly appreciated.
> >
> > Mike - KI4FDH
> >
>

32079. Re: TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 22:29:50 UTC
From: unnorml
Topic: 32076 Message: 32079

Thanks for the prompt reply and the support Mike,

I don't believe I'll have a problem with the rectifier circuit, I have not given full power to it yet.
I will however, double check before power up.
I noticed the series wiring on the schematic, and will be mind full of that. I've blown electrolytics before using "reverse polarity".

I'll post a reply after the install and start up for informational and reading enjoyment.

Thank You again and 73,

Mike - KI4FDH

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> If one or both HV filter caps are shorted, the fuse will blow.
> Since you replaced the diodes and resistors on the Rectifier Unit,
> I would check them to ensure they have not failed again, BEFORE, you power up the 820 after replacing the caps.
>
> Make sure you pay attention to the polarity of the HV replacement caps. Those 2 capacitors are wired in "series". If you wire them wrong you can easily damage other circuits when powering up the 820.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@> wrote:
> >
> > OK - Please respond with a comment if my finding is wrong.
> >
> > Checked the HV Caps and found that 1 of the caps is shorted.
> > No cap value and less than 2 ohms resistance.
> > I've ordered a HV cap replacement set from Ken K4EAA.
> > Hopefully this will solve my problem.
> >
> > I didn't figure that these would cause this problem with the 800V disconnected from the Rectifier Board and still cause the Fuse to blow.
> >
> > Any explanations would be greatly appreciated.
> >
> > Mike - KI4FDH
> >

> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@> wrote:
> > >
> > > Have a TS-820 that worked fine when powered up last year.
> > > Recently turned it on last week only to blow the main fuse.
> > > Connected 100W light bulb in series with incoming power to protect transformer.
> > > Disconnected all power from load side of transformer, reconnected back 1 at a time to find that the 800V load was causing the issue.
> > > Disconnected 800V load from rectifier board to find problem still exists.
> > > Disconnected ground jumper from D1, R1, D2, R2 on 800V section of rectifier board (X43-1090-02), which seemed to stop the over current draw.
> > > So I suspected any of the Diodes and/or Resistors in this circuit.
> > > Replaced D1 - D4 (NTE125) and R1 - R4 (470K 1/2W) on Rectifier board.
> > > Problem still exists.
> > > Again I disconnected the Ground Jumper from D1, R1, D2, R2 on 800V section of rectifier board. No over current draw.
> > > Reconnected and problem arises again - repeated this twice just to make sure.
> > > According to the schematic - this section is the only area to cause this problem.
> > > Out of ideas and running out of hair (being pulled out)
> > >
> > > Can something else cause the Main Fuse to blow???
> > > Any ideas and/or suggestions would be greatly appreciated.
> > >
> > > Mike - KI4FDH
> > >
> >
>

32080. TS-520S Low Output Power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-25 22:47:11 UTC
From: unnorml
Topic: 32080 Message: 32080

Hey guys. Thanks for previous help, I've got another one for you.

I have a TS-520S that has low output power.
On 20m with the Mode setting on CW and keying up the output will "bump" up to around 90W and immediately drop to just less than 60W.
I have replaced the Finals and Driver tube, and performed the alignment and neutralized the finals.
Due to the age, I suspect the HV caps are getting "soft", as I have heard before.
I think they are due for replacement and was asking for any thoughts on that.

I was working on a fellow Ham's TS-820S and came across the HV caps being bad. This made me think of the output on the 520S.

Thanks for any and all words of wisdom.

73,

Nike -KI4FDH

32081. Re: [TS-520_820_530_830] TS-520S Low Output Power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 01:40:31 UTC
From: Joseph Stiles
Topic: 32080 Message: 32081

Nike,

Check the voltage on the HV caps with a VOM/DMM..capable of 1,000VDC....the panel meter may not be accurate due to aging resistors in that circuit, but may give you a clue as to how much the voltage is "sagging." At "idle" it should be 900+ volts...you can measure again with the "heater" on. Then "tune-up" for max output...and measure voltage again while key down...BE CAREFUL...you are messing around volts that can make you SK. You should see about 780+ or so volts on KEY DOWN...less than about 750V key down usually indicates bad cap or caps. Replacement kits are readily available. But measure the resistance of the screen and cathode resistors on the final board. They are readily visible with the bottom removed. If these are out of value or get out of value when "stressed" .... ie.. get hot from lots of volts going through them you may also have loss of power indication. If you have high Ip(plate current) low output...say 60-70 or so watts and
good high voltage...look at the cathode resistors before you just go replacing tubes..etc. Are you measuring the output with the panel meter or outboard watt meter? Is this the only band in which this happens?? Did the rig have the same problem(s) with the old finals and driver?? You can get a good look at the resistors you need to "meter out" by looking at K4EAA's web site...lots of good info and pictures. Nice thing about the 520(s)...you don't have to remove the final board to replace any of the screen or cathode R's!

73's Joe
WB7UQU

From: unnorml <unnorml@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Saturday, June 25, 2011 3:47 PM
Subject: [TS-520_820_530_830] TS-520S Low Output Power

Hey guys. Thanks for previous help, I've got another one for you.

I have a TS-520S that has low output power.
On 20m with the Mode setting on CW and keying up the output will "bump" up to around 90W and immediately drop to just less than 60W.
I have replaced the Finals and Driver tube, and performed the alignment and neutralized the finals.
Due to the age, I suspect the HV caps are getting "soft", as I have heard before.
I think they are due for replacement and was asking for any thoughts on that.

I was working on a fellow Ham's TS-820S and came across the HV caps being bad. This made me think of the output on the 520S.

Thanks for any and all words of wisdom.

73,

Nike -KI4FDH

[Non-text portions of this message have been removed]

32082. Re: TS-520S Low Output Power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 13:23:22 UTC
From: w5rkl
Topic: 32080 Message: 32082

Nike,

You did not provide the HV and IP current level indications at both 90 watts and 60 watts.

While it's possible the HV filter capacitors could be causing your problem, without knowing what the voltage and current levels (HV and IP), it's difficult to determine where the problem could be.

If you would, please, tune the 520 up to full power then note the HV and IP current levels at 90 and 60 watts.

Lets look at an example that could be causing your problem "if" one of the HV filter capacitors is bad. The voltage and current levels may not be exactly what your 520 is indicating. I use them only as an example.

For example, lets assume the HV sags from 850VDC in standby to 450VDC in CW transmit. Lets further assume the IP indication is 125ma. With these 2 HV and IP current indications, the power input in the final amplifier will be

.125 x 450 = 56.25 watts

Since the typical efficiency of the final amplifier is 55%, the power output would be

56.25 = 45% = 30.9 watts

Again, this example is just that, an example. Without knowing what your 520's HV and IP indications are at 90 and 60 watts output, it's difficult to say what is actually causing your problem.

When measuring the final amplifier's HV at full output, measure the HV at the "Rectifier Unit's 800" terminal, NOT at the final tube plate caps. RF at the final tube plate caps will contaminate the DC voltage resulting in an invalid DC voltage indication.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@...> wrote:
>
> Hey guys. Thanks for previous help, I've got another one for you.
>
> I have a TS-520S that has low output power.
> On 20m with the Mode setting on CW and keying up the output will "bump" up to around 90W and immediately drop to just less than 60W.
> I have replaced the Finals and Driver tube, and performed the alignment and neutralized the finals.
> Due to the age, I suspect the HV caps are getting "soft", as I have heard before.
> I think they are due for replacement and was asking for any thoughts on that.

>
> I was working on a fellow Ham's TS-820S and came across the HV caps being bad. This made me think of the output on the 520S.
>
> Thanks for any and all words of wisdom.
>
> 73,
>
> Nike -KI4FDH
>

32083. Re: [TS-520_820_530_830] TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 13:30:04 UTC
From: John Davidson
Topic: 32076 Message: 32083

I can't imagine owning a good rig and not using it for a year !?!?!?!?

From: unnorml <unnorml@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Sat, June 25, 2011 4:17:08 PM
Subject: [TS-520_820_530_830] TS-820 Rectifier Circuit (800V Blowing Fuse)

Have a TS-820 that worked fine when powered up last year.
Recently turned it on last week only to blow the main fuse.
???
Any ideas and/or suggestions would be greatly appreciated.

Mike - KI4FDH

[Non-text portions of this message have been removed]

32084. Re: TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 15:31:59 UTC
From: w5rkl
Topic: 32076 Message: 32084

Mike,

Typically, if one or both of the HV filter capacitors short internally, they take out one or more of the HV rectifier diodes as well.

Once you have replaced both HV filter capacitors, notice I said "both", check the four HV rectifier diodes, D1 thru D4, to be absolutely sure they are okay. Assuming diodes D1 thru D4 are okay, especially when the HV filter capacitors have shorted internally, can easily result in no HV to the final amplifier tubes. Never assume or guess anything, always check the component(s) to be absolutely sure. Just because a diode's body does not show any signs of overheating, crack bodies, etc, does not mean they are okay. That is why I said check the diodes to be sure. If one of the diodes is open, replace the all. Diodes are cheap and you don't know the condition of the other 3 diodes. You can use 1N4007 1KV 1amp diodes to replace the original diodes D1 thru D4. Just be sure you ensure the diode's banded leads are inserted into the correct holes in the board.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@...> wrote:
>
> Thanks for the prompt reply and the support Mike,
>
> I don't believe I'll have a problem with the rectifier circuit, I have not given full power to it yet.
> I will however, double check before power up.
> I noticed the series wiring on the schematic, and will be mind full of that. I've blown electrolytics before using "reverse polarity".
>
> I'll post a reply after the install and start up for informational and reading enjoyment.
>
> Thank You again and 73,
>
> Mike - KI4FDH
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > If one or both HV filter caps are shorted, the fuse will blow.
> > Since you replaced the diodes and resistors on the Rectifier Unit,
> > I would check them to ensure they have not failed again, BEFORE, you power up the 820 after replacing the caps.
> >
> > Make sure you pay attention to the polarity of the HV replacement caps. Those 2

capacitors are wired in "series". If you wire them wrong you can easily damage other circuits when powering up the 820.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@> wrote:
> > >
> > > OK - Please respond with a comment if my finding is wrong.
> > >
> > > Checked the HV Caps and found that 1 of the caps is shorted.
> > > No cap value and less than 2 ohms resistance.
> > > I've ordered a HV cap replacement set from Ken K4EAA.
> > > Hopefully this will solve my problem.
> > >
> > > I didn't figure that these would cause this problem with the 800V disconnected from the Rectifier Board and still cause the Fuse to blow.
> > >
> > > Any explanations would be greatly appreciated.
> > >
> > > Mike - KI4FDH
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "unnorml" <unnorml@> wrote:
> > > >
> > > > Have a TS-820 that worked fine when powered up last year.
> > > > Recently turned it on last week only to blow the main fuse.
> > > > Connected 100W light bulb in series with incoming power to protect transformer.
> > > > Disconnected all power from load side of transformer, reconnected back 1 at a time to find that the 800V load was causing the issue.
> > > > Disconnected 800V load from rectifier board to find problem still exists.
> > > > Disconnected ground jumper from D1, R1, D2, R2 on 800V section of rectifier board (X43-1090-02), which seemed to stop the over current draw.
> > > > So I suspected any of the Diodes and/or Resistors in this circuit.
> > > > Replaced D1 - D4 (NTE125) and R1 - R4 (470K 1/2W) on Rectifier board.
> > > > Problem still exists.
> > > > Again I disconnected the Ground Jumper from D1, R1, D2, R2 on 800V section of rectifier board. No over current draw.
> > > > Reconnected and problem arises again - repeated this twice just to make sure.
> > > > According to the schematic - this section is the only area to cause this problem.
> > > > Out of ideas and running out of hair (being pulled out)
> > > >
> > > > Can something else cause the Main Fuse to blow???
> > > > Any ideas and/or suggestions would be greatly appreciated.
> > > >
> > > > Mike - KI4FDH
> > > >
> > >

> >
>

32085. Need help on TS-520S boards...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 16:08:28 UTC
From: Bob
Topic: 32085 Message: 32085

I'll try this again as I got no response on my first post...

I have a fellow Ham in Australia that wants the following boards:
Ant Coil bd..... X44-1070-00 (I have a X44-1170-00)
Mixer Coil bd..... X44-1080-00 (I have a X44-1180-00)
Drive Coil bd..... X44-1090-00 (I have a X44-1190-00)

My 520S serial is 651215
I wander if he may have an earlier 520S & Kenwood came out with the ones I have...

Are the above boards the same?_____
Thanks in advance.
Bob

32086. Re: TS-820 Rectifier Circuit (800V Blowing Fuse)

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 21:40:22 UTC
From: andy_westcott2004
Topic: 32076 Message: 32086

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Mike,
>
> Typically, if one or both of the HV filter capacitors short internally, they take out one or more of the HV rectifier diodes as well.
>

Agreed, and if you fire up the rig with a shorted rectifier you will almost certainly ruin the new caps you have just fitted.

Can't stress this enough; double check that all the diodes are OK and showing the correct forward voltage of 0.5ish to 0.7ish volts, and infinity (or many megohms) in reverse.

Unsolder one end of each diode to test it - don't test in circuit.

Good luck, I hope you get to the bottom of this.

32087. TS-520, TS-529S, and TS-520SE...differences?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 21:57:40 UTC
From: ae5uu
Topic: 32087 Message: 32087

Can anyone of you sum up the differences between the TS-520, TS-520S, and the TS-520SE?

Thanks,

AE5UU

32088. Re: TS-520, TS-529S, and TS-520SE...differences?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 22:45:15 UTC
From: w5rkl
Topic: 32087 Message: 32088

The 520 series transceivers were "basically" the same.

TS-520
Power rating:
120/240 VAC = SSB 200 watts PEP and 160 watts DC input
13.6VDC at 20 amp - 120 watts PEP and CW 90 watts DC input

Bands covered:
80 thru 10, no 160 meters and no WARC bands

DC to DC converter was standard from the factory

Remote VFO-520 or VFO-820 will work, plug and play, no mods required

No receive RF ATTN push button

Meter switch is an outer ring switch with the PLATE control

4 position FIXed crystal select switch right of meter

JJY/WWV band is selected with a push button on lower left of the VFO

No DG-5 digital HET, CAR, VFO, and 13.6VDC connections on rear panel

No Phone Patch IN/Out connections on rear panel

CW/SSB filter select through Mode switch. No Narrow/Wide filter select switch.

TS-520S
Power rating:
120/240VAC = SSB 200 watts PEP and CW - 160 watts DC input
13.6VDC (optional DC to DC converter required for battery power) SSB 120 watts PEP and CW 90 watts DC input

DC to DC converter is "optional", no longer factory standard

Bands covered:
160 thru 10, no WARC bands

JJY/WWV is made part of the band switch

4 position FIXed crystal select is moved as an outer ring switch on the PLATE control

Meter switch is moved to the right of the meter

Receive RF ATTN "push button" replaces the JJY/WWV band push button on the lower left of the VFO

HET, VFO, CAR and 13.6VDC connections on rear panel for connection to DG-5 digital display

Added Phone Patch IN/OUT sockets on rear panel

Remote VFO-520 or VFO-820 plug and play. No mods required

CW/SSB filter selection through Mode switch. No Narrow/Wide filter select switch.

TS-520SE
Power rating:
120/240VAC SSB 200 watts PEP and CW 160 watts DC input

No DC operation option, primary AC power (120/240VAC) operation ONLY

Same HET, VFO, CAR and 13.6VDC connections on rear panel for DG-5 digital display

CW "Wide/Narrow" filter select switch replaces "Heater" switch. Filaments are wired directly to the 12.6VAC secondary winding. No way to turn filament OFF.

VFO-520 and VFO-820 work "Plug and Play". No mods required.

No "X-Verter" 6 and 2 meter option.

There are circuit improvement changes made but the lists above are the most obvious differences between the 3 different TS-520 models.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:
>
> Can anyone of you sum up the differences between the TS-520, TS-520S, and the TS-520SE?
>
> Thanks,
>
> AE5UU
>

32089. Re: Need help on TS-520S boards...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 23:02:41 UTC
From: w5rkl
Topic: 32085 Message: 32089

Hi Bob,

Yes there are differences in the boards in the TS-520 series.

The boards requested by the Australian ham appear to be from his "TS-520" transceiver. The TS-520 was the first transceiver in the series of 520 transceivers.

The board numbers needed by the Australian ham appear to be incorrect.

The Ant Coil board is not X44-1070 but rather X44-1090-00

The Mixer Coil board is not X44-1080-00 but rather X40-0018-01

The Driver Coil board is not X44-10900-00 but rather X40-0017-01

The boards you have are from either a TS-520S or TS-520SE. They will not work, plug and play, in a TS-520.

You should ask him for the PC board "Foil side" number on the boards he is needing. Simply turn the boards over and look at the foil side. There is a number visable on the foil side of the board. The only way to ensure he is getting the correct boards for his transceiver is for him to tell you the exact model (TS-520, TS-520S, or TS-520SE) and the foil side number on each board he needs.

I hope this helps.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@...> wrote:
>
> I'll try this again as I got no response on my first post...
>
> I have a fellow Ham in Australia that wants the following boards:
> Ant Coil bd..... X44-1070-00 (I have a X44-1170-00)
> Mixer Coil bd..... X44-1080-00 (I have a X44-1180-00)
> Drive Coil bd..... X44-1090-00 (I have a X44-1190-00)
>
> My 520S serial is 651215
> I wander if he may have an earlier 520S & Kenwood came out with the ones I
> have...
>
> Are the above boards the same?______
> Thanks in advance.
> Bob
>

32090. Re: Need help on TS-520S boards...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-26 23:45:38 UTC
From: w5rkl
Topic: 32085 Message: 32090

Bob,

The Antenna, Mixer, and Driver boards are small individual boards on the bottom of the 520 mounted between a metal bracket. The band switch shaft runs through all of these boards. These boards are not incorporated in the RF Unit board like they are in the TS-820/820S.

It appears he has not given you the correct component side "X" number for the board's he needs. He should look on pages 48 and 49 of the TS-520 operator's manual, the pictures show what each board's "X" number is and what the board is, i.e., Driver, Mixer, and Ant Coil Unit boards.

As I stated in my last response, he need to provide you with not only the component side "X" number but also the foil side number for each individual board he needs. For example, he needs to do the following

Ant Coil Unit
X44-1090-00 / <Foil side number>

Mixer Coil Unit
X40-0018-01 / <Foil side number>

Driver Coil Unit
X40-0017-01 / <Foil side number>

This will ensure you are giving him the correct boards that will work in his 520.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Bob,
>
> Yes there are differences in the boards in the TS-520 series.
>
> The boards requested by the Australian ham appear to be from his "TS-520" transceiver. The TS-520 was the first transceiver in the series of 520 transceivers.
>
> The board numbers needed by the Australian ham appear to be incorrect.
>
>
> The Ant Coil board is not X44-1070 but rather X44-1090-00
>
> The Mixer Coil board is not X44-1080-00 but rather X40-0018-01
>
> The Driver Coil board is not X44-10900-00 but rather X40-0017-01

>
> The boards you have are from either a TS-520S or TS-520SE. They will not work, plug and play, in a TS-520.
>
> You should ask him for the PC board "Foil side" number on the boards he is needing. Simply turn the boards over and look at the foil side. There is a number visable on the foil side of the board. The only way to ensure he is getting the correct boards for his transceiver is for him to tell you the exact model (TS-520, TS-520S, or TS-520SE) and the foil side number on each board he needs.
>
> I hope this helps.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@> wrote:
> >
> > I'll try this again as I got no response on my first post...
> >
> > I have a fellow Ham in Australia that wants the following boards:
> > Ant Coil bd..... X44-1070-00 (I have a X44-1170-00)
> > Mixer Coil bd..... X44-1080-00 (I have a X44-1180-00)
> > Drive Coil bd..... X44-1090-00 (I have a X44-1190-00)
> >
> > My 520S serial is 651215
> > I wander if he may have an earlier 520S & Kenwood came out with the ones I
> > have...
> >
> > Are the above boards the same?______
> > Thanks in advance.
> > Bob
> >
>

32091. Re: [TS-520_820_530_830] Re: TS-520, TS-529S, and TS-520SE...differences?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-27 00:46:47 UTC
From: Russell Nilson
Topic: 32087 Message: 32091

Thanks Mike...I appreciate the information on the TS-520 series.

Russell

Russell Nilson

rmn43@...

USCG Licensed Master, 3000 Tons, All Oceans

817.310.3088

AE5UU

--- On Sun, 6/26/11, w5rkl <w5rkl@...> wrote:

From: w5rkl <w5rkl@...>
Subject: [TS-520_820_530_830] Re: TS-520, TS-529S, and TS-520SE...differences?
To: TS-520_820_530_830@...m
Date: Sunday, June 26, 2011, 5:45 PM

The 520 series transceivers were "basically" the same.

TS-520

Power rating:

120/240 VAC = SSB 200 watts PEP and 160 watts DC input

13.6VDC at 20 amp - 120 watts PEP and CW 90 watts DC input

Bands covered:

80 thru 10, no 160 meters and no WARC bands

DC to DC converter was standard from the factory

Remote VFO-520 or VFO-820 will work, plug and play, no mods required

No receive RF ATTN push button

Meter switch is an outer ring switch with the PLATE control

4 position FIXed crystal select switch right of meter

JJY/WWV band is selected with a push button on lower left of the VFO

No DG-5 digital HET, CAR, VFO, and 13.6VDC connections on rear panel

No Phone Patch IN/Out connections on rear panel

CW/SSB filter select through Mode switch. No Narrow/Wide filter select switch.

TS-520S

Power rating:

120/240VAC = SSB 200 watts PEP and CW - 160 watts DC input

13.6VDC (optional DC to DC converter required for battery power) SSB 120 watts PEP and CW 90 watts DC input

DC to DC converter is "optional", no longer factory standard

Bands covered:

160 thru 10, no WARC bands

JJY/WWV is made part of the band switch

4 position FIXed crystal select is moved as an outer ring switch on the PLATE control

Meter switch is moved to the right of the meter

Receive RF ATTN "push button" replaces the JJY/WWV band push button on the lower left of the VFO

HET, VFO, CAR and 13.6VDC connections on rear panel for connection to DG-5 digital display

Added Phone Patch IN/OUT sockets on rear panel

Remote VFO-520 or VFO-820 plug and play. No mods required

CW/SSB filter selection through Mode switch. No Narrow/Wide filter select switch.

TS-520SE

Power rating:

120/240VAC SSB 200 watts PEP and CW 160 watts DC input

No DC operation option, primary AC power (120/240VAC) operation ONLY

Same HET, VFO, CAR and 13.6VDC connections on rear panel for DG-5 digital display

CW "Wide/Narrow" filter select switch replaces "Heater" switch. Filaments are wired directly to the 12.6VAC secondary winding. No way to turn filament OFF.

VFO-520 and VFO-820 work "Plug and Play". No mods required.

No "X-Verter" 6 and 2 meter option.

There are circuit improvement changes made but the lists above are the most obvious differences between the 3 different TS-520 models.

73s

Mike

W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "ae5uu" <nilsonrussell@...> wrote:

>

> Can anyone of you sum up the differences between the TS-520, TS-520S, and the TS-520SE?

>

> Thanks,

>

> AE5UU

>

[Non-text portions of this message have been removed]

32092. Wanted: YK-88C or YK-88CN CW filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-27 12:11:00 UTC
From: bpierfel
Topic: 32092 Message: 32092

Or INRAD #97 or #98
For my TS-530S. I'm cheap so the filter must be too.
tnx
Bob

32093. Re: [TS-520_820_530_830] Wanted: YK-88C or YK-88CN CW filter

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-27 18:04:39 UTC
From: Chris Meyer
Topic: 32092 Message: 32093

I got my filter from this guy. Don't remember his name, but he is reliable, and prices are fair, but not "cheap". His email is ricwip@....
On Jun 27, 2011, at 5:11 AM, bpierfel wrote:

> Or INRAD #97 or #98
> For my TS-530S. I'm cheap so the filter must be too.
> tnx
> Bob
>
>

[Non-text portions of this message have been removed]

32094. Re: Need help on TS-520S boards...

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 00:11:47 UTC
From: Bob
Topic: 32085 Message: 32094

Thanks for all of the help.... :)

I had the right boards after all...
Mailing to Australia in the morning...
Bob
****

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Bob,
>
> The Antenna, Mixer, and Driver boards are small individual boards on the bottom of the 520 mounted between a metal bracket. The band switch shaft runs through all of these boards. These boards are not incorporated in the RF Unit board like they are in the TS-820/820S.
>
> It appears he has not given you the correct component side "X" number for the board's he needs. He should look on pages 48 and 49 of the TS-520 operator's manual, the pictures show what each board's "X" number is and what the board is, i.e., Driver, Mixer, and Ant Coil Unit boards.
>
> As I stated in my last response, he need to provide you with not only the component side "X" number but also the foil side number for each individual board he needs. For example, he needs to do the following
>
> Ant Coil Unit
> X44-1090-00 / <Foil side number>
>
> Mixer Coil Unit
> X40-0018-01 / <Foil side number>
>
> Driver Coil Unit
> X40-0017-01 / <Foil side number>
>
> This will ensure you are giving him the correct boards that will work in his 520.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hi Bob,
> >

> > Yes there are differences in the boards in the TS-520 series.
> >
> > The boards requested by the Australian ham appear to be from his "TS-520" transceiver. The TS-520 was the first transceiver in the series of 520 transceivers.
> >
> > The board numbers needed by the Australian ham appear to be incorrect.
> >
> >
> > The Ant Coil board is not X44-1070 but rather X44-1090-00
> >
> > The Mixer Coil board is not X44-1080-00 but rather X40-0018-01
> >
> > The Driver Coil board is not X44-10900-00 but rather X40-0017-01
> >
> > The boards you have are from either a TS-520S or TS-520SE. They will not work, plug and play, in a TS-520.
> >
> > You should ask him for the PC board "Foil side" number on the boards he is needing. Simply turn the boards over and look at the foil side. There is a number visable on the foil side of the board. The only way to ensure he is getting the correct boards for his transceiver is for him to tell you the exact model (TS-520, TS-520S, or TS-520SE) and the foil side number on each board he needs.
> >
> > I hope this helps.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Bob" <ke5ftf@> wrote:
> > >
> > > I'll try this again as I got no response on my first post...
> > >
> > > I have a fellow Ham in Australia that wants the following boards:
> > > Ant Coil bd..... X44-1070-00 (I have a X44-1170-00)
> > > Mixer Coil bd..... X44-1080-00 (I have a X44-1180-00)
> > > Drive Coil bd..... X44-1090-00 (I have a X44-1190-00)
> > >
> > > My 520S serial is 651215
> > > I wander if he may have an earlier 520S & Kenwood came out with the ones I
> > > have...
> > >
> > > Are the above boards the same?______
> > > Thanks in advance.
> > > Bob
> > >
> >
>

32095. Basic troubleshooting question - How do I trace a signal?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 01:37:43 UTC
From: b.mcmillan@sbcglobal.net
Topic: 32095 Message: 32095

Greetings to all,

I recently upgraded to General class and have purchased two Kenwood radios to set up my first HF staion. Both radios have transmit issues and since this group seems to have some very talented minds I thought I would ask a general question.

Here is my issue on each radio;

TS430 - recieves fine,but on transmit the ALC meter pegs out and there is no output.

TS520s (I love this radio!)- recieves fine and seems to transmit OK in CW but very low power in SSB(maybe 10 watts).

I'm afraid I know enough to be dangerous but not enough to isolate the problems.

I have the service manuals but I don't know how to trace the signals. Can anyone tell me the proper procedure for tracing a signal from the mic to the antenna? Also, the schematic shows voltage readings at various points. How exactly do you test these volatges.

I have really enjoyed this group for the past several weeks and I am learning a lot!

Thanks for any guidance. Also,if there is a good book on this subject please let me know as I am very good at learning this way.

73,
Bill
N0YUD

32096. TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 01:33:22 UTC
From: Guillermo
Topic: 32096 Message: 32096

Hi folks,

Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).

I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts !!!

I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
I tried installing the old 12BY7A but no change here, also very low output.
I can see the glow of both 6146's, but I don't know what to do.

Please help me, and thank you in advance.
Guillermo
LU5FAR

32097. Re: [TS-520_820_530_830] TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 02:32:46 UTC
From: n6wk@n6wk.com
Topic: 32096 Message: 32097

You did set the Bias while in USB or LSB... correct?
Not in Tune or CW

Gordon
N6WK

On 6/27/2011 6:33 PM, Guillermo wrote:
>
> Hi folks,
>
> Today I've been doing some adjustments to my TS-830S, fixing a broken
> PROCESSOR switch, and replacing the 12BY7A driver because the previous
> one started showing wear (half power output, no ALC action).
>
> I successfully replaced the 12BY7A, and could get full output power
> and ALC deflect.
> So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> So far so good, until I tried to transmit again, and my wattmeter only
> showed 2 watts !!!
>
> I have excellent TX audio as I checked it with another rig, but I have
> no way to increase the power.
> I tried installing the old 12BY7A but no change here, also very low
> output.
> I can see the glow of both 6146's, but I don't know what to do.
>
> Please help me, and thank you in advance.
> Guillermo
> LU5FAR
>
>

32098. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 03:52:13 UTC
From: Guillermo
Topic: 32096 Message: 32098

Yes Gordon, set when it was in LSB, and it read 60 mA.

--- In TS-520_820_530_830@yahoogroups.com, n6wk@... wrote:
>
> You did set the Bias while in USB or LSB... correct?
> Not in Tune or CW
>
> Gordon
> N6WK
>
> On 6/27/2011 6:33 PM, Guillermo wrote:
> >
> > Hi folks,
> >
> > Today I've been doing some adjustments to my TS-830S, fixing a broken
> > PROCESSOR switch, and replacing the 12BY7A driver because the previous
> > one started showing wear (half power output, no ALC action).
> >
> > I successfully replaced the 12BY7A, and could get full output power
> > and ALC deflect.
> > So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> > So far so good, until I tried to transmit again, and my wattmeter only
> > showed 2 watts !!!
> >
> > I have excellent TX audio as I checked it with another rig, but I have
> > no way to increase the power.
> > I tried installing the old 12BY7A but no change here, also very low
> > output.
> > I can see the glow of both 6146's, but I don't know what to do.
> >
> > Please help me, and thank you in advance.
> > Guillermo
> > LU5FAR
> >
> >
>

32099. stiff drive control ts520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 08:54:47 UTC
From: jeffrey lord
Topic: 32099 Message: 32099

The drive control is very stiff and the reactive range for the control appears small??

On 80Mt I find that I have trouble getting a reading on the meter with out moving the control through it's range a couple of times.

What is the cause of this ? and how do I fix it..

Jeff
Vk4fnrs

[Non-text portions of this message have been removed]

32100. Re: stiff drive control ts520s

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 12:12:20 UTC
From: w5rkl
Topic: 32099 Message: 32100

Hi Jeff,

A stiff DRIVE control could be caused by dirt collection in the DRIVE control hardware and bearings in the variable capacitors. A good cleaning of the hardware, shafts, and capacitor bearings would help.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, jeffrey lord <jc_2aussie@...> wrote:
>
> The drive control is very stiff and the reactive range for the control appears
> small??
>
> On 80Mt I find that I have trouble getting a reading on the meter with out
> moving the control through it's range a couple of times.
>
>
> What is the cause of this ? and how do I fix it..
>
> Jeff
> Vk4fnrs
>
>
> [Non-text portions of this message have been removed]
>

32101. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 12:21:38 UTC
From: w5rkl
Topic: 32096 Message: 32101

Hello Guillermo,

Measure the voltage on the driver tube first.

Connect the DC volt meter's RED lead to pin 2 of the driver tube socket and the Black lead to the 830s chassis.

The voltage in receive should be approximately -43VDC.

The voltage in transmit should be approximately +.4VDC

If the voltage does not change, remains "negative" then I suspect the problem is caused by the relay on the AF Unit board.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@...> wrote:
>
> Hi folks,
>
> Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).
>
> I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
> So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts !!!
>
> I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
> I tried installing the old 12BY7A but no change here, also very low output.
> I can see the glow of both 6146's, but I don't know what to do.
>
> Please help me, and thank you in advance.
> Guillermo
> LU5FAR
>

32102. ts530s 160m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 12:54:47 UTC
From: Joao
Topic: 32102 Message: 32102

hello folks.

anyone who owns a 530s ,

why does the 160m on that rig

say 1.5?

does the vfo start at 1500 khz?

just curious,

because i thought of buying one, and

i just noticed that difference from mine on a photo.

thanks

john

32103. Re: Basic troubleshooting question - How do I trace a signal?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 12:57:55 UTC
From: w5rkl
Topic: 32095 Message: 32103

Hello Bill,

You asked for reading material. I recommend reading the operator and service manual's "Circuit Description" section. This will help you understand how the 520 stages work and each stage contributes to the overall operation of the 520.

I also recommend studying the block diagrams in the operator and service manuals. This will show you how the signal flows in both transmit and receive.

I can give you a more detailed description of how the signals flow, including how the mixing circuits produce the "desired" signal if you drop me an e-mail. I'm good on here but my e-mail address is w5rkl at yahoo.com

I'm not familiar with the TS-430 so I can't comment on it. I can only suggest doing the same, read the circuit description section in the 430 manuals.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "b.mcmillan@..." <b.mcmillan@...> wrote:
>
> Greetings to all,
>
> I recently upgraded to General class and have purchased two Kenwood radios to set up my first HF staion. Both radios have transmit issues and since this group seems to have some very talented minds I thought I would ask a general question.
>
> Here is my issue on each radio;
>
> TS430 - recieves fine,but on transmit the ALC meter pegs out and there is no output.
>
> TS520s (I love this radio!)- recieves fine and seems to transmit OK in CW but very low power in SSB(maybe 10 watts).
>
> I'm afraid I know enough to be dangerous but not enough to isolate the problems.
>
> I have the service manuals but I don't know how to trace the signals. Can anyone tell me the proper procedure for tracing a signal from the mic to the antenna? Also, the schematic shows voltage readings at various points. How exactly do you test these volatges.
>
> I have really enjoyed this group for the past several weeks and I am learning a lot!
>
> Thanks for any guidance. Also,if there is a good book on this subject please let me know as I am very good at learning this way.
>

> 73,
> Bill
> N0YUD
>

32104. Re: ts530s 160m

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 13:01:01 UTC
From: w5rkl
Topic: 32102 Message: 32104

Hi John,

The VFO does not operate at 1.5Mhz or any of the other band switch setting frequencies. The VFO frequency range is between 5.500Mhz and 6Mhz on ALL bands. The VFO, Carrier signal, and VCO oscillators in the PLL Unit produce the correct frequency that is applied to the RF Unit in both transmit and receive. If you have the operator and/or service manual for the 530, I recommend reading the Circuit Description so you have a better idea of how the overall operation in the 530 occurs.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Joao" <phoenixproject@...> wrote:
>
> hello folks.
>
> anyone who owns a 530s ,
>
> why does the 160m on that rig
>
> say 1.5?
>
> does the vfo start at 1500 khz?
>
> just curious,
>
> because i thought of buying one, and
>
> i just noticed that difference from mine on a photo.
>
> thanks
>
> john
>

32105. Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 15:42:01 UTC
From: Terry Wagoner
Topic: 32105 Message: 32105

I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small green case radial lead ferrite core RF inductors/chokes.

L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver plate supply but prefer a 470uhy choke that has not seen plate current so selected L42 to harvest)

I have checked with Mouser and Digi-Key and they do not stock these chokes.

Anyone have a parts only RF board that they would be willing to pull these from or just sell the board to me? Board can be in bad shape and have bad foils, jumpers, etc. Does not have to have the drive variable capacitors etc.

Thanks-Terry K9TW

32106. Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 16:03:07 UTC
From: w5rkl
Topic: 32105 Message: 32106

Hi Terry,

DigiKey sells the RF choke you are looking for

http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small green case radial lead ferrite core RF inductors/chokes.
>
> L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver plate supply but prefer a 470uhy choke that has not seen plate current so selected L42 to harvest)
>
> I have checked with Mouser and Digi-Key and they do not stock these chokes.
>
> Anyone have a parts only RF board that they would be willing to pull these from or just sell the board to me? Board can be in bad shape and have bad foils, jumpers, etc. Does not have to have the drive variable capacitors etc.
>
> Thanks-Terry K9TW
>

32107. Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 09:26:07 UTC
From: Sander Wissing
Topic: 32107 Message: 32107

Hi everyone,

I need to work on my TS830s, and while I suppose I can muddle along
for a while without an oscilloscope, now is probably a good time to
invest in one.

The options are:

20MHz analogue. (I assume a 'normal' oscilloscope is analogue?
40MHz analogue
60MHz analogue

and then the USB connected digital storage scopes like the Velleman
PCSU1000 which seems to be able to sample up to 60MHz.

Price wise the USB scope slots in between the 20MHz and the 40MHz scopes.

So the questions are:

1. I have always assumed the analogue scopes are better than the
digital storage scopes. Is this true?
2. If I have to stick to the analogue scopes, is a 20MHz unit OK
for radio work? Or will I always regret not buying the 40MHz unit?
The 60MHz unit is fairly expensive, so if the 40MHz unit is not good
enough I will need to postpone the purchase a month or so.

Sorry for the Off Topic! :)

Thanks!

--
Best Regards,
Sander Wissing

32108. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 14:20:07 UTC
From: Guillermo
Topic: 32096 Message: 32108

Thanks Mike, in a few hours I will check everything that my knowledge allows.

It's amazing because the needle meter shows as if everything is fine (I get ALC movement, 60mA Ip at SSB with no input, about 760 HV, full deflection when the S-meter switch is in RF).

Very strange.

I will update this post later when I finish the tests.

Thanks everyone,
Guillermo.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hello Guillermo,
>
> Measure the voltage on the driver tube first.
>
> Connect the DC volt meter's RED lead to pin 2 of the driver tube socket and the Black lead to the 830s chassis.
>
> The voltage in receive should be approximately -43VDC.
>
> The voltage in transmit should be approximately +.4VDC
>
> If the voltage does not change, remains "negative" then I suspect the problem is caused by the relay on the AF Unit board.
>
> 73s
> Mike
> W5RKL
>
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> >
> > Hi folks,
> >
> > Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).
> >
> > I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
> > So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> > So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts

!!!
> >
> > I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
> > I tried installing the old 12BY7A but no change here, also very low output.
> > I can see the glow of both 6146's, but I don't know what to do.
> >
> > Please help me, and thank you in advance.
> > Guillermo
> > LU5FAR
> >
>

32109. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 16:40:14 UTC
From: w5rkl
Topic: 32096 Message: 32109

You said the HV is "760VDC". I assume that is the HV after tuning the transmitter for full output. Is that true??

Also, what is the meter showing as the IP (Meter switch set to IP) at full output (760VDC)?

If the IP current is 220ma with HV at 760VDC yet you only see approximately 10 watts output then I would look at the antenna change over relay located at the bottom of the final unit PC board, the relay terminals may be carbon coated. You said the meter switch set to RF indicates full scale which tells me either the RF pot on the rear panel is set wrong or the RF pot is set properly and the final amplifier through the PI Network is producing full output but that RF output is not appearing at the rear panel's SO-239 antenna connector. The RF goes through the T/R relay but the RF pot is "before" the T/R relay.

If the T/R relay is causing your low RF output, I believe the tuning of the PLATE and LOAD controls would not be "normal". The IP dip and LOAD peak RF output adjustments would not results in normal indications because the output of the PI Network is not seeing an impedance load that is within the range of the PI Network (50 to 75 ohms).

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@...> wrote:
>
> Thanks Mike, in a few hours I will check everything that my knowledge allows.
>
> It's amazing because the needle meter shows as if everything is fine (I get ALC movement, 60mA Ip at SSB with no input, about 760 HV, full deflection when the S-meter switch is in RF).
>
> Very strange.
>
> I will update this post later when I finish the tests.
>
> Thanks everyone,
> Guillermo.
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > Hello Guillermo,
> >
> > Measure the voltage on the driver tube first.
> >
> > Connect the DC volt meter's RED lead to pin 2 of the driver tube socket and the Black lead to the 830s chassis.
> >

> > The voltage in receive should be approximately -43VDC.
> >
> > The voltage in transmit should be approximately +.4VDC
> >
> > If the voltage does not change, remains "negative" then I suspect the problem is caused by the relay on the AF Unit board.
> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> > >
> > > Hi folks,
> > >
> > > Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).
> > >
> > > I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
> > > So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> > > So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts !!!
> > >
> > > I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
> > > I tried installing the old 12BY7A but no change here, also very low output.
> > > I can see the glow of both 6146's, but I don't know what to do.
> > >
> > > Please help me, and thank you in advance.
> > > Guillermo
> > > LU5FAR
> > >
> >
>

32110. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 16:57:13 UTC
From: w5rkl
Topic: 32107 Message: 32110

Hi Sander,

If you have never used an oscilloscope before then I recommend a simple analog oscilloscope until you get familiar with and learn how to use an oscilloscope.

What ever scope you buy, makes sure the probe(s) come with it. If it's a dual trace scope you will need 2 probes. If the scope does not come with probes you will need a basic set of 1X/10X probes.

An inexpensive analog scope, doesn't have to be dual trace, will allow you to learn how to use it. There are many places on the Internet where you learn "free" by simply going to and reading the "How to" on use of an oscilloscope. For most basic amateur radio scope requirements, a 20Mhz scope will do fine. Yes, a 60Mhz scope will be much better. There are quite a few on eBay under Consumer Electronics. Simple enter "Oscilloscope" in the search and you will see the various oscilloscopes for sale.

Here's an example of a simple "BRAND NEW" oscilloscope on eBay. It comes with a probe

http://cgi.ebay.com/MCP-CQ5010C-COMPACT-10MHz-COMPACT-OSCILLOSCOPE-PROBE-/200580351390?pt=BI_Oscilloscopes&hash=item2eb385459e

This is a simple scope to learn on plus it's brand new with the probe.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@...> wrote:
>
> Hi everyone,
>
> I need to work on my TS830s, and while I suppose I can muddle along
> for a while without an oscilloscope, now is probably a good time to
> invest in one.
>
> The options are:
>
> 20MHz analogue. (I assume a 'normal' oscilloscope is analogue?
> 40MHz analogue
> 60MHz analogue
>
> and then the USB connected digital storage scopes like the Velleman
> PCSU1000 which seems to be able to sample up to 60MHz.
>
> Price wise the USB scope slots in between the 20MHz and the 40MHz scopes.
>
> So the questions are:

>
> 1. I have always assumed the analogue scopes are better than the
> digital storage scopes. Is this true?
> 2. If I have to stick to the analogue scopes, is a 20MHz unit OK
> for radio work? Or will I always regret not buying the 40MHz unit?
> The 60MHz unit is fairly expensive, so if the 40MHz unit is not good
> enough I will need to postpone the purchase a month or so.
>
> Sorry for the Off Topic! :)
>
> Thanks!
>
> --
> Best Regards,
> Sander Wissing
>

32111. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 17:02:38 UTC
From: Terry Wagoner
Topic: 32105 Message: 32111

Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh to come up. Maybe I am not setting the filters correct? Will try again. Terry

---
From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 12:03 PM
Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Hi Terry,

DigiKey sells the RF choke you are looking for

http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>
> I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small green case radial lead ferrite core RF inductors/chokes.
>
> L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver plate supply but prefer a 470uhy choke that has not seen plate current so selected L42 to harvest)
>
> I have checked with Mouser and Digi-Key and they do not stock these chokes.
>
> Anyone have a parts only RF board that they would be willing to pull these from or just sell the board to me? Board can be in bad shape and have bad foils, jumpers, etc. Does not have to have the drive variable capacitors etc.
>
> Thanks-Terry K9TW
>

[Non-text portions of this message have been removed]

32112. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 17:13:53 UTC
From: Terry Wagoner
Topic: 32107 Message: 32112

Sander--There are some really good O-scope tutorials on You Tube. I believe the best are made by W2AEW. If money is not object I would get the 40 mhz as some of the cheaper 20mhz dont do a good job at 28mhz where you would need it to use as null detector for final tube neutralization. I used Heath single and dual trace scopes for years before finally getting kids out of the house and upgrading to Tektronics 100 mhz dual trace. These are good for sweeping filters, but to be honest I dont use it as much as I do my RF millivolt meter and RF signal generator and of course good high Z multimeter. If I was prioritizing scope wouldnt be first piece of test equipment to buy. Just my 1.5 cents worth!--Terry K9TW

From: w5rkl <w5rkl@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 12:57 PM
Subject: [TS-520_820_530_830] Re: Which oscilloscope?

Hi Sander,

If you have never used an oscilloscope before then I recommend a simple analog oscilloscope until you get familiar with and learn how to use an oscilloscope.

What ever scope you buy, makes sure the probe(s) come with it. If it's a dual trace scope you will need 2 probes. If the scope does not come with probes you will need a basic set of 1X/10X probes.

An inexpensive analog scope, doesn't have to be dual trace, will allow you to learn how to use it. There are many places on the Internet where you learn "free" by simply going to and reading the "How to" on use of an oscilloscope. For most basic amateur radio scope requirements, a 20Mhz scope will do fine. Yes, a 60Mhz scope will be much better. There are quite a few on eBay under Consumer Electronics. Simple enter "Oscilloscope" in the search and you will see the various oscilloscopes for sale.

Here's an example of a simple "BRAND NEW" oscilloscope on eBay. It comes with a probe

http://cgi.ebay.com/MCP-CQ5010C-COMPACT-10MHz-COMPACT-OSCILLOSCOPE-PROBE-/200580351390?pt=BI_Oscilloscopes&hash=item2eb385459e

This is a simple scope to learn on plus it's brand new with the probe.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@...> wrote:
>
> Hi everyone,
>
> I need to work on my TS830s, and while I suppose I can muddle along

> for a while without an oscilloscope, now is probably a good time to
> invest in one.
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> The options are:
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> 20MHz analogue. (I assume a 'normal' oscilloscope is analogue?
> 40MHz analogue
> 60MHz analogue
>
> and then the USB connected digital storage scopes like the Velleman
> PCSU1000 which seems to be able to sample up to 60MHz.
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> Price wise the USB scope slots in between the 20MHz and the 40MHz scopes.
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> digital storage scopes. Is this true?
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> The 60MHz unit is fairly expensive, so if the 40MHz unit is not good
> enough I will need to postpone the purchase a month or so.
>
> Sorry for the Off Topic! :)
>
> Thanks!
>
> --
> Best Regards,
> Sander Wissing
>

[Non-text portions of this message have been removed]

32113. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 17:21:23 UTC
From: n6wk@n6wk.com
Topic: 32105 Message: 32113

Terry,
If you can't locate any, I can harvest a couple from my RF Parts Board

73,
Gordon

On 6/28/2011 10:02 AM, Terry Wagoner wrote:
>
> Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh
> to come up. Maybe I am not setting the filters correct? ? Will try
> again. Terry?
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 28, 2011 12:03 PM
> Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
>
> ?
> Hi Terry,
>
> DigiKey sells the RF choke you are looking for
>
> http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small
> green case radial lead ferrite core RF inductors/chokes.
> >
> > L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver
> plate supply but prefer a 470uhy choke that has not seen plate current
> so selected L42 to harvest)
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> > I have checked with Mouser and Digi-Key and they do not stock these
> chokes.
> >
> > Anyone have a parts only RF board that they would be willing to pull

> these from or just sell the board to me? Board can be in bad shape and
> have bad foils, jumpers, etc. Does not have to have the drive variable
> capacitors etc.
> >
> > Thanks-Terry K9TW
> >
>
> [Non-text portions of this message have been removed]
>
>

--

32114. A few 520 history questions....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 17:52:56 UTC
From: Brian
Topic: 32114 Message: 32114

I was just wondering if the 520 was phased out when the 520s hit the market? What was the years the 520 was maufactored with the brass fan cage? What was the price of the 520 and 520s?

Thank you, Brian NC KB4MNG

32115. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 18:16:11 UTC
From: Terry Wagoner
Topic: 32105 Message: 32115

Gordon--Thanks I will keep your offer in mind. I offer the following to all who may experience a shot of RF into the receive path.

I measured Joes rewound L41 and it just about spot on to the baseline ohms and inductance readings you gave us. I reinstalled L41 in the board . I injected 10 mv 1.9Mhz signal at TP-1 (because he sent it to me in the 1.5 Mhz position) and measured output at VC-1 and got something less than 10mv. Went back to C1 1800pf (mylar film) coupling cap and pulled it and found it to read approx 1400 pf which surprised me due to normal close tolerance on this kind of cap. Not enough to account for signal loss. I then pulled L1 2.7uhy choke in the broadcast band high pass filter and measured it. I have no other specs other than 2.7uhy and I get very weird low ohms and inductance readings. I also noticed that the top half of L1 is very discolored dark brown/black around entire top (as if overheated). Couldnt really see this very well in circuit. As you know these chokes are all bright green cans.

I had a 6.8uhy choke in one of Ken K4EAA final repair kits and stuck it in place of L1. Reinjected 10 mv 1.9mhz at TP-1 and now get approx 75mv output at VC-1 that I can peak with the driver cap shaft and by tuning L41 slug. I now know L41 is working as it should. So looks like the Xmit RF took out L41 xfmr and the L1 choke. L1 apparently has shorted turns and is shunting nearly all the rf to ground. Not sure if you have seen this before or not?

I cant leave the 6.8uhy choke in the circuit as it changes the cutoff frequency of the high pass filter. If you havent seen it there is really great free filter design and analysis software tool on AADE website. He sells a nice digital LC meter kit. It is fun to plug in differing values for C and L in the high pass filter circuit and see the effect on the cutoff frequency. I have downloaded the software on to my laptop.

So long story but looks like L1 was problem in addition to L41 and something to look at with any future burned up L41 transformers. Bad L1 probably talked Joe into a 2nd rewind of L41? I did pull L2 4.7uhy choke (2nd dipole of high pass filter) and it read dead on 4.7uhy on my bridge and showed no signs of discoloration.

I will get back to you if I cant find a 2.7 uhy L1 replacement. Thanks Terry K9TW

From: "n6wk@..." <n6wk@n6wk.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 1:21 PM
Subject: Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Terry,
If you can't locate any, I can harvest a couple from my RF Parts Board

73,
Gordon

On 6/28/2011 10:02 AM, Terry Wagoner wrote:
>
> Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh
> to come up. Maybe I am not setting the filters correct? Â Will try
> again. TerryÂ
>
> _____
> From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 28, 2011 12:03 PM
> Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
>
> Â
> Hi Terry,
>
> DigiKey sells the RF choke you are looking for
>
> http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> <wagstw46@...> wrote:
> >
> > I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small
> green case radial lead ferrite core RF inductors/chokes.
> >
> > L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver
> plate supply but prefer a 470uhy choke that has not seen plate current
> so selected L42 to harvest)
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> > I have checked with Mouser and Digi-Key and they do not stock these
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> have bad foils, jumpers, etc. Does not have to have the drive variable
> capacitors etc.
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> > Thanks-Terry K9TW
> >
>
> [Non-text portions of this message have been removed]
>
>

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Yahoo! Groups Links

[Non-text portions of this message have been removed]

32116. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 17:18:35 UTC
From: Sander Wissing
Topic: 32107 Message: 32116

Thanks Mike,

One of the drawbacks of living in South Africa is that we are far enough from the rest of the world to make ebay bargains expensive in postage. And the same goes for buying from US distributors. But your advice is taken! I will look for a cheapish used oscilloscope, but if I can't find one anytime soon I will be comfortable with a 20 MHz unit which aren't that expensive either...

Thanks,
Sander, ZS6SSW

On Tue, Jun 28, 2011 at 6:57 PM, w5rkl <w5rkl@...> wrote:

> **
>
>
>
>
> Hi Sander,
>
> If you have never used an oscilloscope before then I recommend a simple
> analog oscilloscope until you get familiar with and learn how to use an
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> What ever scope you buy, makes sure the probe(s) come with it. If it's a
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>
>
> http://cgi.ebay.com/MCP-CQ5010C-COMPACT-10MHz-COMPACT-OSCILLOSCOPE-PROBE-/200580351390?pt=BI_Oscilloscopes&hash=item2eb385459e
>
> This is a simple scope to learn on plus it's brand new with the probe.
>

> 73s
> Mike
> W5RKL
>
>
>

[Non-text portions of this message have been removed]

32117. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 18:58:26 UTC
From: Dave & Loraine
Topic: 32107 Message: 32117

Howzit Sander,
I bought my 'scope for R10 when I lived in SA in 2000.
An old Phillips PM3200 valve model 10 MHz.
Try a local rally and talk to your local radio club.
73 Dave f4eyk

32118. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 19:06:32 UTC
From: n6wk@n6wk.com
Topic: 32105 Message: 32118

I always look closely at those little chokes for any sign of
darkness/discoloration.

Gordon
N6WK

On 6/28/2011 11:16 AM, Terry Wagoner wrote:
>
> Gordon--Thanks I will keep your offer in mind. I offer the following
> to all who may experience a shot of RF into the receive path.
>
> I measured Joes rewound L41 and it just about spot on to the baseline
> ohms and inductance readings you gave us. I reinstalled L41 in the
> board . I injected 10 mv 1.9Mhz signal at TP-1 (because he sent it to
> me in the 1.5 Mhz position) and measured output at VC-1 and got
> something less than 10mv. Went back to C1 1800pf (mylar film) coupling
> cap and pulled it and found it to read approx 1400 pf which surprised
> me due to normal close tolerance on this kind of cap. Not enough to
> account for signal loss. I then pulled L1 2.7uhy choke in the
> broadcast band high pass filter and measured it. I have no other specs
> other than 2.7uhy and I get very weird low ohms and inductance
> readings. I also noticed that the top half of L1 is very discolored
> dark brown/black around entire top (as if overheated). Couldnt really
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>
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> the Xmit RF took out L41 xfmr and the L1 choke. L1 apparently has
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> you have seen this before or not?
>
> I cant leave the 6.8uhy choke in the circuit as it changes the cutoff
> frequency of the high pass filter. If you havent seen it there is
> really great free filter design and analysis software tool on AADE
> website. He sells a nice digital LC meter kit. It is fun to plug in
> differing values for C and L in the high pass filter circuit and see
> the effect on the cutoff frequency. I have downloaded the software on
> to my laptop.
>
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> L1 probably talked Joe into a 2nd rewind of L41? I did pull L2 4.7uhy

> choke (2nd dipole of high pass filter) and it read dead on 4.7uhy on
> my bridge and showed no signs of discoloration.
>
> I will get back to you if I cant find a 2.7 uhy L1 replacement. Thanks
> Terry K9TW
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 28, 2011 1:21 PM
> Subject: Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
>
> Terry,
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> 73,
> Gordon
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> On 6/28/2011 10:02 AM, Terry Wagoner wrote:
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> > Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh
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> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>
> <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Tuesday, June 28, 2011 12:03 PM
> > Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
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> > ?
> > Hi Terry,
> >
> > DigiKey sells the RF choke you are looking for
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> >
> http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html
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> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"

> > <wagstw46@...> wrote:
> > >
> > > I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small
> > green case radial lead ferrite core RF inductors/chokes.
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> > > Thanks-Terry K9TW
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> >
> > [Non-text portions of this message have been removed]
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> ------------------------------------
>
> Yahoo! Groups Links
>
> [Non-text portions of this message have been removed]
>
>

32119. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 19:11:55 UTC
From: Sander Wissing
Topic: 32107 Message: 32119

Thanks Dave,

Hi from a cold Pretoria!

I have everyone at the club on the lookout for a good deal. I was really just trying to figure out how critical the specs are. I didn't want to buy an older / cheaper model and then regret it...

Thanks,
ZS6SSW

On Tue, Jun 28, 2011 at 8:58 PM, Dave & Loraine <dave.crooks@...>wrote:

> **
>
>
> Howzit Sander,
> I bought my 'scope for R10 when I lived in SA in 2000.
> An old Phillips PM3200 valve model 10 MHz.
> Try a local rally and talk to your local radio club.
> 73 Dave f4eyk
>
>

--
Best Regards,
Sander Wissing

[Non-text portions of this message have been removed]

32120. TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 19:29:14 UTC
From: Sander Wissing
Topic: 32120 Message: 32120

Hi everyone,

I recently acquired a TS830s with problems. This radio stood for a year or so and was then discovered to have no receive and reportedly only about 30w output. The radio was then left for another year and then changed hands for a good price. It may have been struck by lightning.

I have replaced the finals with a supposedly good set, and confirmed that there is no receive. I get whitenoise and the AF gain works. Also filters etc. makes a difference to the noise. And there is a surprising number of birdies present when tuning around. I was feeding a 50uV signal into the antenna connector and not a peep, but I do get pops when I connect or disconnect something to the antenna connector. I have not even tried to get anything done on transmit. Based on a recent post about Q1 affecting receive and transmit I started there. What is the pinout of Q1?

Looking down from the front panel, I have labeled the legs as follows:

1 2
\ /
O
/\
3 4

In receive I get these voltages:
1 4.01v (slowly stabilizes as if the multimeter is charging up a cap or something)
2 11.76v
3 1.146v
4 0.936
The shell of Q1 is at 1.146v as well.

This is significantly different from the schematic, the question is, does anyone have a hunch why? I will trace the schematic further and see if I can figure it out, but any leads are welcome!

I also tried to set the bias, but with the meter in IP, the needle never moves, regardless of bias pot setting. This may or may not be related, but it may also be an error in my technique... If anyone feels like talking me through a bias adjustment real slowly I would appreciate it.

Thanks,
Sander, ZS6SSW

--
Best Regards,
Sander Wissing

32121. Re: [TS-520_820_530_830] TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 20:10:39 UTC
From: W LEWIS
Topic: 32120 Message: 32121

Hi Sander,
I'm new to the hobby (two years next month) and am learning to maintain my Kenwood radios. My most recent project was replacing a corroded back panel on my 830s with a nice one from Bob Mansker. Upon reassembly, the radio powered up but nothing else. After searching the files of this group I looked at the microswitch attached to the remote vfo socket and found it to be malfunctioning. After some tinkering it is now working properly as is the radio. The microswitch serves the same purpose as the vfo jumpers used on the 520 and 820 series. It may be totally unrelated, but is worth looking at.
73s,
Butch Lewis
KØPSA

--- On Tue, 6/28/11, Sander Wissing <sander.wissing@...> wrote:

From: Sander Wissing <sander.wissing@...>
Subject: [TS-520_820_530_830] TS830s no receive, low output
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, June 28, 2011, 2:29 PM

Hi everyone,

I recently acquired a TS830s with problems. This radio stood for a
year or so and was then discovered to have no receive and reportedly
only about 30w output. The radio was then left for another year and
then changed hands for a good price. It may have been struck by
lightning.

I have replaced the finals with a supposedly good set, and confirmed
that there is no receive. I get whitenoise and the AF gain works.
Also filters etc. makes a difference to the noise. And there is a
surprising number of birdies present when tuning around. I was
feeding a 50uV signal into the antenna connector and not a peep, but I
do get pops when I connect or disconnect something to the antenna
connector. I have not even tried to get anything done on transmit.
Based on a recent post about Q1 affecting receive and transmit I
started there. What is the pinout of Q1?

Looking down from the front panel, I have labeled the legs as follows:

1 2
\ /
O
/\
3 4

In receive I get these voltages:
1 4.01v (slowly stabilizes as if the multimeter is charging up a

cap or something)
2 11.76v
3 1.146v
4 0.936
The shell of Q1 is at 1.146v as well.

This is significantly different from the schematic, the question is, does anyone have a hunch why? I will trace the schematic further and see if I can figure it out, but any leads are welcome!

I also tried to set the bias, but with the meter in IP, the needle never moves, regardless of bias pot setting. This may or may not be related, but it may also be an error in my technique... If anyone feels like talking me through a bias adjustment real slowly I would appreciate it.

Thanks,
Sander, ZS6SSW

--
Best Regards,
Sander Wissing

[Non-text portions of this message have been removed]

32122. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 20:13:59 UTC
From: Terry Wagoner
Topic: 32105 Message: 32122

Will sure be my practice based on this experience.

From: "n6wk@..." <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 3:06 PM
Subject: Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

I always look closely at those little chokes for any sign of
darkness/discoloration.

Gordon
N6WK

On 6/28/2011 11:16 AM, Terry Wagoner wrote:
>
> Gordon--Thanks I will keep your offer in mind. I offer the following
> to all who may experience a shot of RF into the receive path.
>
> I measured Joes rewound L41 and it just about spot on to the baseline
> ohms and inductance readings you gave us. I reinstalled L41 in the
> board . I injected 10 mv 1.9Mhz signal at TP-1 (because he sent it to
> me in the 1.5 Mhz position) and measured output at VC-1 and got
> something less than 10mv. Went back to C1 1800pf (mylar film) coupling
> cap and pulled it and found it to read approx 1400 pf which surprised
> me due to normal close tolerance on this kind of cap. Not enough to
> account for signal loss. I then pulled L1 2.7uhy choke in the
> broadcast band high pass filter and measured it. I have no other specs
> other than 2.7uhy and I get very weird low ohms and inductance
> readings. I also noticed that the top half of L1 is very discolored
> dark brown/black around entire top (as if overheated). Couldnt really
> see this very well in circuit. As you know these chokes are all bright
> green cans.
>
> I had a 6.8uhy choke in one of Ken K4EAA final repair kits and stuck
> it in place of L1. Reinjected 10 mv 1.9mhz at TP-1 and now get approx
> 75mv output at VC-1 that I can peak with the driver cap shaft and by
> tuning L41 slug. I now know L41 is working as it should. So looks like
> the Xmit RF took out L41 xfmr and the L1 choke. L1 apparently has
> shorted turns and is shunting nearly all the rf to ground. Not sure if
> you have seen this before or not?
>
> I cant leave the 6.8uhy choke in the circuit as it changes the cutoff
> frequency of the high pass filter. If you havent seen it there is
> really great free filter design and analysis software tool on AADE
> website. He sells a nice digital LC meter kit. It is fun to plug in

> differing values for C and L in the high pass filter circuit and see
> the effect on the cutoff frequency. I have downloaded the software on
> to my laptop.
>
> So long story but looks like L1 was problem in addition to L41 and
> something to look at with any future burned up L41 transformers. Bad
> L1 probably talked Joe into a 2nd rewind of L41? I did pull L2 4.7uhy
> choke (2nd dipole of high pass filter) and it read dead on 4.7uhy on
> my bridge and showed no signs of discoloration.
>
> I will get back to you if I cant find a 2.7 uhy L1 replacement. Thanks
> Terry K9TW
>
> _____
> From: "n6wk@... <mailto:n6wk%40n6wk.com>" <n6wk@...
> <mailto:n6wk%40n6wk.com>>
> To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> Sent: Tuesday, June 28, 2011 1:21 PM
> Subject: Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
>
> Terry,
> If you can't locate any, I can harvest a couple from my RF Parts Board
>
> 73,
> Gordon
>
> On 6/28/2011 10:02 AM, Terry Wagoner wrote:
> >
> > Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh
> > to come up. Maybe I am not setting the filters correct? Â Will try
> > again. TerryÂ
> >
> > _____
> > From: w5rkl <w5rkl@... <mailto:w5rkl%40yahoo.com>
> <mailto:w5rkl%40yahoo.com>>
> > To: TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>
> > Sent: Tuesday, June 28, 2011 12:03 PM
> > Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
> >
> > Â
> > Hi Terry,
> >
> > DigiKey sells the RF choke you are looking for
> >
> >
> http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html
> >

> > 73s
> > Mike
> > W5RKL
> >
> > --- In TS-520_820_530_830@yahoogroups.com
> <mailto:TS-520_820_530_830%40yahoogroups.com>
> > <mailto:TS-520_820_530_830%40yahoogroups.com>, "Terry Wagoner"
> > <wagstw46@...> wrote:
> > >
> > > I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small
> > green case radial lead ferrite core RF inductors/chokes.
> > >
> > > L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver
> > plate supply but prefer a 470uhy choke that has not seen plate current
> > so selected L42 to harvest)
> > >
> > > I have checked with Mouser and Digi-Key and they do not stock these
> > chokes.
> > >
> > > Anyone have a parts only RF board that they would be willing to pull
> > these from or just sell the board to me? Board can be in bad shape and
> > have bad foils, jumpers, etc. Does not have to have the drive variable
> > capacitors etc.
> > >
> > > Thanks-Terry K9TW
> > >
> >
> > [Non-text portions of this message have been removed]
> >
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> --
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> ------------------------------------
>
> Yahoo! Groups Links
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> [Non-text portions of this message have been removed]
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>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

32123. Re: [TS-520_820_530_830] TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 20:43:54 UTC
From: Terry Wagoner
Topic: 32120 Message: 32123

Sander-- Here is quick test. Touch you antenna center conductor or your finger to VC-1 at the 2nd or back solder lug terminal (the first air variable cap on right side of the RF board). This will input a signal to G1 of Q1 dual gate mosfet RF amp. You should see very noticeable gain in noise and/or actually copy signals. Make sure RF gain control is at full CW max position.

Your Q1 voltages are good accept for Pin 1 which is Gate 2 and should read approx 2.7 volts in receive with RF gain at max. AGC applied to G2 controls gain by determining how hard you turn Q1 on. Pin 2 is the Drain and should read approx 12.4 vdc, Pin 4 is the Source and should read approx 1.0 vdc, and Pin 3 is Gate 1 and should read approx 1.1 vdc.

You need to use a high impedance meter to make these readings like an old Heath 11Meg input VTVM. Many newer DMMs have around 2 meg input impedance especially on the lower ranges and will affect your readings.

So only reading that looks odd to me is at your Pin 1 or G1. Should be approx 1.1 in receive and -2.9 in xmit. You can think of G1 as equivalent to the control grid on a tube amp. I dont think there is anything wrong with Q1 (not shorted or not open) based on readings you obtained. Terry K9TW

From: Sander Wissing <sander.wissing@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 3:29 PM
Subject: [TS-520_820_530_830] TS830s no receive, low output

Hi everyone,

I recently acquired a TS830s with problems. This radio stood for a
year or so and was then discovered to have no receive and reportedly
only about 30w output. The radio was then left for another year and
then changed hands for a good price. It may have been struck by
lightning.

I have replaced the finals with a supposedly good set, and confirmed
that there is no receive. I get whitenoise and the AF gain works.
Also filters etc. makes a difference to the noise. And there is a
surprising number of birdies present when tuning around. I was
feeding a 50uV signal into the antenna connector and not a peep, but I
do get pops when I connect or disconnect something to the antenna
connector. I have not even tried to get anything done on transmit.
Based on a recent post about Q1 affecting receive and transmit I
started there. What is the pinout of Q1?

Looking down from the front panel, I have labeled the legs as follows:

1 2
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In receive I get these voltages:
1 4.01v (slowly stabilizes as if the multimeter is charging up a
cap or something)
2 11.76v
3 1.146v
4 0.936
The shell of Q1 is at 1.146v as well.

This is significantly different from the schematic, the question is,
does anyone have a hunch why? I will trace the schematic further and
see if I can figure it out, but any leads are welcome!

I also tried to set the bias, but with the meter in IP, the needle
never moves, regardless of bias pot setting. This may or may not be
related, but it may also be an error in my technique... If anyone
feels like talking me through a bias adjustment real slowly I would
appreciate it.

Thanks,
Sander, ZS6SSW

--
Best Regards,
Sander Wissing

[Non-text portions of this message have been removed]

32124. Re: [TS-520_820_530_830] TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 20:47:56 UTC
From: Terry Wagoner
Topic: 32120 Message: 32124

Sander --I assumed you were talking about Q1 RF amp on the RF board. Also, my Q1 is plastic case so no potential from case to ground. Lastly, Q1 RF amp has nothing to do with Xmit.
Terry

From: Sander Wissing <sander.wissing@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tuesday, June 28, 2011 3:29 PM
Subject: [TS-520_820_530_830] TS830s no receive, low output

Hi everyone,

I recently acquired a TS830s with problems. This radio stood for a year or so and was then discovered to have no receive and reportedly only about 30w output. The radio was then left for another year and then changed hands for a good price. It may have been struck by lightning.

I have replaced the finals with a supposedly good set, and confirmed that there is no receive. I get whitenoise and the AF gain works. Also filters etc. makes a difference to the noise. And there is a surprising number of birdies present when tuning around. I was feeding a 50uV signal into the antenna connector and not a peep, but I do get pops when I connect or disconnect something to the antenna connector. I have not even tried to get anything done on transmit. Based on a recent post about Q1 affecting receive and transmit I started there. What is the pinout of Q1?

Looking down from the front panel, I have labeled the legs as follows:

1 2
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In receive I get these voltages:
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The shell of Q1 is at 1.146v as well.

This is significantly different from the schematic, the question is, does anyone have a hunch why? I will trace the schematic further and see if I can figure it out, but any leads are welcome!

I also tried to set the bias, but with the meter in IP, the needle never moves, regardless of bias pot setting. This may or may not be related, but it may also be an error in my technique... If anyone feels like talking me through a bias adjustment real slowly I would appreciate it.

Thanks,
Sander, ZS6SSW

--
Best Regards,
Sander Wissing

[Non-text portions of this message have been removed]

32125. Re: [TS-520_820_530_830] Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 22:20:29 UTC
From: AI4WM Bill
Topic: 32107 Message: 32125

Sander,
If you have never used or owned a scope before start with a plain analog scope, even a tube type (valve type). I would stay away from many modern used digital scopes due to the custom I.C.s that are used. If they fail replacements may not be available.

Start with a 100 MHz if it fits your budget. The higher the bandwidth the better.
Single channel is fine for 90% of what you will probably do.
Dual Trace, Dual Beam and such only add to complexity and cost. Not needed if you are a beginner oscilloscope user.

As far as brands. It depends what is available as good used equipment near your location. Here in the States I would sarcastically say "is there anything other than Tektronix?" simply because they are the best (IMHO) others may disagree. HP are fine. Their older scope trigger a bit slower than the Tek do and their solid state are filled with specialized I.C.s and if you get a scope with a failed input amplifier I.C. for instance they are not available unless another socpe is purchased for parts. HP makes excellent and very comparable scopes to Tek. Philips also makes some very nice scopes. I am not familiar with most of them though.

Check out the scope before you buy it and ensure all the functions work and you can get a nice clean trace that is even thickness from one end of the screen to the other.

A few ideas that I hope can head you in the direction you want to go.

73,

Bill

AI4WM

--- On Tue, 6/28/11, Sander Wissing <sander.wissing@...> wrote:

From: Sander Wissing <sander.wissing@...>
Subject: [TS-520_820_530_830] Which oscilloscope?
To: TS-520_820_530_830@yahoogroups.com
Date: Tuesday, June 28, 2011, 5:26 AM

Hi everyone,

I need to work on my TS830s, and while I suppose I can muddle along

for a while without an oscilloscope, now is probably a good time to

invest in one.

The options are:

20MHz analogue. (I assume a 'normal' oscilloscope is analogue?

40MHz analogue

60MHz analogue

and then the USB connected digital storage scopes like the Velleman

PCSU1000 which seems to be able to sample up to 60MHz.

Price wise the USB scope slots in between the 20MHz and the 40MHz scopes.

So the questions are:

1. I have always assumed the analogue scopes are better than the

digital storage scopes. Is this true?

2. If I have to stick to the analogue scopes, is a 20MHz unit OK

for radio work? Or will I always regret not buying the 40MHz unit?

The 60MHz unit is fairly expensive, so if the 40MHz unit is not good

enough I will need to postpone the purchase a month or so.

Sorry for the Off Topic! :)

Thanks!

--

Best Regards,

Sander Wissing

[Non-text portions of this message have been removed]

32126. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-28 22:43:16 UTC
From: Guillermo
Topic: 32096 Message: 32126

Hi Mike, I just came back from working with the 830 at the house of my friend, who is the owner.

The first thing I did is measure voltage at pin 2 of the drive socket, as you advised me. The voltages were as you said, so nothing wrong there.

Before putting the newest 12by7a, I sprayed some contact cleaner and pushed down the socket.
After installing the new driver, voila! Full power output again.

After that, I measured at idle:
Ip: 60 mA.
HV: 800 V.

At full output in CW mode, the meter shows:
ALC: top of the ALC range.
Ip: about 240mA.
HV: 750 V.

It appears as everything is working fine. I left the unit open so I can go on testing it tomorrow and check how it behaves.

Thanks Mike for your time and answers.
Guillermo.

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> You said the HV is "760VDC". I assume that is the HV after tuning the transmitter for full output. Is that true??
>
> Also, what is the meter showing as the IP (Meter switch set to IP) at full output (760VDC)?
>
> If the IP current is 220ma with HV at 760VDC yet you only see approximately 10 watts output then I would look at the antenna change over relay located at the bottom of the final unit PC board, the relay terminals may be carbon coated. You said the meter switch set to RF indicates full scale which tells me either the RF pot on the rear panel is set wrong or the RF pot is set properly and the final amplifier through the PI Network is producing full output but that RF output is not appearing at the rear panel's SO-239 antenna connector. The RF goes through the T/R relay but the RF pot is "before" the T/R relay.
>
> If the T/R relay is causing your low RF output, I believe the tuning of the PLATE and LOAD controls would not be "normal". The IP dip and LOAD peak RF output adjustments would not results in normal indications because the output of the PI Network is not seeing an impedance load that is within the range of the PI Network (50 to 75 ohms).
>

> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> >
> > Thanks Mike, in a few hours I will check everything that my knowledge allows.
> >
> > It's amazing because the needle meter shows as if everything is fine (I get ALC movement, 60mA Ip at SSB with no input, about 760 HV, full deflection when the S-meter switch is in RF).
> >
> > Very strange.
> >
> > I will update this post later when I finish the tests.
> >
> > Thanks everyone,
> > Guillermo.
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > >
> > > Hello Guillermo,
> > >
> > > Measure the voltage on the driver tube first.
> > >
> > > Connect the DC volt meter's RED lead to pin 2 of the driver tube socket and the Black lead to the 830s chassis.
> > >
> > > The voltage in receive should be approximately -43VDC.
> > >
> > > The voltage in transmit should be approximately +.4VDC
> > >
> > > If the voltage does not change, remains "negative" then I suspect the problem is caused by the relay on the AF Unit board.
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> > > >
> > > > Hi folks,
> > > >
> > > > Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).
> > > >

> > > > I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
> > > > So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> > > > So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts !!!
> > > >
> > > > I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
> > > > I tried installing the old 12BY7A but no change here, also very low output.
> > > > I can see the glow of both 6146's, but I don't know what to do.
> > > >
> > > > Please help me, and thank you in advance.
> > > > Guillermo
> > > > LU5FAR
> > > >
> > >
> >
>

32127. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 02:30:11 UTC
From: w5rkl
Topic: 32096 Message: 32127

Hi Guillermo,

With 750VDC on the plates of the final amplifier and 245ma of plate current in CW mode, that's equal to 180 watts DC input. That's the correct CW DC input power rating for the TS-830.

If your watt meter is an "average" watt meter, the most power output you will see with the 830 MIC gain adjusted so the ALC meter indication just barely starts to flicker above zero, the most you will see on an average watt meter is between 20 and 30 watts on voice peaks. If that's what you are seeing then there is nothing wrong with the 830 transmitter.

73s
Mike
W5RKL

--- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@...> wrote:
>
> Hi Mike, I just came back from working with the 830 at the house of my friend, who is the owner.
>
> The first thing I did is measure voltage at pin 2 of the drive socket, as you advised me.
> The voltages were as you said, so nothing wrong there.
>
> Before putting the newest 12by7a, I sprayed some contact cleaner and pushed down the socket.
> After installing the new driver, voila! Full power output again.
>
> After that, I measured at idle:
> Ip: 60 mA.
> HV: 800 V.
>
> At full output in CW mode, the meter shows:
> ALC: top of the ALC range.
> Ip: about 240mA.
> HV: 750 V.
>
> It appears as everything is working fine. I left the unit open so I can go on testing it tomorrow and check how it behaves.
>
> Thanks Mike for your time and answers.
> Guillermo.
>
> --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> >
> > You said the HV is "760VDC". I assume that is the HV after tuning the transmitter for full output. Is that true??

> >
> > Also, what is the meter showing as the IP (Meter switch set to IP) at full output (760VDC)?
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> >
> > 73s
> > Mike
> > W5RKL
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> > >
> > > Thanks Mike, in a few hours I will check everything that my knowledge allows.
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> > > It's amazing because the needle meter shows as if everything is fine (I get ALC movement, 60mA Ip at SSB with no input, about 760 HV, full deflection when the S-meter switch is in RF).
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> > > Guillermo.
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> > > > > Please help me, and thank you in advance.
> > > > > Guillermo
> > > > > LU5FAR
> > > > >
> > > >
> > > >
> > >
> >
>

32128. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 04:27:44 UTC
From: Jeramy Ross
Topic: 32105 Message: 32128

2.7uh can be found here:

http://www.allelectronics.com/make-a-store/item/CC-207/2.7-UH-CHOKE//1.html

or a pack of 50 for about the same price can be had here:

http://www.electronicsurplus.com/Item/151112/EPCOS%20-%20Inductor_%20RF%20chokes_%202_7uH_%20Package%20of%2050_%20-%20B78108S1272K/

73,
Jeramy W5XTL

On Tue, Jun 28, 2011 at 12:02 PM, Terry Wagoner <wagstw46@yahoo.com> wrote:
> Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh to come up. Maybe I am not setting the filters correct? Will try again. Terry
>
>
> _____
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 28, 2011 12:03 PM
> Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
>
>
>
> Hi Terry,
>
> DigiKey sells the RF choke you are looking for
>
> http://parts.digikey.co.nz/1/1/517096-choke-rf-conformal-coated-470uh-8230-84-rc.html
>
> 73s
> Mike
> W5RKL
>
> --- In TS-520_820_530_830@yahoogroups.com, "Terry Wagoner" <wagstw46@...> wrote:
>>
>> I am working on Joe Loverti WW8X TS-830S RF Board. I need 2 small green case radial lead ferrite core RF inductors/chokes.
>>
>> L1 is 2.7uhy and L42 is 470uhy. (actually replacing L36 in driver plate supply but prefer a 470uhy choke that has not seen plate current so selected L42 to harvest)
>>
>> I have checked with Mouser and Digi-Key and they do not stock these chokes.
>>
>> Anyone have a parts only RF board that they would be willing to pull these from or just

sell the board to me? Board can be in bad shape and have bad foils, jumpers, etc. Does not have to have the drive variable capacitors etc.
>>
>> Thanks-Terry K9TW
>>
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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32129. Re: [TS-520_820_530_830] TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 08:38:30 UTC
From: Sander Wissing
Topic: 32120 Message: 32129

Hi Terry,

Yes, I was talking about Q1 on the RF board. And yes, I made a noob mistake in asuming that there is only one Q1... So my Q1 isn't whichever one was involved in receive and transmit. Mine is a metal case and the voltage on G2 varies between 1.7v with RF Gain at min to 7.3v with RF Gain at max. The book says the meter has a 10MOhm impedance, but the voltage at G2 is still being pulled low by the meter.

Injecting a signal at the solder lug on VC1 makes no difference whatsoever and neither does injecting it directly on G1 of Q1.

Next step is to inject a signal at TP4 to eliminate the next step up transformer on the way to Q2. Injecting a signal on TP4 I get a very distinct increase in audio from the speaker. So this really points to the transformer between Q1 and TP4, doesn't it? On the level diagram this transformer doesn't have a name, so I will go through the schematic and see if I can identify it.

So now I have three clues:

1. No audio if I inject on Q1, but audio if I inject on TP4 (RF board)
2. Too high voltage on G1 of Q1 (RF Board)
3. No IP indication when trying to set bias.

Thanks!

On Tue, Jun 28, 2011 at 10:43 PM, Terry Wagoner <wagstw46@yahoo.com> wrote:

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>
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> Sander-- Here is quick test. Touch you antenna center conductor or your
> finger to VC-1 at the 2nd or back solder lug terminal (the first air
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> and Pin 3 is Gate 1 and should read approx 1.1 vdc.
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> From: Sander Wissing <sander.wissing@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 28, 2011 3:29 PM
>
> Subject: [TS-520_820_530_830] TS830s no receive, low output
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> Hi everyone,
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> Thanks,
> Sander, ZS6SSW
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> Best Regards,
> Sander Wissing
>
> [Non-text portions of this message have been removed]
>
>
>

--
Best Regards,
Sander Wissing

[Non-text portions of this message have been removed]

32130. Re: [TS-520_820_530_830] TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 12:15:06 UTC
From: Terry Wagoner
Topic: 32120 Message: 32130

Sander--I will measure my AGC voltages at G2 and report back to you. Appears you are following proper troubleshooting process.

With increase in receiver noise with signal at TP-4 it appears that Q2 buffer amp and the RIF mixer is working. I believe you are referring to Xfmr L13. I have never heard of it failing. More commonly L41 antenna step-up xfmr is the culprit.

Ken K4EAA reports on his site that he has found diode D2 shorted which would shunt G1 signal to ground. I dont think you can get meter probes on D2 in circuit to test it and it is shunted by couple of resistors.

If you were able to measure the Drain voltage of Q1 can you inject signal there? That would prove L13 good if you get increase in noise. When in injecting signal make sure you use a frequency that is same as your bandswitch position and peak the driver control while injecting. Terry

---
From: Sander Wissing <sander.wissing@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 29, 2011 4:38 AM
Subject: Re: [TS-520_820_530_830] TS830s no receive, low output

Hi Terry,

Yes, I was talking about Q1 on the RF board. And yes, I made a noob mistake in asuming that there is only one Q1... So my Q1 isn't whichever one was involved in receive and transmit. Mine is a metal case and the voltage on G2 varies between 1.7v with RF Gain at min to 7.3v with RF Gain at max. The book says the meter has a 10MOhm impedance, but the voltage at G2 is still being pulled low by the meter.

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Next step is to inject a signal at TP4 to eliminate the next step up transformer on the way to Q2. Injecting a signal on TP4 I get a very distinct increase in audio from the speaker. So this really points to the transformer between Q1 and TP4, doesn't it? On the level diagram this transformer doesn't have a name, so I will go through the schematic and see if I can identify it.

So now I have three clues:

1. No audio if I inject on Q1, but audio if I inject on TP4 (RF board)
2. Too high voltage on G1 of Q1 (RF Board)
3. No IP indication when trying to set bias.

Thanks!

On Tue, Jun 28, 2011 at 10:43 PM, Terry Wagoner <wagstw46@...> wrote:

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> finger to VC-1 at the 2nd or back solder lug terminal (the first air
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> Heath 11Meg input VTVM. Many newer DMMs have around 2 meg input impedance
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> approx 1.1 in receive and -2.9 in xmit. You can think of G1 as equivalent to
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> (not shorted or not open) based on readings you obtained. Terry K9TW
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> ---------------------------------
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> From: Sander Wissing <sander.wissing@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 28, 2011 3:29 PM
>
> Subject: [TS-520_820_530_830] TS830s no receive, low output
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> Hi everyone,
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> do get pops when I connect or disconnect something to the antenna
> connector. I have not even tried to get anything done on transmit.

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> cap or something)
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> The shell of Q1 is at 1.146v as well.
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> This is significantly different from the schematic, the question is,
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> see if I can figure it out, but any leads are welcome!
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> I also tried to set the bias, but with the meter in IP, the needle
> never moves, regardless of bias pot setting. This may or may not be
> related, but it may also be an error in my technique... If anyone
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> Best Regards,
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--
Best Regards,
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[Non-text portions of this message have been removed]

Yahoo! Groups Links

[Non-text portions of this message have been removed]

32131. Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 12:21:14 UTC
From: Terry Wagoner
Topic: 32105 Message: 32131

Jeramy--I started looking at surplus market after I posted. I got use to such good fast service from Mouser that I didnt do enough homework. Thanks for taking time to research. Terry

---
From: Jeramy Ross <jeramy@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 29, 2011 12:27 AM
Subject: Re: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board

2.7uh can be found here:

http://www.allelectronics.com/make-a-store/item/CC-207/2.7-UH-CHOKE//1.html

or a pack of 50 for about the same price can be had here:

http://www.electronicsurplus.com/Item/151112/EPCOS%20-%20Inductor_%20RF%20chokes_%202_7uH_%20Package%20of%2050_%20-%20B78108S1272K/

73,
Jeramy W5XTL

On Tue, Jun 28, 2011 at 12:02 PM, Terry Wagoner <wagstw46@...> wrote:
> Thanks--Somehow I missed the 470uhy one. I still cant get the L1 2.7uh to come up. Maybe I am not setting the filters correct? Will try again. Terry
>
>
> ---
> From: w5rkl <w5rkl@...>
> To: TS-520_820_530_830@yahoogroups.com
> Sent: Tuesday, June 28, 2011 12:03 PM
> Subject: [TS-520_820_530_830] Re: Parts Only TS-830S RF Board
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> Hi Terry,
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> 73s
> Mike
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> [Non-text portions of this message have been removed]
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> Yahoo! Groups Links
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32132. Re: TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 12:57:20 UTC
From: Terry Wagoner
Topic: 32120 Message: 32132

Sander--Measured my G2 (AGC) at Conn 5 Pin 1 as follows:
With no signal get approx 2.9 volts RF gain max and approx. 0.70 RF gain minimum. With Marker on and peaked and AGC on SSB get approx 2.0 with RF gain at minimum.

Suggest you measure RF1 at Audio Board Connector 9 Pin #5. Should be 3.6 volts and is adjusted with trim pot VR-3. Need bottom cover of rig off and turned on its side to access this point.

I am not ignoring inability to set tube bias. Just focusing on receive problem. Terry

--- In TS-520_820_530_830@yahoogroups.com, Sander Wissing <sander.wissing@...> wrote:
>
> Hi Terry,
>
> Yes, I was talking about Q1 on the RF board. And yes, I made a noob mistake
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> > Sent: Tuesday, June 28, 2011 3:29 PM
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> > Subject: [TS-520_820_530_830] TS830s no receive, low output
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32133. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 13:05:51 UTC
From: w2aew
Topic: 32107 Message: 32133

Terry - thanks for the compliment! I hope my scope videos are helpful to people. For those that haven't found them, my videos are on my YouTube channel:
http://www.youtube.com/w2aew

In addition to those videos, I helped to teach a comprehensive Oscilloscopes Basics class for the NJ Antique Radio Club. This 2hr class was recorded and also put online. You can find this video linked as a "Favorite" from my YouTube page. I've also included the link for this video below:
http://www.youtube.com/watch?v=8ZKMrzTGxLQ
Since this is a long video, please see the Comments section below the video for a timeline, or table of contents that you can use to fast forward or rewind to review specific portions of the class.

I hope you all enjoy!

73,
Alan W2AEW

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> Sander--There are some really good O-scope tutorials on You Tube. I believe the best are made by W2AEW. If money is not object I would get the 40 mhz as some of the cheaper 20mhz dont do a good job at 28mhz where you would need it to use as null detector for final tube neutralization. I used Heath single and dual trace scopes for years before finally getting kids out of the house and upgrading to Tektronics 100 mhz dual trace. These are good for sweeping filters, but to be honest I dont use it as much as I do my RF millivolt meter and RF signal generator and of course good high Z multimeter. If I was prioritizing scope wouldnt be first piece of test equipment to buy. Just my 1.5 cents worth!--Terry K9TW
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<<<<snipped>>>>>

32134. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 13:52:08 UTC
From: Terry Wagoner
Topic: 32107 Message: 32134

Alan--I sometimes forget about You Tube. There are a lot of very good electronic training/tutorials available there. There are also some very bad ones!

I watched a good one the other day on how to set up a dual trace scope X-Y inputs for sweeping filters that was very helpful. We all learn differently and relate differently to differing instructors. I enjoyed your videos even after being in this hobby a long time. I learned and re-enforced some things from watching your series. Thanks for taking time to do this. Terry K9TW

From: w2aew <w2aew@arrl.net>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 29, 2011 9:05 AM
Subject: [TS-520_820_530_830] Re: Which oscilloscope?

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I hope you all enjoy!

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<<<<snipped>>>>>

[Non-text portions of this message have been removed]

32135. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 14:17:33 UTC
From: w2aew
Topic: 32107 Message: 32135

Hi Terry - If you get a chance, please pass along the link to the XY filter sweep video that you watched.

Thanks,
Alan

--- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@...> wrote:
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> Sent: Wednesday, June 29, 2011 9:05 AM
> Subject: [TS-520_820_530_830] Re: Which oscilloscope?
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> http://www.youtube.com/watch?v=8ZKMrzTGxLQ
> Since this is a long video, please see the Comments section below the video for a timeline, or table of contents that you can use to fast forward or rewind to review specific portions of the class.
>
> I hope you all enjoy!
>
> 73,
> Alan W2AEW
>
> --- In TS-520_820_530_830@...m, Terry Wagoner <wagstw46@> wrote:

> >
> > Sander--There are some really good O-scope tutorials on You Tube. I believe the best are made by W2AEW. If money is not object I would get the 40 mhz as some of the cheaper 20mhz dont do a good job at 28mhz where you would need it to use as null detector for final tube neutralization. I used Heath single and dual trace scopes for years before finally getting kids out of the house and upgrading to Tektronics 100 mhz dual trace. These are good for sweeping filters, but to be honest I dont use it as much as I do my RF millivolt meter and RF signal generator and of course good high Z multimeter. If I was prioritizing scope wouldnt be first piece of test equipment to buy. Just my 1.5 cents worth!--Terry K9TW
> >
> >
> > _____
> <<<<snipped>>>>>
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>
> [Non-text portions of this message have been removed]
>

32136. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 14:18:34 UTC
From: roberteleazer@rocketmail.com
Topic: 32107 Message: 32136

Alan:

Thanks for the link to your videos. I have 5 Oscopes and I really should learn how to use one!

I bought my first OScope at a hamfest for $1.00, a WWII vintage TS-34/AP radar test set. I found the tubes were Okay but all of the 2W carbon resistors had opened up. Replacing them enabled me to focus the trace, but I don't know what it really is good for.

I got a big rack mount Tek scope for free from friend when he replaced it with a later model; I have never used it. When he passed away I bought the later one, a 100 MHZ Tek scope with a built-in Freq counter, from his widow. I don't think I could have fixed my TS-820S without it, and using it was a ball, even if it was occasionally puzzling when I flipped the wrong switch.

I got a Tek 467 portable model for $35 including shipping on ebay. I had to hook up a power cord for it and it works. But I found the 100 MHZ Tek to be much better for the work on the Kenwood, since I had to go higher than 20M and the freq counter was very useful as well as superior to the stand alone counter I have at HF freqs. I definitely recommend a scope with a built in freq counter, since the signal you are measuring may not be strong enough to drive both a counter and a scope.

I bought a Nonlinear Systems Miniscope and NLS DVOM at a local fleamarket for $5.00. I fixed the Miniscope and got it working, including putting in new batteries. It is way cool but frankly the screen is so small I doubt it is very useful.

So I need to sit down with one of these instruments and watch your videos.

Thanks!

Robert
WB5WSV

--- In TS-520_820_530_830@yahoogroups.com, "w2aew" <w2aew@...> wrote:
>
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> <<<<snipped>>>>>
>

32137. Re: [TS-520_820_530_830] Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 14:25:46 UTC
From: Bob Macklin
Topic: 32107 Message: 32137

The TS-34 is not really good for much. The other scope we had was the
USM-24. Both were really only usable for audio work. And neither have
triggered sweep.

Bob Macklin
K5MYJ
Seattle, Wa.
"Real Radios Glow In The Dark"
----- Original Message -----
From: <roberteleazer@...>
To: <TS-520_820_530_830@yahoogroups.com>
Sent: Wednesday, June 29, 2011 7:18 AM
Subject: [TS-520_820_530_830] Re: Which oscilloscope?

> Alan:
>
> Thanks for the link to your videos. I have 5 Oscopes and I really should
> learn how to use one!
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> new batteries. It is way cool but frankly the screen is so small I doubt
> it is very useful.
>
> So I need to sit down with one of these instruments and watch your videos.

>
> Thanks!
>
> Robert
> WB5WSV
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "w2aew" <w2aew@...> wrote:
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>> people. For those that haven't found them, my videos are on my YouTube
>> channel:
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>> In addition to those videos, I helped to teach a comprehensive
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>> I hope you all enjoy!
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>> >
>> > _____________________________
>> <<<<snipped>>>>>
>>

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> Yahoo! Groups Links
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32138. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 14:32:40 UTC
From: w2aew
Topic: 32107 Message: 32138

Sounds like a good scope collection! Learning how to get the most out of the scope will certainly pay dividends down the road with your repair, alignment and monitoring tasks...

73 - W2AEW - Alan

--- In TS-520_820_530_830@yahoogroups.com, "roberteleazer@..." <roberteleazer@...> wrote:
>
> Alan:
>
> Thanks for the link to your videos. I have 5 Oscopes and I really should learn how to use one!
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> > >
> > >
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> >
>

32139. Re: [TS-520_820_530_830] A few 520 history questions....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 14:35:18 UTC
From: John Davidson
Topic: 32114 Message: 32139

I bought my 520 from a local ham radio store just after the 520-S was released, I bought the new rig, the VFO-520 and a 3 element HyGain 10M Yagi all for $ 600 and change.

I am guessing it was in 1974 but need to dig out the receipts from the archives.

From: Brian <bsa0791@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Tue, June 28, 2011 1:52:56 PM
Subject: [TS-520_820_530_830] A few 520 history questions....

I was just wondering if the 520 was phased out when the 520s hit the market? What was the years the 520 was maufactored with the brass fan cage? What was the price of the 520 and 520s?

Thank you, Brian NC KB4MNG

[Non-text portions of this message have been removed]

32140. Re: [TS-520_820_530_830] Re: TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 20:26:36 UTC
From: Sander Wissing
Topic: 32120 Message: 32140

Hi Terry,

I don't know about good troubleshooting process, just trying to keep some common sense... Yes, I have also come up with L13 Xfmr, but it is a big heavy part and no obvious way to inject a signal anywhere there. G1 (on Q1) isn't at ground potential, so I suppose that means D2 isn't shorted. OK, checked again and even with D2 shorted it still isn't a DC path to ground, so disregard that.

D2 measures forward voltage of about .4v, but I am not sure if this means anything in circuit.

Injecting a signal on drain of Q1 doesn't seem to make a difference. I am injecting a signal at 14.175, with the radio set to 14.175 as well, purely because that is where the schematic says to measure voltages. What is weird though, is that injecting the same signal on T4 is softer than injecting it on T2. As I understood the level diagram a signal on T2 would sound softer, or alternatively you would need to inject more signal to have the same output. Also when I pick up more noise when injecting on TP2 / TP4, turning Drive doesn't make any difference, so I am not sure what you mean by peaking drive. Also, you said 'with marker on' , what is the marker?

Measuring AGC on Conn 5 pin 1 I get 1.8v (RF Gain min) to 8.3v (RF Gain max).

On Af board, conn 9, pin 5 (RFI) measures at 8.79v, but I can adjust it to 3.6 with VR3. Should i just adjust it or is this indicative of a problem somewhere else? After adjusting VR3 to have RFI at 3.6v, AGC on Conn 5, pin 1 on RF board now measures 0.9v - 3.3v

And lastly, I didn't mean to be pedantic about the bias, just keeping tally of all the issues, still hoping someone will look at the list and say, "o yeah, all of those will be caused by x' and save us all a lot of trouble shooting! :)

Thanks!
Sander

On Wed, Jun 29, 2011 at 2:57 PM, Terry Wagoner <wagstw46@...> wrote:

> **
>
>
Sander--I will measure my AGC voltages at G2 and report back to you. Appears you are following proper troubleshooting process.

With increase in receiver noise with signal at TP-4 it appears that Q2 buffer amp and the RIF mixer is working. I believe you are referring to Xfmr L13. I have never heard of it failing. More commonly L41 antenna step-up xfmr is the culprit.

Ken K4EAA reports on his site that he has found diode D2 shorted which would shunt G1 signal to ground. I dont think you can get meter probes on D2 in circuit to test it and it is shunted by couple of resistors.

If you were able to measure the Drain voltage of Q1 can you inject signal there? That would prove L13 good if you get increase in noise. When in injecting signal make sure you use a frequency that is same as your bandswitch position and peak the driver control while injecting. Terry

> Sander--Measured my G2 (AGC) at Conn 5 Pin 1 as follows:
> With no signal get approx 2.9 volts RF gain max and approx. 0.70 RF gain
> minimum. With Marker on and peaked and AGC on SSB get approx 2.0 with RF
> gain at minimum.
>
> Suggest you measure RF1 at Audio Board Connector 9 Pin #5. Should be 3.6
> volts and is adjusted with trim pot VR-3. Need bottom cover of rig off and
> turned on its side to access this point.
>
> I am not ignoring inability to set tube bias. Just focusing on receive
> problem. Terry
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>

[Non-text portions of this message have been removed]

32141. Re: [TS-520_820_530_830] Re: TS830s no receive, low output

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-29 21:57:02 UTC
From: Terry Wagoner
Topic: 32120 Message: 32141

Sander--I will try to respond to each point
1. I believe D2 is the agc delay diode. It is a very fast switcher and Ken K4EAA noted hybrid expert reports finding it shorted. D2 ensures that the agc is held off or delayed during static crashes, ignition noise spike etc. Just wanted to make sure D2 was not shorted and shunting G1 signal to ground thru cap C44.
2. Injecting signal at Drain of Q1 and getting good signal out was to prove that transformer L13 was not bad.
3. If you inject 14.175 mhz with bandswitch in the 14 mhz position you should be able to vary the Driver control either side of normal 1200 position and get a peak. Just wanted to make sure you had receive path optimized for weak test signal. It is important that you use as low a test signal as possible especially if you are using one of the older Heath/Knight/Eico signal generators that are not shielded and do not have calibrated attenuator. You dont want the signal to swamp the front end. I would think 10 mv would be more than adequate. If you have better generator with a shielded and calibrated output 50uv would be good real life test.
4. I dont remember saying anything about the "marker" but it is standard test you should perform. I wanted to make sure you addressed the high G2 voltage which was not normal before moving on to anything else. The Marker is the Crystal Calibrator that you turn on with the Mic Gain control. If you can get a good strong marker signal it proves your active components Q1, Q2, RIF mixer are all good and problem is in Ant Relay or RF attenuator, or Bad Connector 3 on the RF board or bad input components just down stream of TP-1. I have a RF board on bench now that had bad L1 choke in broadcast band high pass filter that was shunting the weak RF signal to ground.
5. Very good that you were able to adjust VR-3 and set RF1 to 3.6vdc and now you have normal G2 AGC voltage range with RF gain control. At first with the high voltage on G2 I thought you may have had problem on audio board. Very odd that RF1 would be out of adjustment by that extreme amount? Hopefully it will stay in spec.

So -- Now I would perform the "marker" test and see if you get marker signal thru. If you get good signal then turn maker off and inject 14.200 into coax connector and follow the signal path with your schematic to see where you loose it. Antenna relay contact or bad connector 3 on RF board are two more likely candidates. Terry

---

From: Sander Wissing <sander.wissing@gmail.com>
To: TS-520_820_530_830@yahoogroups.com
Sent: Wednesday, June 29, 2011 4:26 PM
Subject: Re: [TS-520_820_530_830] Re: TS830s no receive, low output

Hi Terry,

I don't know about good troubleshooting process, just trying to keep some common sense... Yes, I have also come up with L13 Xfmr, but it is a big heavy part and no obvious way to inject a signal anywhere there. G1 (on Q1) isn't at ground potential, so I suppose that means D2 isn't shorted. OK, checked again and even with D2 shorted it still isn't a DC path to ground,

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Sander

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[Non-text portions of this message have been removed]

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32142. Re: TS-830S Sudden loss of output power

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 01:42:25 UTC
From: Guillermo
Topic: 32096 Message: 32142

Yes, that's it Mike.

Today I tested the rig on air with excellent reports.

Thanks for everything!

--- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@...> wrote:
>
> Hi Guillermo,
>
> With 750VDC on the plates of the final amplifier and 245ma of plate current in CW mode, that's equal to 180 watts DC input. That's the correct CW DC input power rating for the TS-830.
>
> If your watt meter is an "average" watt meter, the most power output you will see with the 830 MIC gain adjusted so the ALC meter indication just barely starts to flicker above zero, the most you will see on an average watt meter is between 20 and 30 watts on voice peaks. If that's what you are seeing then there is nothing wrong with the 830 transmitter.
>
> 73s
> Mike
> W5RKL
>
>
> --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> >
> > Hi Mike, I just came back from working with the 830 at the house of my friend, who is the owner.
> >
> > The first thing I did is measure voltage at pin 2 of the drive socket, as you advised me.
> > The voltages were as you said, so nothing wrong there.
> >
> > Before putting the newest 12by7a, I sprayed some contact cleaner and pushed down the socket.
> > After installing the new driver, voila! Full power output again.
> >
> > After that, I measured at idle:
> > Ip: 60 mA.
> > HV: 800 V.
> >
> > At full output in CW mode, the meter shows:
> > ALC: top of the ALC range.
> > Ip: about 240mA.
> > HV: 750 V.
> >

> > It appears as everything is working fine. I left the unit open so I can go on testing it tomorrow and check how it behaves.
> >
> > Thanks Mike for your time and answers.
> > Guillermo.
> >
> > --- In TS-520_820_530_830@...m, "w5rkl" <w5rkl@> wrote:
> > >
> > > You said the HV is "760VDC". I assume that is the HV after tuning the transmitter for full output. Is that true??
> > >
> > > Also, what is the meter showing as the IP (Meter switch set to IP) at full output (760VDC)?
> > >
> > > If the IP current is 220ma with HV at 760VDC yet you only see approximately 10 watts output then I would look at the antenna change over relay located at the bottom of the final unit PC board, the relay terminals may be carbon coated. You said the meter switch set to RF indicates full scale which tells me either the RF pot on the rear panel is set wrong or the RF pot is set properly and the final amplifier through the PI Network is producing full output but that RF output is not appearing at the rear panel's SO-239 antenna connector. The RF goes through the T/R relay but the RF pot is "before" the T/R relay.
> > >
> > > If the T/R relay is causing your low RF output, I believe the tuning of the PLATE and LOAD controls would not be "normal". The IP dip and LOAD peak RF output adjustments would not results in normal indications because the output of the PI Network is not seeing an impedance load that is within the range of the PI Network (50 to 75 ohms).
> > >
> > > 73s
> > > Mike
> > > W5RKL
> > >
> > >
> > > --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> > > >
> > > > Thanks Mike, in a few hours I will check everything that my knowledge allows.
> > > >
> > > > It's amazing because the needle meter shows as if everything is fine (I get ALC movement, 60mA Ip at SSB with no input, about 760 HV, full deflection when the S-meter switch is in RF).
> > > >
> > > > Very strange.
> > > >
> > > > I will update this post later when I finish the tests.
> > > >
> > > > Thanks everyone,
> > > > Guillermo.
> > > >
> > > > --- In TS-520_820_530_830@yahoogroups.com, "w5rkl" <w5rkl@> wrote:
> > > > >

> > > > > Hello Guillermo,
> > > > >
> > > > > Measure the voltage on the driver tube first.
> > > > >
> > > > > Connect the DC volt meter's RED lead to pin 2 of the driver tube socket and the Black lead to the 830s chassis.
> > > > >
> > > > > The voltage in receive should be approximately -43VDC.
> > > > >
> > > > > The voltage in transmit should be approximately +.4VDC
> > > > >
> > > > > If the voltage does not change, remains "negative" then I suspect the problem is caused by the relay on the AF Unit board.
> > > > >
> > > > > 73s
> > > > > Mike
> > > > > W5RKL
> > > > >
> > > > >
> > > > >
> > > > > --- In TS-520_820_530_830@yahoogroups.com, "Guillermo" <guillermoromero85@> wrote:
> > > > > >
> > > > > > Hi folks,
> > > > > >
> > > > > > Today I've been doing some adjustments to my TS-830S, fixing a broken PROCESSOR switch, and replacing the 12BY7A driver because the previous one started showing wear (half power output, no ALC action).
> > > > > >
> > > > > > I successfully replaced the 12BY7A, and could get full output power and ALC deflect.
> > > > > > So I adjusted BIAS potentiometer to read 60mA in the Ip scale.
> > > > > > So far so good, until I tried to transmit again, and my wattmeter only showed 2 watts !!!
> > > > > >
> > > > > > I have excellent TX audio as I checked it with another rig, but I have no way to increase the power.
> > > > > > I tried installing the old 12BY7A but no change here, also very low output.
> > > > > > I can see the glow of both 6146's, but I don't know what to do.
> > > > > >
> > > > > > Please help me, and thank you in advance.
> > > > > > Guillermo
> > > > > > LU5FAR
> > > > > >
> > > > > >
> > > > >
> > > >
> > >
> >
>

32143. Possible TS-830 Schematic Errors?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 13:25:25 UTC
From: wagstw46
Topic: 32143 Message: 32143

Gang--Electricians live and die by their Elementary diagrams and Hams depend on their Schematics to understand circuit operation and troubleshoot problems. To that end my large TS-830 is getting pretty dog eared and marked up with voltages, signal levels, notes and corrections.

Could Mike or Gordon or someone look at two areas for me and determine if the schematic is drawn wrong. If drawn wrong, interested members can correct their schematic to reflect actually as-built.

1. RF Board--The resistors and capacitors associated with Gate 1 of
RF amp dual-gate mosfet Q1 are drawn wrong. The bias resistors R10 & R11, and caps C42 & C44 are not connected as shown. I discovered this while troubleshooting RB1 bias.

2. Rectifier Unit Board and Screen Grid Switch S20--The industry standard for relay contacts is to show them in the de-energized state. Either the relay contact of RL-1 (-c switching) is shown wrong or Screen Grid switch position is drawn wrong. I believe the Screen Grid switch should be shown in the "ON" position which would then de-energize the relay and make the contacts correct as shown.

Appreciate a review of this so we can all have accurate tools.

Thanks-Terry K9TW

32144. Re: A few 520 history questions....

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 15:57:52 UTC
From: Joe McGerald
Topic: 32114 Message: 32144

I have most back issues of QST and CQ through the 1960's and 70's. I'll try to take a look tonight at the ads.

Joe

AF6NI

[Non-text portions of this message have been removed]

32145. Re: [TS-520_820_530_830] Possible TS-830 Schematic Errors?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 16:13:32 UTC
From: n6wk@n6wk.com
Topic: 32143 Message: 32145

Hi Terry,
I have found the R-10,R11 C42 and C44 error already in the past.
I believe I also discovered the same issue you found on the rectifier
Board, but my memory forgets that for sure LOL

73,
Gordon

On 6/30/2011 6:25 AM, wagstw46 wrote:
>
> Gang--Electricians live and die by their Elementary diagrams and Hams
> depend on their Schematics to understand circuit operation and
> troubleshoot problems. To that end my large TS-830 is getting pretty
> dog eared and marked up with voltages, signal levels, notes and
> corrections.
>
> Could Mike or Gordon or someone look at two areas for me and determine
> if the schematic is drawn wrong. If drawn wrong, interested members
> can correct their schematic to reflect actually as-built.
>
> 1. RF Board--The resistors and capacitors associated with Gate 1 of
> RF amp dual-gate mosfet Q1 are drawn wrong. The bias resistors R10 &
> R11, and caps C42 & C44 are not connected as shown. I discovered this
> while troubleshooting RB1 bias.
>
> 2. Rectifier Unit Board and Screen Grid Switch S20--The industry
> standard for relay contacts is to show them in the de-energized state.
> Either the relay contact of RL-1 (-c switching) is shown wrong or
> Screen Grid switch position is drawn wrong. I believe the Screen Grid
> switch should be shown in the "ON" position which would then
> de-energize the relay and make the contacts correct as shown.
>
> Appreciate a review of this so we can all have accurate tools.
>
> Thanks-Terry K9TW
>
>

32146. Re: [TS-520_820_530_830] Possible TS-830 Schematic Errors?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 16:51:27 UTC
From: Terry Wagoner
Topic: 32143 Message: 32146

Gordon--Ok just wanted some one with more experience to confirm what I found. I have a couple more marked on my schematic. Wonder if I should write/draw this up and make a folder for it? Maybe already on our site somewhere. I didnt look. Terry

---

From: "n6wk@n6wk.com" <n6wk@...>
To: TS-520_820_530_830@yahoogroups.com
Sent: Thursday, June 30, 2011 12:13 PM
Subject: Re: [TS-520_820_530_830] Possible TS-830 Schematic Errors?

Hi Terry,
I have found the R-10,R11 C42 and C44 error already in the past.
I believe I also discovered the same issue you found on the rectifier
Board, but my memory forgets that for sure LOL

73,
Gordon

On 6/30/2011 6:25 AM, wagstw46 wrote:
>
> Gang--Electricians live and die by their Elementary diagrams and Hams
> depend on their Schematics to understand circuit operation and
> troubleshoot problems. To that end my large TS-830 is getting pretty
> dog eared and marked up with voltages, signal levels, notes and
> corrections.
>
> Could Mike or Gordon or someone look at two areas for me and determine
> if the schematic is drawn wrong. If drawn wrong, interested members
> can correct their schematic to reflect actually as-built.
>
> 1. RF Board--The resistors and capacitors associated with Gate 1 of
> RF amp dual-gate mosfet Q1 are drawn wrong. The bias resistors R10 &
> R11, and caps C42 & C44 are not connected as shown. I discovered this
> while troubleshooting RB1 bias.
>
> 2. Rectifier Unit Board and Screen Grid Switch S20--The industry
> standard for relay contacts is to show them in the de-energized state.
> Either the relay contact of RL-1 (-c switching) is shown wrong or
> Screen Grid switch position is drawn wrong. I believe the Screen Grid
> switch should be shown in the "ON" position which would then
> de-energize the relay and make the contacts correct as shown.
>
> Appreciate a review of this so we can all have accurate tools.
>
> Thanks-Terry K9TW
>

>

Yahoo! Groups Links

[Non-text portions of this message have been removed]

32147. carfull

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 18:26:25 UTC
From: Don Langston
Topic: 32147 Message: 32147

Sometimes TKC will make a production change in mfg. of their radios,
These changes do not get in the Manuel.
Just my comments.
Don.

32148. removing the TS830s front and knobs

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 21:07:21 UTC
From: ktwhy2003
Topic: 32148 Message: 32148

I have to replace the power switch on my TS-830S, which mean removing the front panel.. and all the knobs.

SO I"m wondering if there's any special tools needed or anything I need to be careful of?

Kent
ve3knt

.

32150. Re: [TS-520_820_530_830] removing the TS830s front and knobs

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 21:29:30 UTC
From: Chris Parnell
Topic: 32148 Message: 32150

Hi Kent,

No special tools required. I did it recently with my 830. The original owner had fitted a non standard switch.

Pretty easy to do once you have taken front off.

Thanks
Chris, ZL1CDP

Sent from my iPhone

On 1/07/2011, at 9:07 AM, ktwhy2003 <ktwhy2003@...> wrote:

> I have to replace the power switch on my TS-830S, which mean removing the front panel.. and all the knobs.
>
> SO I"m wondering if there's any special tools needed or anything I need to be careful of?
>
> Kent
> ve3knt
>
> .
>
>

[Non-text portions of this message have been removed]

32151. TS-820

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 21:39:45 UTC
From: Joe
Topic: 2059 Message: 32151

I have a TS-820 I acquired from a SK shack cleanout. It is for sale.

The SK was a consumate ham..everything he had was in perfect order..all the time.

That said, I have not benched it yet. I plan to this weekend....My venerable 30 year old TenTec 229 tuner died on me last weekend so I was preoccupied with replacing it. This weekend the TS-820 will be gone through and made sure it is 100%.

For you youngsters in the world of Kenwood...this was considered one of the best HF transceivers in its day. People still speak of its receive qualities with hushed reverance.

http://www.eham.net/reviews/detail/154

This is not the S model....no digi dial...that was the only difference between the TS-820 and the TS-820S. (If you can find a digi kit, it is real easy to convert...1 hour of time, if memory serves me.)

I am in Reno, Nevada, email address is WA6RKN@..., telephone number is 1 775 746-2733, Weekdays only, 8 to 5, Pacific time. (My business phone.) Feel free to call and talk about the radio. Oh, and it includes the manual, no mic, built in power supply.

Price is negotible. I would like $3000.00 for it. (I wish!) Seriously, I am thinking if it is up to snuff, About $300.00, CONUS. No out of country sales unless you have a verifiable U.S. shipping address.

I am not excited about shipping the radio..it is HEAVY, but will let THEUPS STORE do the honors if that is your wish. They are pricy but do a good job.

If you would like pictures, let me know, and I will accommodate your request, but it might take a couple of days to open it up for the 'shoot'.

Joe Wolfe
WA6RKN
Reno, Nevada

32152. Re: Which oscilloscope?

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 22:34:32 UTC
From: roberteleazer@rocketmail.com
Topic: 32107 Message: 32152

Bob:

Was the TS-34/AP used as a substitute for the display unit in radars such as the APS-6 during troubleshooting? Is that what it is designed to do? I note that it has a SO-239 input jack and is designed to use the same kind of hood as on the WWII airborne radars.

Thanks,

Robert

--- In TS-520_820_530_830@yahoogroups.com, Bob Macklin <macklinbob@...> wrote:
>
> The TS-34 is not really good for much. The other scope we had was the
> USM-24. Both were really only usable for audio work. And neither have
> triggered sweep.
>
> Bob Macklin
> K5MYJ
> Seattle, Wa.
> "Real Radios Glow In The Dark"
> ----- Original Message -----
> From: <roberteleazer@...>
> To: <TS-520_820_530_830@yahoogroups.com>
> Sent: Wednesday, June 29, 2011 7:18 AM
> Subject: [TS-520_820_530_830] Re: Which oscilloscope?
>
>
> > Alan:
> >
> > Thanks for the link to your videos. I have 5 Oscopes and I really should
> > learn how to use one!
> >
> > I bought my first OScope at a hamfest for $1.00, a WWII vintage TS-34/AP
> > radar test set. I found the tubes were Okay but all of the 2W carbon
> > resistors had opened up. Replacing them enabled me to focus the trace,
> > but I don't know what it really is good for.
> >
> > I got a big rack mount Tek scope for free from friend when he replaced it
> > with a later model; I have never used it. When he passed away I bought
> > the later one, a 100 MHZ Tek scope with a built-in Freq counter, from his
> > widow. I don't think I could have fixed my TS-820S without it, and using
> > it was a ball, even if it was occasionally puzzling when I flipped the
> > wrong switch.
> >
> > I got a Tek 467 portable model for $35 including shipping on ebay. I had
> > to hook up a power cord for it and it works. But I found the 100 MHZ Tek

> > to be much better for the work on the Kenwood, since I had to go higher
> > than 20M and the freq counter was very useful as well as superior to the
> > stand alone counter I have at HF freqs. I definitely recommend a scope
> > with a built in freq counter, since the signal you are measuring may not
> > be strong enough to drive both a counter and a scope.
> >
> > I bought a Nonlinear Systems Miniscope and NLS DVOM at a local fleamarket
> > for $5.00. I fixed the Miniscope and got it working, including putting in
> > new batteries. It is way cool but frankly the screen is so small I doubt
> > it is very useful.
> >
> > So I need to sit down with one of these instruments and watch your videos.
> >
> > Thanks!
> >
> > Robert
> > WB5WSV
> >
> >
> > --- In TS-520_820_530_830@yahoogroups.com, "w2aew" <w2aew@> wrote:
> >>
> >> Terry - thanks for the compliment! I hope my scope videos are helpful to
> >> people. For those that haven't found them, my videos are on my YouTube
> >> channel:
> >> http://www.youtube.com/w2aew
> >>
> >> In addition to those videos, I helped to teach a comprehensive
> >> Oscilloscopes Basics class for the NJ Antique Radio Club. This 2hr class
> >> was recorded and also put online. You can find this video linked as a
> >> "Favorite" from my YouTube page. I've also included the link for this
> >> video below:
> >> http://www.youtube.com/watch?v=8ZKMrzTGxLQ
> >> Since this is a long video, please see the Comments section below the
> >> video for a timeline, or table of contents that you can use to fast
> >> forward or rewind to review specific portions of the class.
> >>
> >> I hope you all enjoy!
> >>
> >> 73,
> >> Alan W2AEW
> >>
> >>
> >>
> >> --- In TS-520_820_530_830@yahoogroups.com, Terry Wagoner <wagstw46@>
> >> wrote:
> >> >
> >> > Sander--There are some really good O-scope tutorials on You Tube. I
> >> > believe the best are made by W2AEW. If money is not object I would get
> >> > the 40 mhz as some of the cheaper 20mhz dont do a good job at 28mhz
> >> > where you would need it to use as null detector for final tube

> >> > neutralization. I used Heath single and dual trace scopes for years
> >> > before finally getting kids out of the house and upgrading to
> >> > Tektronics 100 mhz dual trace. These are good for sweeping filters, but
> >> > to be honest I dont use it as much as I do my RF millivolt meter and RF
> >> > signal generator and of course good high Z multimeter. If I was
> >> > prioritizing scope wouldnt be first piece of test equipment to buy.
> >> > Just my 1.5 cents worth!--Terry K9TW
> >> >
> >> >
> >> > _____
> >> <<<<snipped>>>>>
> >>
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> > Yahoo! Groups Links
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32155. Re: Display again

Yahoo group: TS-520_820_530_830 (2011-01 — 2011-06)
Date: 2011-06-30 21:15:26 UTC
From: jmikeln
Topic: 31985 Message: 32155

Hi Jeramy,

I did some adjustments, but no improvement. It is interesting, that on 7 MHz & 14 MHZ bands display shows 2 MHz less (i.e. 5 & 12 MHz respectively) while at 21 MHz bands and above it shows 6 MHz more (i.e. 27 MHz and 2_ it is a blank on second digit).

Any thoughts about that?

73 de Jure, S52CQ

--- In TS-520_820_530_830@yahoogroups.com, Jeramy Ross <jeramy@...> wrote:
>
> Hello Jure,
>
> Did you check the counter input levels (3-2, page 49 of the TS-820
> service manual)? I have seen cases where it is barely enough on the
> lower bands, and then below a workable threshold once you proceed up
> the bands with the symptoms you describe.
>
> 73,
> Jeramy W5XTL
>
> On Mon, Jun 20, 2011 at 5:11 PM, jmikeln <jmikeln@...> wrote:
> > Hi all,
> >
> > I was pleasantly surprised to see all useful answers in this group! I wish you can direct me with my problem too.
> >
> > I own TS-820S and for some reason (after a couple of years of no activity on the band), receiver receives signal on the bands OK. On 7 MHz for example however, display shows 5 MHz, at 14 MHz band it shows 12 MHz, on 21 MHz band shows 19 MHz. On 3.5 MHz and 1.8 MHz display shows correct frequency.
> >
> > I did open the rig, checked connectors on counter mix & counter boards, have resoldered all vias there, checked the PLL unit's connectors, retuned coils for each band... but still not success. The only thing I did not get into it yet was coil pack.
> >
> > Is it possible that my problem lays right there?
> >
> > I am suspecting that within counter any of TTL chips is dead but how to identify it?
> >
> > Thanks for your replies.
> >
> > 73 de Jure, S52CQ
> >
> >

> >
> > ------------------------------------
> >
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